Biyani's Think Tank

Concept based notes

Web Technology

(MCA)

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Preface

I am glad to present this book, especially designed to serve the needs of the students. The book has been written keeping in mind the general weakness in understanding the fundamental concepts of the topics. The book is self-explanatory and adopts the "Teach Yourself" style. It is based on question-answer pattern. The language of book is quite easy and understandable based on scientific approach.

Any further improvement in the contents of the book by making corrections, omission and inclusion is keen to be achieved based on suggestions from the readers for which the author shall be obliged.

I acknowledge special thanks to Mr. Rajeev Biyani, *Chairman* & Dr. Sanjay Biyani, *Director* (*Acad.*) Biyani Group of Colleges, who are the backbones and main concept provider and also have been constant source of motivation throughout this Endeavour. They played an active role in coordinating the various stages of this Endeavour and spearheaded the publishing work.

I look forward to receiving valuable suggestions from professors of various educational institutions, other faculty members and students for improvement of the quality of the book. The reader may feel free to send in their comments and suggestions to the under mentioned address.

Nitasha Jain

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Syllabus

The internet: history of the world wide web, hardware and software trend, object technology – java script object, scripting for the web-browser portability.
Introduction of HTML: introduction, markup language, editing HTML : common tags, headers, text styles, linking, images, formatting text, horizontal rules and more line breaks, unordered lists, nested and ordered lists, basic HTML tables : intermediate HTML tables and formatting : basic HTML forms, more complex HTML forms, internal linking, creating and using image maps.

Java script – introduction to scripting: introduction- memory concepts- arithmetic- decisionmaking. Java script control structures, Java script functions: introduction – program modules in java script - function definitions, duration of identifiers, scope rules, recursion, java script global functions.

Java script arrays: introduction, array-declaring and allocating arrays, references and reference parameters – passing arrays to functions, multiple subscripted arrays. Java script objects: introduction, math, string, data, boolean and number objects.

Dynamic HTML : CSS : introduction – inline styles, creating style sheets with the style element, conflicting styles, linking external style sheets, positioning elements, backgrounds, element dimensions, text flow and the box model, user style sheets.

Dynamic HTML: object model and collections: introduction, object referencing, collections all and children, dynamic style, dynamic positioning, using the frames collection, navigator object.

Dynamic HTML: event model : introduction, event ON CLICK, event ON LOAD – error handling with ON ERROR, tracking the mouse with event, more DHTML events. Filters and Transitions: Dynamical HTML: Client side scripting with VB script: Introduction - operators- data types and control structures – VB script functions – arrays –string manipulation classes and objects.
Introduction to PHP – Advantages of PHP – Functions – Data types – Arrays – SQL – Connecting Databases using ODBC – Files – Forms – Images –Imap objects.

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9	ODBC Connectivity
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Chapter 1
HTML With Tags and Attribute

Q1. What Exactly Is HTML?

Ans: The name *HTML* stands for *Hypertext Markup Language.* That's a mouthful. Many people who create Web pages and work in HTML often forget what the letters stand for. The term's hypertext portion refers to the cross-links, also called hyperlinks, between Web pages. The term's markup language portion refers to the commands that format the Web pages that the users see. Knowing how to write and use HTML is the goal, not remembering the archaic abbreviation.

Note: The term *HTML language* is as redundant as *ATM machine* and *PIN number.* Literally, *HTML language* means *Hypertext Markup Language.* Redundant or not, *HTML language* is often the phrase used, even by experienced HTML programmers.

The Internet is more than just a bunch of Web pages. The Internet consists of Web pages, e-mail, text, voice, video chat sessions, and an assortment of other tasks that often hide behind the scenes from typical Internet users. Amidst the array of Internet components, a Web page comprises the most important piece of the Internet because a Web page is the user interface to the information that resides on the Internet. Close to one billion Web pages comprise the World Wide Web (WWW). Virtually every Web page that you've ever visited has two things in common:

- ❖ They contain formatted text and graphic images.
- ❖ They are created, in whole or in part, using the HTML language.

It may surprise you to learn that HTML is a language that has absolutely no formatted text or graphic images. The HTML language consists solely of unformatted text. That text, however, contains instructions, called *tags* or *command tags that* define exactly how formatted text and graphics appear on Internet Web pages. In other words, HTML determines how a

Web page browser displays the information your HTML-based Web pages produce.

Q2. What is HTML?

Ans: HTML is a language for describing web pages.

- HTML stands for Hyper Text Markup Language
- HTML is not a programming language, it is a markup language
- A markup language is a set of markup tags
- HTML uses markup tags to describe web pages

Q3: Define HTML filename extension.

Ans: A Web page, defined in an HTML file, always has the filename extension html (Or htm if you want to be compatible with Windows $3x$ users, although fewer and Fewer of them exist). The html extension separates the file type from ordinary, unformatted text files whose extensions might be txt. Many browsers, such as Internet Explorer, will refuse to open your file with an extension such as txt, except by starting another program such as Notepad and loading the text file into that secondary program for your viewing and editing work. Some browsers will open a file whose name does not end with the html extension, but will refuse to interpret any HTML command tags. In such a case, the file will appear inside the browser window displaying the nitty-gritty command tags themselves instead of performing the formatting actions that the command tags request.

Q4: Define <html><html> tags.

Ans: *Beginning and Ending <html> and </html>Tags* every Web page should begin with the following HTML start tag:

<html>

Every Web page should end with the following HTML end tag:

</html>

The poem, therefore, looks like this with those two enclosing tags:

<html>
Roses are red,
The Web is sure growing.
You can use HTML,
To keep your page flowing.
</html>

More is needed to make this an appealing Web page. All HTML tags are enclosed between angled brackets. Often,
related tags appear in pairs with one beginning the formatting process and the other terminating that format. The <html> and </html> tags indicate the very beginning and ending of a Web page. The *end tag* contains the same command name as the start tag except it begins with a forward slash to distinguish where the tag pair begins and ends.

Q5: Define <head> and <title>tag.

Ans: The title command tag must appear inside a special section of your Web page called the *header section*. Before adding the title's tags, you must first create the header section with the <head> and </head> command tags. Start these tags immediately after the opening <html> tag, like this:

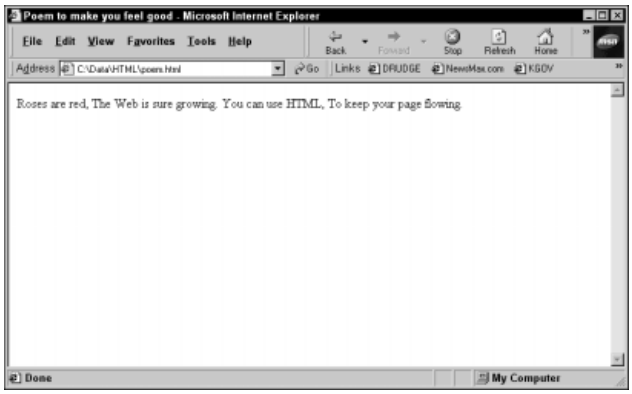
```
<html>
<head>
</head>
Roses are red,
The Web is sure growing.
You can use HTML,
To keep your page flowing.
</html>
```

Add ample spacing to make your HTML files readable and to make the command tags and HTML sections pronounced. Subsequent HTML examples in this weekend course include plenty of this *whitespace* to make the file readable and easy to maintain. The value that you type between the title tags becomes the actual title you want the Web browser to display in the browser window's title bar.

```
<html>
<head>
<title>Poem to make you feel good</title>
</head>
Roses are red,
The Web is sure growing.
You can use HTML,
To keep your page flowing.
</html>
```

Figure shows the resulting browser window. The browser window displays
the poem's title, "Poem to make you feel good."

The window's title



Q6: Define <BR> tag?

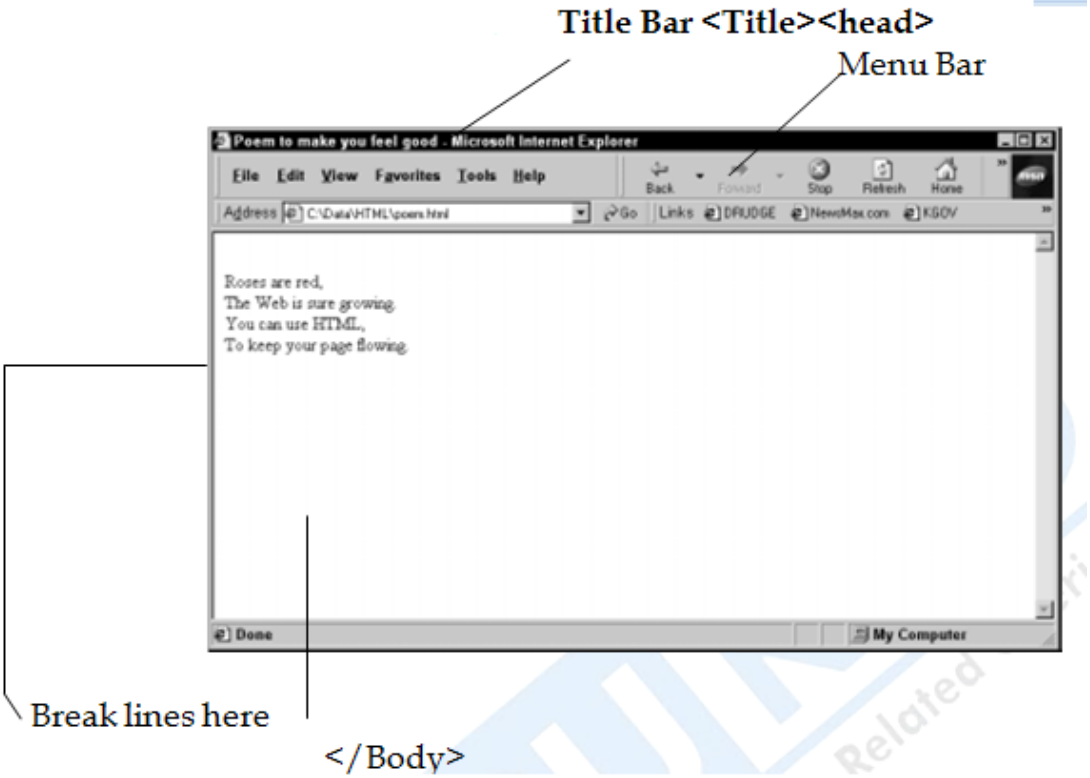
Ans: Use the *break tag* to break lines. The format of the tag is as follows:

Text that appears on its own line. The <br> tag is special because, unlike so many other command tags, <br> has
no corresponding end tag. The <br> tag is a stand-alone tag because it requests that the browser move down to the next line on the screen before displaying the text that follows. Adding <br> to the beginning of each line in the poem produces a four-line poem. Here is the complete HTML file:

```
<html>
<head>
<title>Poem to make you feel good</title>
</head>
<body>
<br>Roses are red,
<br>The Web is sure growing.
<br>You can use HTML,
<br>To keep your page flowing.
</body>
</html>
```

Output

<Title>
<Body>



Note:- The <br> tag creates a line break at each location in which it is laced. The first line of the poem would appear one line higher without the <br> tag in front of it. You can put the <br> tag at the end of a line to force a line break for subsequent text.

Q7: Which resolution displays the most information: 640×480 or 800×600?

Ans: A Web page displayed at 800 × 600 pixels of resolution. the same Web page displayed at 640 × 480. Notice how much less of the Web page the lower resolution displays. actually, the resolutions 800 × 600 and 640 × 480 are misleading because the user's browsers consume much of the screen because of the menu, toolbars, and status bar. A more realistic design area, if you want to hit virtually every Web user in the world, is only 580 × 315 on a Mac and 635 × 314 on a PC.

Q8: Define with example HTML Documents (Web Pages)?

Ans: HTML Documents (Web Pages)

- HTML documents describe web pages
- HTML documents contain HTML tags and plain text
- HTML documents are also called web pages

The purpose of a web browser (like Internet Explorer or Firefox) is to read HTML documents and display them as web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page:

```
<html>
<body>
<h1>My First Heading</h1>
<p>My first paragraph.</p>
</body>
</html>
```

Example Explained

- The text between <html> and </html> describes the web page
- The text between <body> and </body> is the visible page content
- The text between <h1> and </h1> is displayed as a heading
- The text between and is displayed as a paragraph

Q9. Define Body <body></body>tag.

Ans: The <body> element defines the body of the HTML document.
The element has a start tag <body> and an end tag </body>.
Example

```
<body>
<p>This is my first paragraph.</p>
</body>
```

The element content is another HTML element (a p element).

Q10: Define HTML Headings.

Ans: HTML headings are defined with the <h1> to <h6> tags.
Headings Are Important->Use HTML headings for headings only. Don't use headings to make text BIG or bold.
Search engines use your headings to index the structure and content of your web pages. Since users may skim your pages by its headings, it is important to use headings to show the document structure.H1 headings should be used as main headings, followed by H2 headings, then the less important H3 headings, and so on.
Example

```
<h1>hello</h1>
<h2>hello</h2>
<h3>hello</h3>
<h4>hello</h4>
```

```
<h5>hello</h5>
<h6>hello</h6>
```

Q11. Define HTML Paragraphs

Ans: HTML paragraphs are defined with the <p> tag.

Example:

```
<p>this is my first paragraph writing</p>
```

Q12 Explain the html elements

Ans: HTML Element Syntax

- An HTML element starts with a **start tag / opening tag**
- An HTML element ends with an **end tag / closing tag**
- The **element content** is everything between the start and the end tag
- Some HTML elements have **empty content**
- Empty elements are **closed in the start tag**
- Most HTML elements can have **attributes**

Q13 What is HTML Attributes?

Ans: HTML Attributes are:

- HTML elements can have **attributes**
- Attributes provide **additional information** about an element
- Attributes are always specified in **the start tag**
- Attributes come in name/value pairs like: **name="value"**

Attribute Example

HTML links are defined with the <a> tag. The link address is specified in the href attribute:

```
<a href="http://www.gurukpo.com">This is a link</a>
```

Q14: Define HTML Lines

Ans: HTML LinesThe <hr /> tag creates a horizontal line in an HTML page.The hr element can be used to separate content:

Example

```
<p>hello students</p>
<hr />
<p>How Are You</p>
<hr />
<p>God Bless you</p>
```

Q15: How to use comment in html document?

Ans: **HTML Comments->** Comments can be inserted into the HTML code to make it more readable and understandable. Comments are ignored by the browser and are not displayed.
Comments are written like this:
Example
<! -- This is a comment -->

Q16: Define HTML Formatting tags?

Ans: HTML Formatting Tags like <b> and <i> for formatting output, like bold or *italic* text.
These HTML tags are called formatting tags (look at the table below)

Tag	Description
<b>	Defines bold text
<big>	Defines big text
	Defines emphasized text
<i>	Defines italic text
<small>	Defines small text
	Defines strong text
<sub>	Defines subscripted text
<sup>	Defines superscripted text

Q17 How can we use linking in html document?

Ans: HTML Hyperlinks (Links)
A hyperlink (or link) is a word, group of words, or image that you can click on to jump to a new document or a new section within the current document.When you move the cursor over a link in a Web page, the arrow will turn into a little hand.
Links are specified in HTML using the <a> tag.
The <a> tag can be used in two ways:

1. To create a link to another document, by using the href attribute
2. To create a bookmark inside a document, by using the name attribute

Syntax of linking
Link text
The target Attribute: The target attribute specifies where to open the linked document.

Example

Visit gurukpo

For example External linking

```
<Html>
<Head><title>linking internal</title>
</head>
<Body>
<a href=”www.gurukpo.com”>
Gurukpo data</a>
<h1>hello</h1>
<h2>hello</h2>
<h3>hello</h3>
<h4>hello</h4>
<h5>hello</h5>
<h6>hello</h6>
</body>
</html>
```

The name Attribute:The name attribute specifies the name of an anchor.The name attribute is used to create a bookmark inside an HTML document.

Note: Bookmarks are not displayed in any special way. They are invisible to the reader.

For example Internal linking

```
<Html>
<Head><title>linking internal</title>
</head>
<Body>
<a href=”#gurukpo”>
Gurukpo data</a>
<h1>hello</h1>
<h2>hello</h2>
<h3>hello</h3>
<h4>hello</h4>
<h5>hello</h5>
<h6>hello</h6>
<a name=”gurukpo”>
Useful tips define in this paragraph
</a>
</body>
</html>
```

Q18 How to define an image in html document?

Ans: HTML Images - The <img> Tag and the Src Attribute

In HTML, images are defined with the <img> tag. The <img> tag is empty, which means that it contains attributes only, and has no closing tag. To display an image on a page, you need to use the src attribute. Src stands for "source". The value of the src attribute is the URL of the image you want to display.

Syntax for defining an image:

The URL points to the location where the image is stored.

The Alt Attribute:

The required alt attribute specifies an alternate text for an image, if the image cannot be displayed.

The value of the alt attribute is an author-defined text:

The alt attribute provides alternative information for an image if a user for some reason cannot view it (because of slow connection, an error in the src attribute, or if the user uses a screen reader).

HTML Images - Set Height and Width of an Image

The height and width attributes are used to specify the height and width of an image.The attribute values are specified in pixels by default:

Q19: Explain table tag

Ans: HTML Tables

Tables are defined with the <table> tag. A table is divided into rows (with the <tr> tag), and each row is divided into data cells (with the <td> tag). td stands for "table data," and holds the content of a data cell. A <td> tag can contain text, links, images, lists, forms, other tables, etc.

Table Example

```
<table border="1">
<tr>
<td>row 1, cell 1</td>
<td>row 1, cell 2</td>
</tr>
<tr>
```

<td>row 2, cell 1</td>
<td>row 2, cell 2</td>
</tr>
</table>

How the HTML code above looks in a browser:

row 1, cell 1	row 1, cell 2
row 2, cell 1	row 2, cell 2

HTML Tables and the Border Attribute

If you do not specify a border attribute, the table will be displayed without borders. Sometimes this can be useful, but most of the time, we want the borders to show. To display a table with borders, specify the border attribute:

```
<table border="1">
<tr>
<td>Row 1, cell 1</td>
<td>Row 1, cell 2</td>
</tr>
</table>
```

HTML Table Headers

Header information in a table are defined with the <th> tag.

All major browsers will display the text in the <th> element as bold and centered.

```
<table border="1">
<tr>
<th>Header 1</th>
<th>Header 2</th>
</tr>
<tr>
<td>row 1, cell 1</td>
<td>row 1, cell 2</td>
</tr>
<tr>
<td>row 2, cell 1</td>
<td>row 2, cell 2</td>
</tr>
</table>
```

How the HTML code above looks in your browser:

Header 1	Header 2
row 1, cell 1	row 1, cell 2
row 2, cell 1	row 2, cell 2

Q20: Explain Ordered and unordered list in html?

Ans: **HTML Unordered Lists**

An unordered list starts with the <ul> tag. Each list item starts with the <li> tag. The list items are marked with bullets (typically small black circles).

```
<ul>
<li>Coffee</li>
<li>Milk</li>
</ul>
```

How the HTML code above looks in a browser:

- Coffee
- Milk

HTML Ordered Lists

An ordered list starts with the <ol> tag. Each list item starts with the <li> tag. The list items are marked with numbers.

```
<ol>
<li>Coffee</li>
<li>Milk</li>
</ol>
```

How the HTML code above looks in a browser:

1. Coffee
2. Milk

HTML Definition Lists

A definition list is a list of items, with a description of each item. The <dl> tag defines a definition list.

The <dl> tag is used in conjunction with <dt> (defines the item in the list) and <dd> (describes the item in the list):

```
<dl>
<dt>Coffee</dt>
<dd>- black hot drink</dd>
<dt>Milk</dt>
<dd>- white cold drink</dd>
</dl>
```

How the HTML code above looks in a browser:
Coffee
- black hot drink
Milk
- white cold drink

HTML List Tags

Tag	Description
	Defines an ordered list
	Defines an unordered list
	Defines a list item
<dl>	Defines a definition list
<dt>	Defines an item in a definition list
<dd>	Defines a description of an item in a definition list

Q21: Exaplain html Forms

Ans: HTML Forms

HTML forms are used to pass data to a server.
A form can contain input elements like text fields, checkboxes, radio-buttons, submit buttons and more. A form can also contain select lists, textarea, fieldset, legend, and label elements.
The <form> tag is used to create an HTML form:

```
<form>
.
input elements
.
</form>
```

HTML Forms - The Input Element

The most important form element is the input element.
The input element is used to select user information.

An input element can vary in many ways, depending on the type attribute. An input element can be of type text field, checkbox, password, radio button, submit button, and more.
The most used input types are described below.

Text Fields

<input type="text" /> defines a one-line input field that a user can enter text into:

```
<form>
First name:<input type=”text” name=’firstname”><br/>
Last name:<input type=”text” name=’lastname”><br/>
</form>
```

How the HTML code above looks in a browser:

First name:

Last name:

Note: The form itself is not visible. Also note that the default width of a text field is 20 characters. **Password Field**

<input type="password" /> defines a password field:

```
<form><input type=”password” name=”pass”/>
        </form>
```

How the HTML code above looks in a browser:

Password:

Note: The characters in a password field are masked (shown as asterisks or circles).

Radio Buttons

<input type="radio" /> defines a radio button. Radio buttons let a user select ONLY ONE one of a limited number of choices:

```
<form>
<input type="radio" name="sex" value="male" /> Male<br />
<input type="radio" name="sex" value="female" /> Female
</form>
```

How the HTML code above looks in a browser:

Male

Female

Checkboxes

<input type="checkbox" /> defines a checkbox. Checkboxes let a user select ONE or MORE options of a limited number of choices.

```
<form>
```

<input type="checkbox" name="vehicle" value="Bike" /> I have a bike
<input type="checkbox" name="vehicle" value="Car" /> I have a car
</form>
How the HTML code above looks in a browser:

☐ I have a bike

☐ I have a car

Submit Button

<input type="submit" /> defines a submit button.
A submit button is used to send form data to a server. The data is sent to the page specified in the form's action attribute. The file defined in the action attribute usually does something with the received input:

```
<form name="input" action="html_form_action.asp" method="get">
Username: <input type="text" name="user" />
<input type="submit" value="Submit" />
</form>
```

How the HTML code above looks in a browser:

Username: [ ]

If you type some characters in the text field above, and click the "Submit" button, the browser will send your input to a page called "html_form_action.asp". The page will show you the received input.

Q22: Create a From with suitable information?

Ans:

```
<html>
<body background="c:\lucky\a3.jpg">
<p align=center><font color=red><font size=+1>biyani girls college</font></p>
<p align=center><font color=red><font size=+1>computer education center</font></p>
<p><font color=red><font size=+1>application form</font></p>
<form>
name  <input type="text"width=30><br><br>
father's name  <input type="text"width=30><br><br>
date of birth  <select name="dd"><br>
<option>1</option>
<option>2</option>
<option>3</option>
<option>4</option>
```

```
<option>5</option>
<option>6</option>
<option>7</option>
<option>8</option>
<option>9</option>
<option>10</option>
<option>11</option>
<option>12</option>
<option>13</option>
<option>14</option>
<option>15</option>
<option>16</option>
<option>17</option>
<option>18</option>
<option>19</option>
<option>20</option>
<option>21</option>
<option>22</option>
<option>23</option>
<option>24</option>
<option>25</option>
<option>26</option>
<option>27</option>
<option>28</option>
<option>29</option>
<option>30</option>
<option>31</option>
</select>
<select name="mm">
<option>january</option>
<option>febuary</option>
<option>march</option>
<option>aprial</option>
<option>may</option>
<option>june</option>
<option>july</option>
<option>august</option>
<option>september</option>
<option>octomber</option>
<option>november</option>
```

```
<option>december</option>
</select>
<select name="yy">
<option>1980</option>
<option>1981</option>
<option>1982</option>
<option>1983</option>
<option>1984</option>
<option>1985</option>
<option>1986</option>
<option>1987</option>
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<option>2005</option>
<option>2006</option>
<option>2007</option>
<option>2008</option>
<option>2009</option>
<option>2010</option>
</select>
<br>
<br>
address  <input type="text" width=50><br><br>
sex<br><br>
male<input type="radio"name="a"value=0>
```
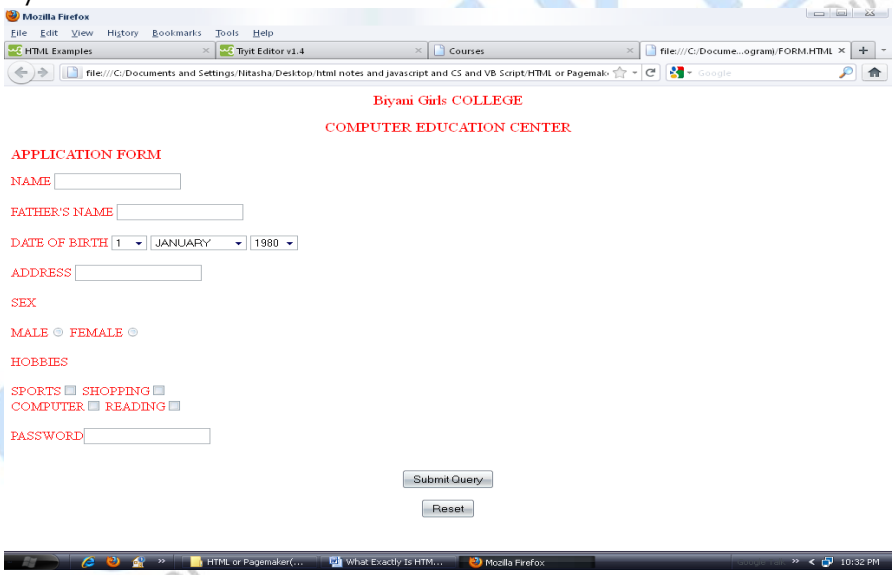

```
female<input type="radio"name="a"value=0>
<br>
<br>
hobbies<br><br>
sports<input type="checkbox"name="s"value=0>
shopping<input type="checkbox"name="sh"value=0>
<br>
computer<input type="checkbox"name="c"value=0>
reading<input type="checkbox"name="r"value=0>
<br>
<br>
password<input type="password"><br><br>
<p align=center><input type="submit"name"yy"value="submit"></p>
<p align=center><input type="reset"name"b"value="reset"></p>
</form>
</html>
```



Q23 Explain frames in HTML

Ans HTML Frames with frames, we can display more than one HTML document in the same browser window. Each HTML document is called a frame, and each frame is independent of the others.

The disadvantages of using frames are:

- Frames are not expected to be supported in future versions of HTML
- Frames are difficult to use. (Printing the entire page is difficult).

- The web developer must keep track of more HTML documents

The HTML frameset Element
The frameset element holds one or more frame elements. Each frame element can hold a separate document.
The frameset element states HOW MANY columns or rows there will be in the frameset, and HOW MUCH percentage/pixels of space will occupy each of them.

The HTML frame Element
The <frame> tag defines one particular window (frame) within a frameset.
In the example below we have a frameset with two columns.
The first column is set to 25% of the width of the browser window. The second column is set to 75% of the width of the browser window. The document "frame_a.htm" is put into the first column, and the document "frame_b.htm" is put into the second column:

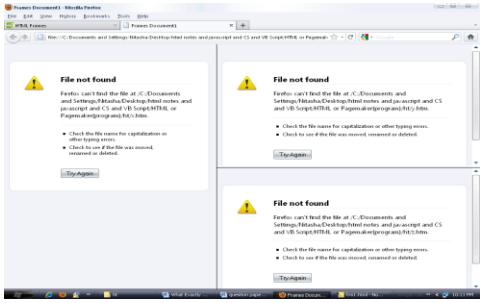
```
<frameset cols="25%,75%">
  <frame src="frame_a.htm" />
  <frame src="frame_b.htm" />
</frameset>
```

Note: The frameset column size can also be set in pixels (cols="200,500"), and one of the columns can be set to use the remaining space, with an asterisk (cols="25%,*").

Basic Notes - Useful Tips
Tip: If a frame has visible borders, the user can resize it by dragging the border. To prevent a user from doing this, you can add noresize="noresize" to the <frame> tag.
Note: Add the <noframes> tag for browsers that do not support frames.
Important: You cannot use the <body></body> tags together with the <frameset></frameset> tags! However, if you add a <noframes> tag containing some text for browsers that do not support frames, you will have to enclose the text in <body></body> tags! See how it is done in the first example below.

Q24: Create a Frame

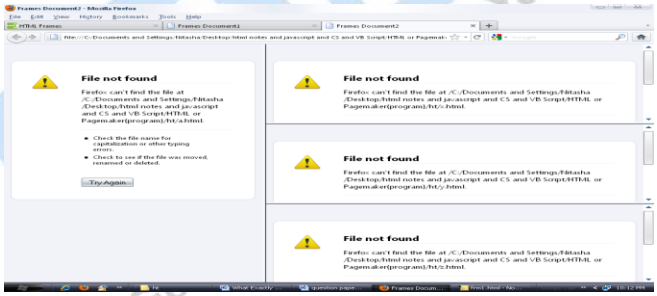
Ans




```
<html>
<head>
<title>Frames Document1</title>
</head>
<frameset cols="40%,50%">
<frame src="x.htm">
<frameset rows="25%,25%">
<frame src="y.htm">
<frame src="z.htm">
</frameset>
</html>
```

Q25: Create a frame like that

Ans

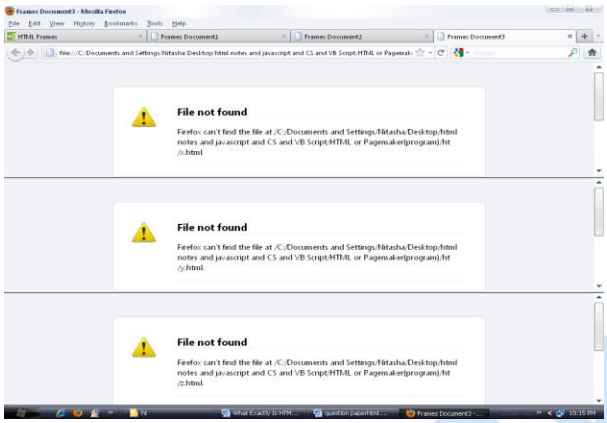



```
<html>
<head>
<title>Frames Document2</title>
</head>
<frameset cols="40%,60%">
<frame src=" a.html">
<frameset rows="20%,20%,20%">
<frame src="x.html">
<frame src="y.html">
```

```
<frame src="z.html">
</frameset>
</html>
```

Q26: Create a frame

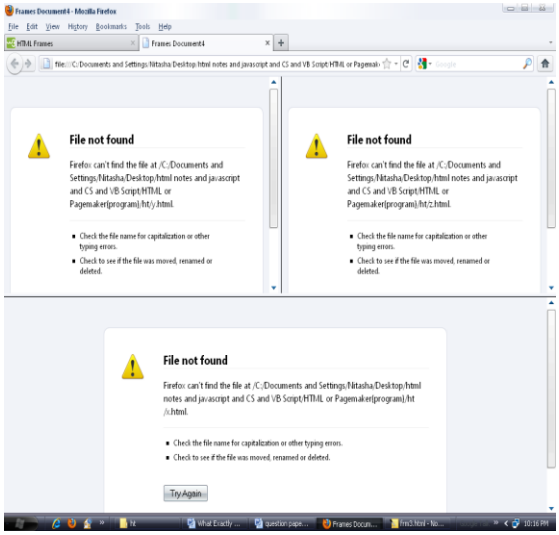
Ans




```
<html>
<head>
<title>Frames Document3</title>
<head>
<frameset rows="30%,30%,30%">
<frame src="x.html">
<frame src="y.html">
<frame src="z.html">
</frameset>
</html>
```

Q27: Create a Frame

Ans.




```
<html>
<head>
<title>Frames Document4</title>
</head>
<frameset rows="50%,50%">
<frameset cols="25%,25%">
<frame src="y.html">
<frame src="z.html">
</frameset>
<frame src="x.html">
</frameset>
</html>
```

Q28 Create a Image Map

Ans:

```
<html>
<body>
<p>Click on the sun or on one of the planets to watch it closer:</p>
<img src="planets.gif" width="145" height="126" alt="Planets"
usemap="#planetmap" />
<map name="planetmap">
 <area shape="rect" coords="0,0,82,126" alt="Sun" href="sun.htm" />
 <area shape="circle" coords="90,58,3" alt="Mercury" href="mercur.htm"
/>
 <area shape="circle" coords="124,58,8" alt="Venus" href="venus.htm" />
</map>
```

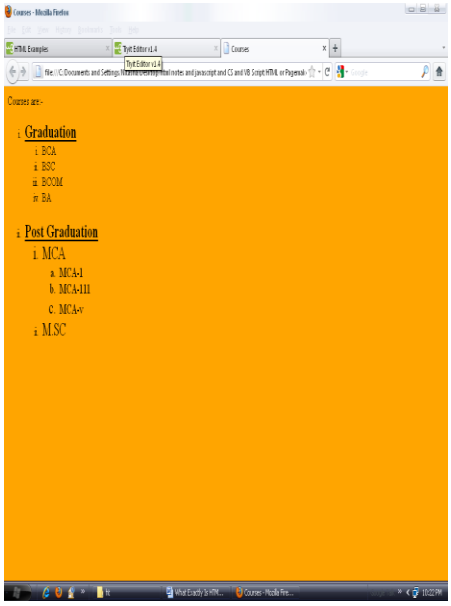
```
</body>
</html>
```

Q29 Create a different types of Bullets

Ans:

```
<html>
<title>Courses</title>
<body bgColor=orange>
Courses are:-
<font size="+2">
<ol type=i>
        <li><b><u>Graduation</u></b>
</font>
<ol type=i>
        <li>BCA
        <li>BSC
        <li>BCOM
        <li>BA
</ol>
<br>
<font size="+2">
<li><b><u>Post Graduation</u></b>
</font>
<font size="+2">
<ol type=i>
        <li>MCA
        <font size="+1">
        <ol type=a>
                <li>MCA-1
                <li>MCA-111
                <li>MCA-v
</font>
</ol>
        <li>M.SC
</font>
</ol>
</body>
</html>
```

Output:



Chapter 2

Java Script

Q1 Explain Java Script ?

Ans: HTML pages which we have discussed so far are considered as static HTML pages,these pages layout remains same. But , if you want to create the dynamic page , with the programming support then you have to make use of the scripting languages.Scripting languages are not the complete programming laguages then work within the HTML code.The Scripting Language in the market are **VBScript,Javascript** etc..

The Scripting code is written in the **<script>** tag , and the general form is ,

<script langauge="JavaScript/VBScript">

Body of the code

</script>

Q2: How to Displaying the Information Using JavaScript Code

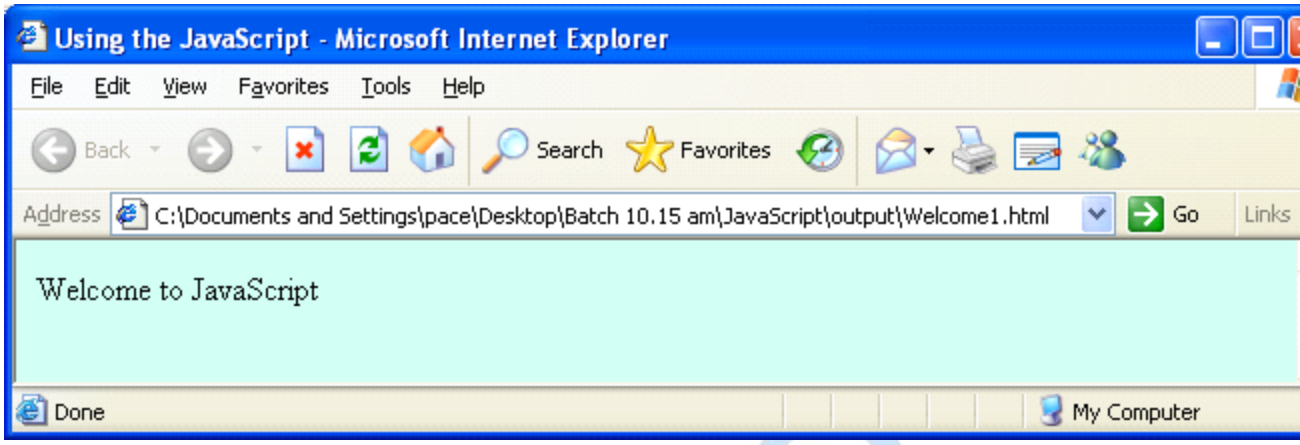
Ans : (a) **document. write( )**The document object is used to identify the webpage and it provides the method or the function known as write( ) to display the information on the browser windows.

Note : JavaScript is case sensitive.

Consider the following code,

```
<html>
<head>
<title>Using the JavaScript </title>
</head>
<body bgcolor="#ccffee">
<script language="JavaScript">
        document.write("Welcome to JavaScript");
</script>
</body>
</html>
```

Output :



(b) alert( ) This function will display a dialog box on the screen ,via, which we can display the information on the screen.
The general form is ,
alert("message");

Consider the following code ,

```
<html>
<head>
<title>Using the JavaScript </title>
</head>
<body bgcolor="#ccffee">
<script language="JavaScript">
        alert("Welcome to JavaScript");
</script>
</body>
</html>
```

Output :

Q3: How to Declaring the variables:

Ans: Variables are the named value holders.They act as a container to store the value.To declare the variable we will use the var keyword.

The general form is ,

var variablelist;

e.g. var a,b,c;

Types of values :

1) **integer values :** The values without the fractional part .e.g. 10,-45 etc...
2) **real values :** The values which contains the fractional part e.g. 5.6,7.89 etc...The real values are also known as the floating point values.
3) **character values :** It refers to the single character. e.g. 'a','%','3' etc...
4) **string values :** It refers to the group of characters. "ajay" etc...

Note that the var type variable is capable of holding any type of value.

Q4: How to Read the Information from the User :

Ans: 1) **prompt( ) :** This function is used to read the information from the user.

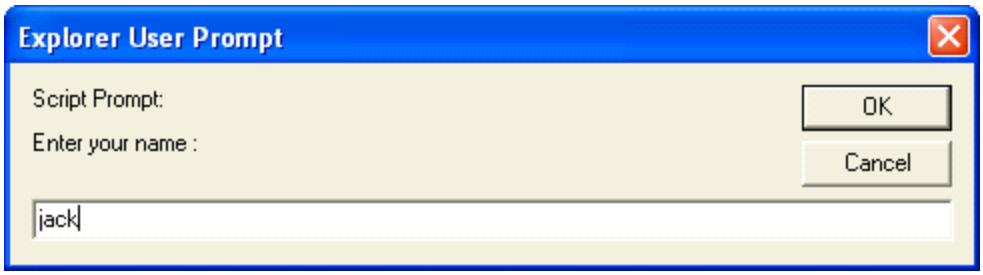
The general form is ,

prompt("message");

Consider the following code ,

```
<html>
<head>
<title>Using JavaScript</title>
</head>
<body bgcolor="#ccffee">
<script language="JavaScript">
var sname;
sname=prompt("Enter your name :");
document.write("<center><h1>Your Name is : "+sname+"
</h1></center>");
</script>
</body>
</html>
```

Output :



Note : Whatever you enter or input using the prompt( ) will be considered as a string.

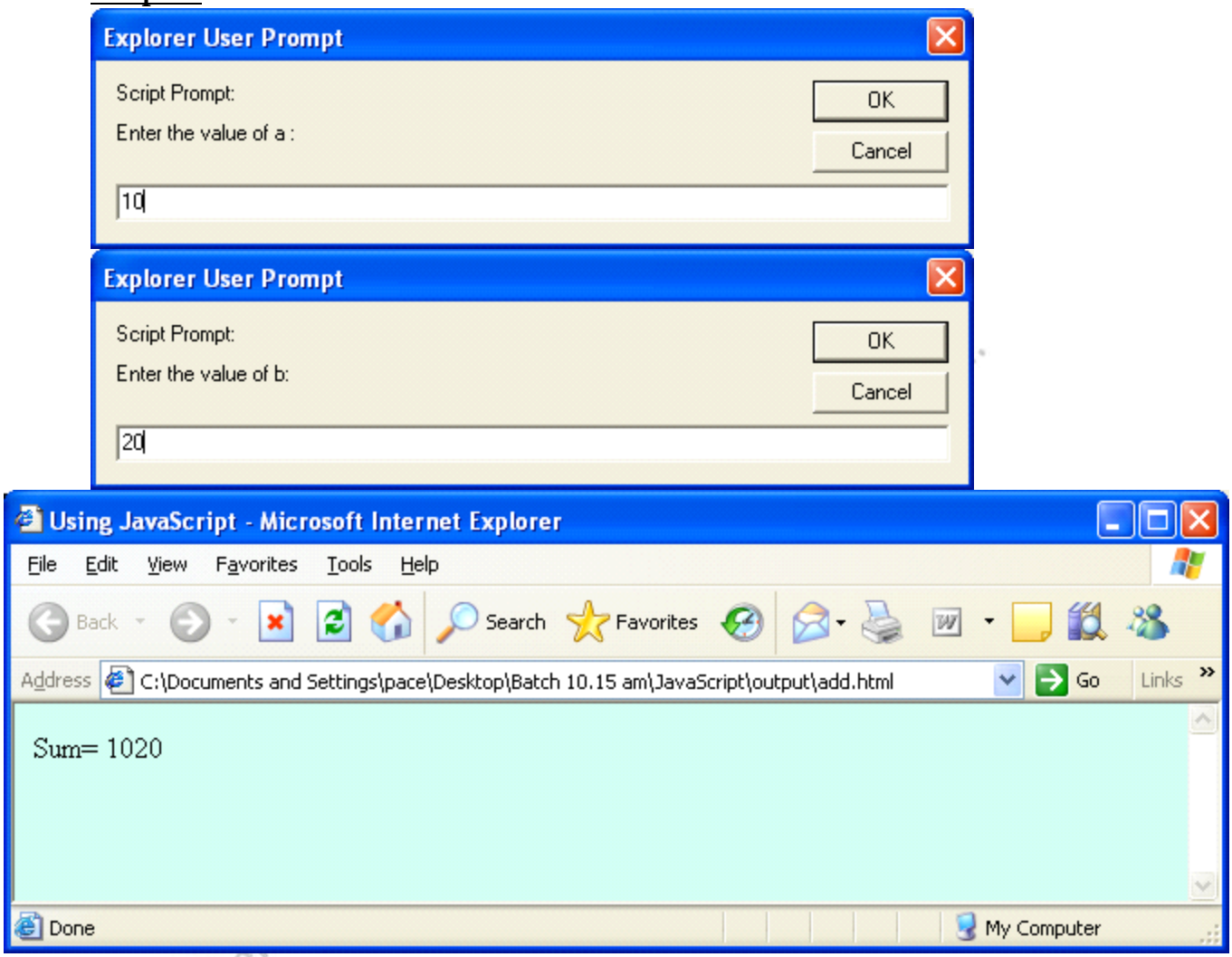
Q5: Write a JavaScript code to add two numbers.

Ans: First code display addition in string format:

```
<html>
<head>
<title>Using JavaScript</title>
</head>
<body bgcolor="#ccffee">
<script language="JavaScript">
        var a,b,c;
        a=prompt("Enter the value of a :");
        b=prompt("Enter the value of b:");
        c=a+b;
        document.write("Sum= " + c);
</script>
```

```
</body>
</html>
```

Output :

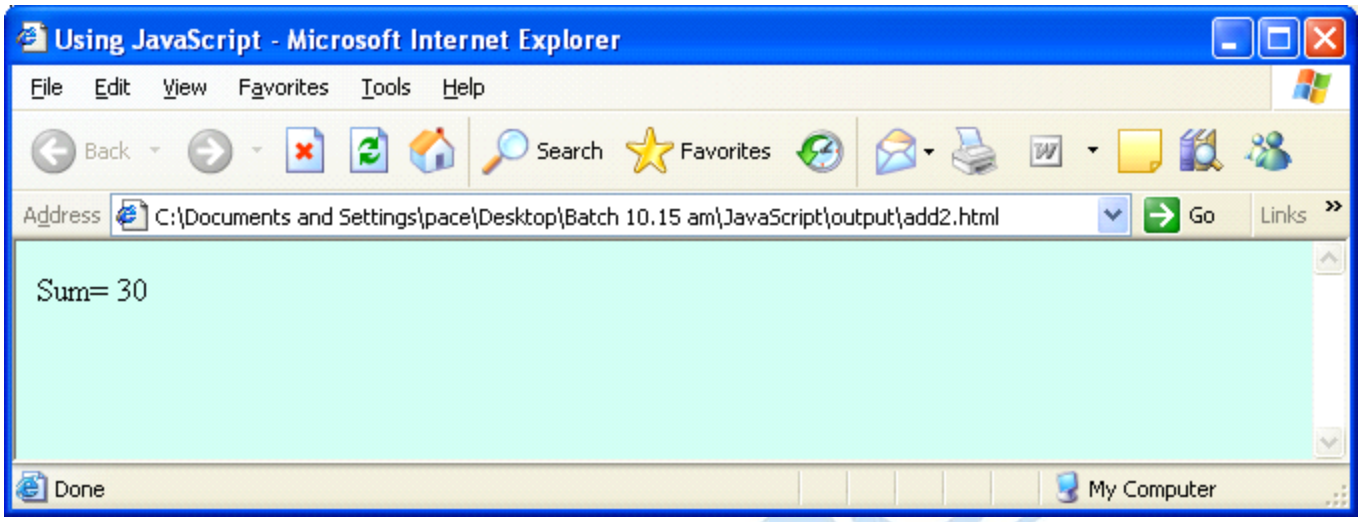


Now, consider the following program, Which display addition in integer format

```
<html>
<head>
<title>Using JavaScript</title>
</head>
<body bgcolor="#ccffee">
```

```
<script language="JavaScript">
        var a,b,c;
        a=prompt("Enter the value of a :");
        b=prompt("Enter the value of b:");
        a=parseInt(a);
        b=parseInt(b);
        c=a+b;
        document.write("Sum= " + c);
</script>
</body>
</html>
```

Note: **parseInt( ) :** This function is used to convert the string into integer.
parseFloat( ) : This function is used to convert the string into Decimal number.



Conditional statements

Q6: How to use conditional statements in Java Script?

Ans: The general form is ,

```
if(condition)
        statement1;
else
        statement2;
```

where,statement1 will get executed when the condition is true and the statment2 will get executed when the condition is false.

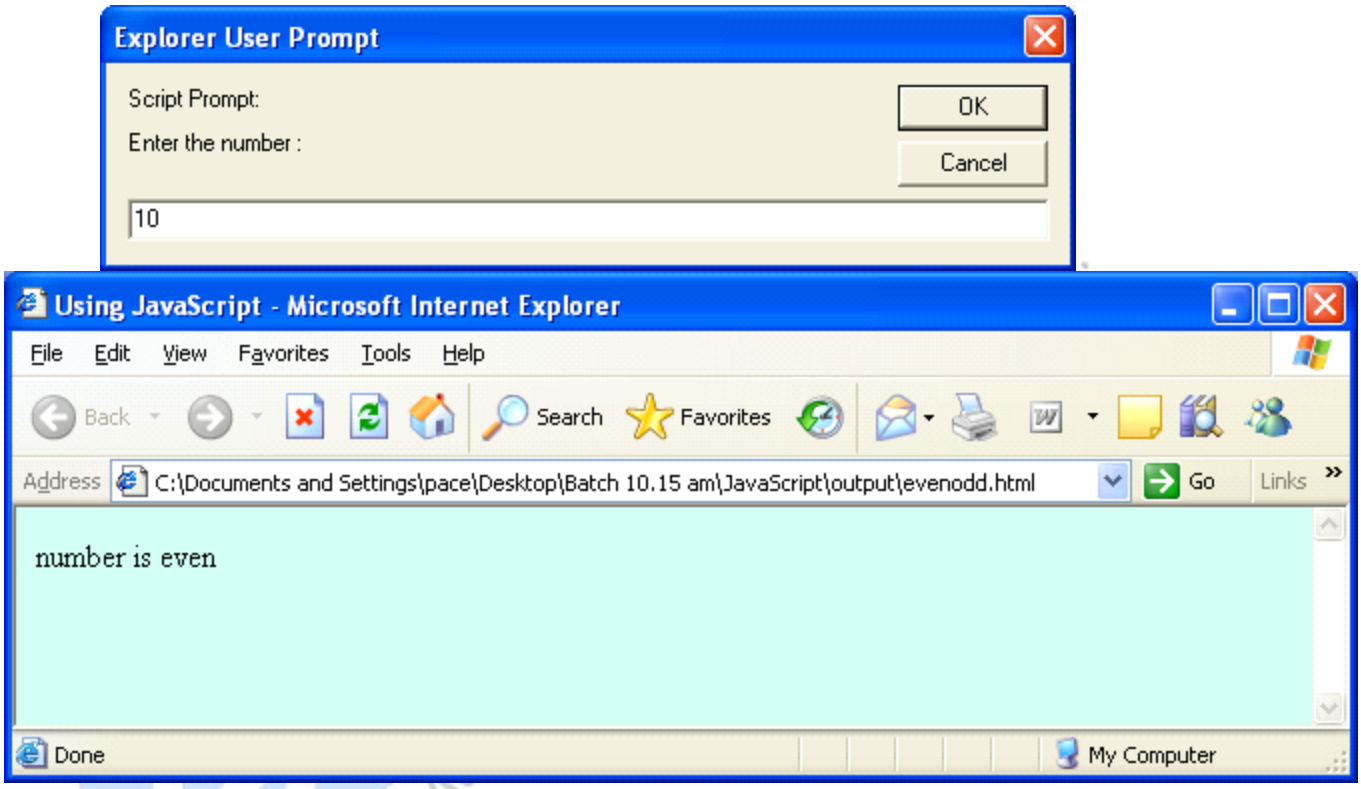
Q7. Write a JavaScript code to check whether the number is even or odd.

Ans

```
<html>
<head>
<title>Using JavaScript</title>
</head>
<body bgcolor="#ccffee">
<script language="JavaScript">
        var num;
        num=prompt("Enter the number :");
        num=parseInt(num);

        if(num%2==0)
                document.write("number is even");
```

```
        else
                document.write("number is odd");
</script>
</body>
</html>
```

Output :



Q8: Write a JavaScript code to find the largest of three numbers.

Ans:

```
<html>
<head>
<title>Using JavaScript</title>
</head>
<body bgcolor="#ccffee">
<script language="JavaScript">
        var a,b,c;
        a=prompt("Enter the value of a :");
        b=prompt("Enter the value of b:");
        c=prompt("Enter the value of c:");
```

```
        a=parseInt(a);
        b=parseInt(b);
        c=parseInt(c);
        if(a>b)
                if(a>c)
                        document.write("a is largest");
                else
                        document.write("c is largest");
        else
                if(b>c)
                        document.write("b is largest");
        else
                document.write("c is largest");
</script>
</body>
</html>
```

Loops :

Q9: What are the Loop structure use in Java script?

Ans: The term Loops refers to executing a statement or a group of statement till the specified condition is true.Their are three types of loop structure

1. for loop
2. while loop
3. do while loop

(i) for loop : The general form is ,

```
for(initliase the variable;condition;increament/ decreament)
{
        body of loop
}
```

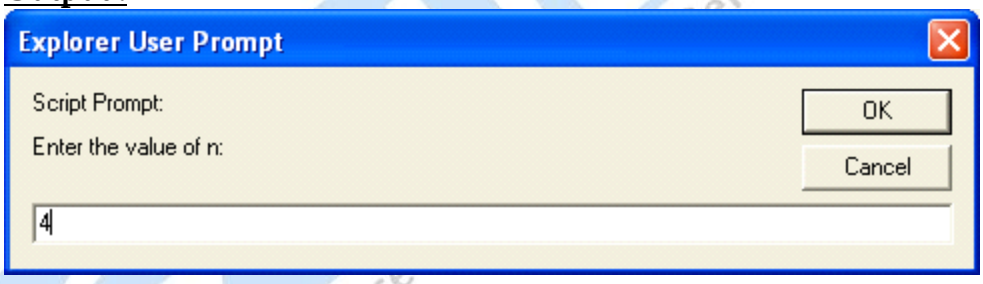
Consider the following Example:

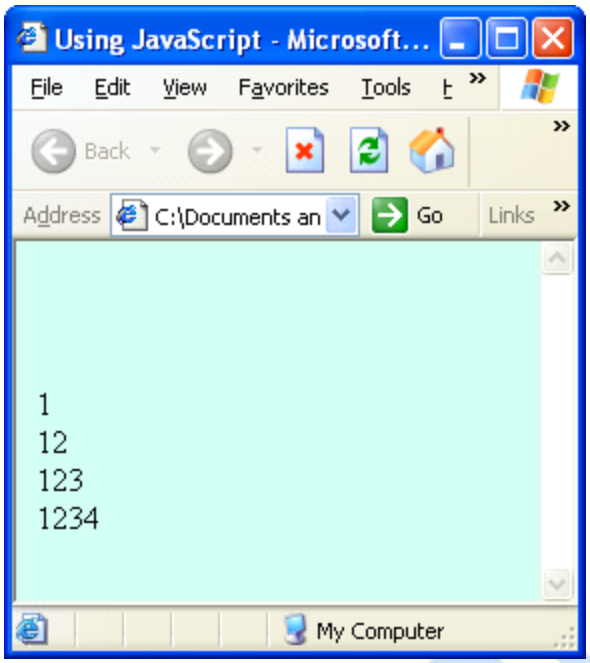
```
n=4
1
12
123
1234
```

```
<html>
<head>
```

```
<title>Using JavaScript</title>
</head>
<body bgcolor="#ccffee">
<script language="JavaScript">
var i,j,n;
n=prompt("Enter the value of n:");
document.write("<br><br><br>") ;
for(i=1;i<=n;i++)
        {
                for(j=1;j<=i;j++)
                {
                        document.write(j);
                }
                document.write("<br>");
        }
</script>
</body>
</html>
```

Output :





(ii) while loop

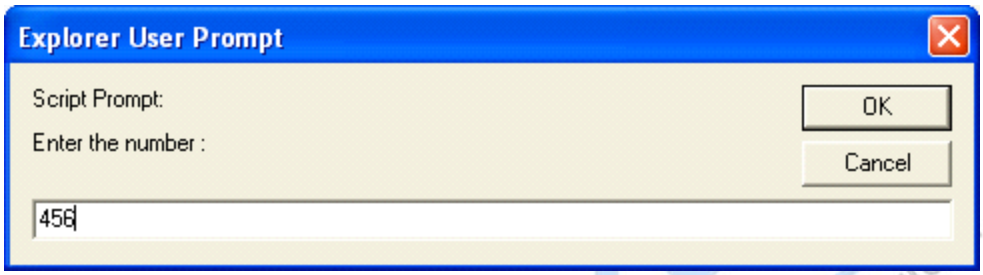
```
/*initialise the variable*/
while(condition)/*test the condition*/
{
        /*body of the loop*/
        /*increament or decreament the variable*/
}
```

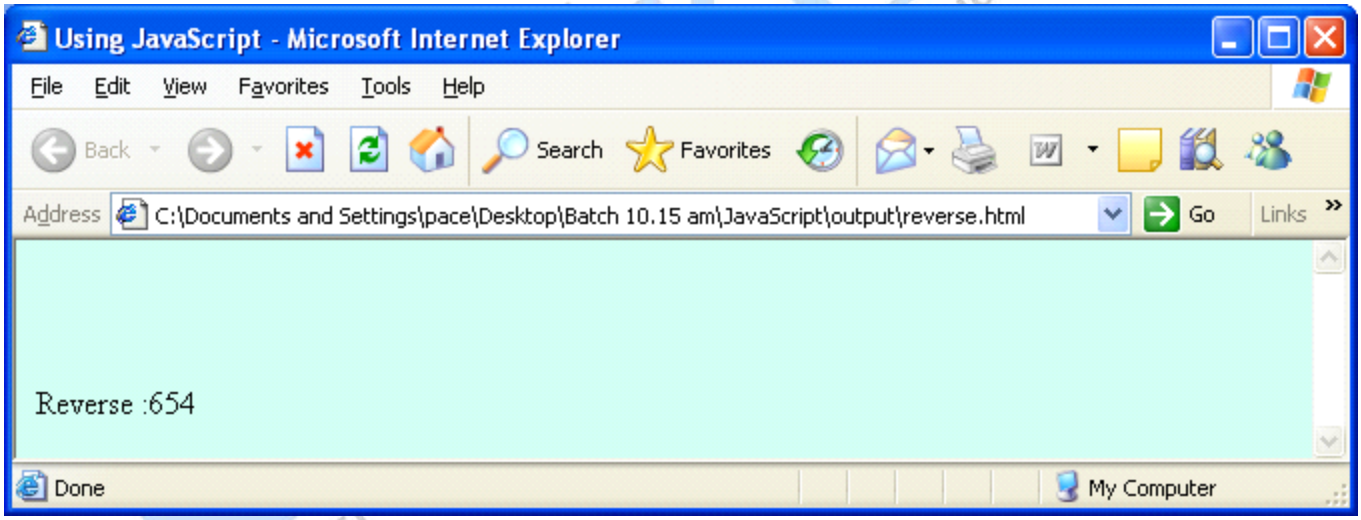
For example

```
<html>
<head>
<title>Using JavaScript</title>
</head>
<body bgcolor="#ccffee">
<script language="JavaScript">
        var num,rev;
        num=prompt("Enter the number :");
        document.write("<br><br><br>") ;
        rev=0;
        while(num!=0)
        {
                rev=rev*10+num%10;
                num=parseInt(num/10);
```

```
        }
        document.write("Reverse :"+rev);

</script>
</body>
</html>
```

output :





(iii) do...while loop : The general form is ,

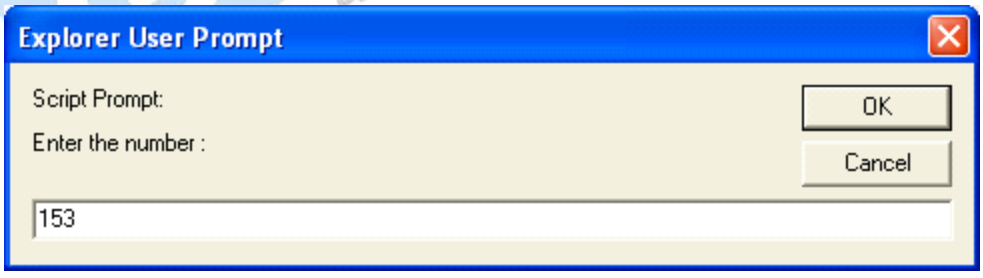
```
/*initialise the variable*/
do
{
   /*body of the loop*/
   /*increament or decreament the variable*/
}while(condition);
```

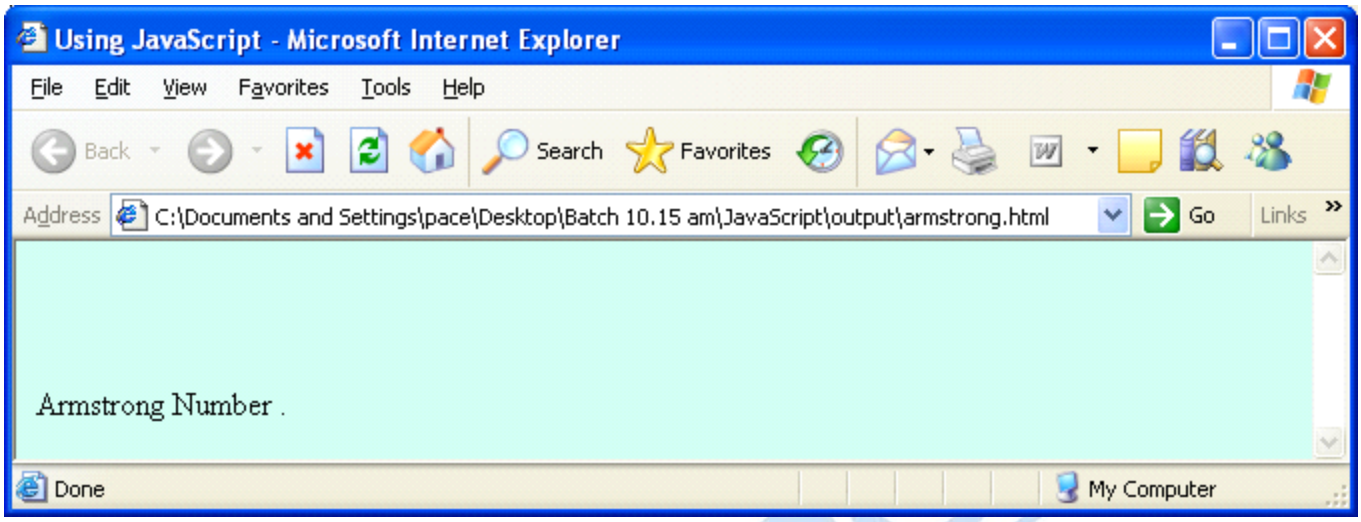
For example

```
<html>
```

```
<head>
<title>Using JavaScript</title>
</head>
<body bgcolor="#ccffee">
<script language="JavaScript">
        var num,sum,org;
        num=prompt("Enter the number :");
        num=parseInt(num);
        org=num;
        document.write("<br><br><br>") ;
        sum=0;
        do
        {
                sum=sum+(num%10)*(num%10)*(num%10);
                num=parseInt(num/10);

        }while(num!=0);
        if(sum==org)
                document.write("Armstrong Number .");
        else
                document.write("Not an armstrong number.");
</script>
</body>
</html>
```

output :





Functions

Q11. Define JavaScript Functions.

Ans: A function will be executed by an event or by a call to the function.To keep the browser from executing a script when the page loads, you can put your script into a function.A function contains code that will be executed by an event or by a call to the function.You may call a function from anywhere within a page (or even from other pages if the function is embedded in an external .js file).Functions can be defined both in the <head> and in the <body> section of a document. However, to assure that a function is read/loaded by the browser before it is called, it could be wise to put functions in the <head> section.

Q12: How to Define a Function

Ans: Function is define like

Syntax

function *functionname*(*var1,var2,...,varX*)
{
some code
}

The parameters var1, var2, etc. are variables or values passed into the function. The { and the } defines the start and end of the function.

Note: A function with no parameters must include the parentheses () after the function name.

Note: Do not forget about the importance of capitals in JavaScript! The word *function* must be written in lowercase letters, otherwise a JavaScript error occurs! Also note that you must call a function with the exact same capitals as in the function name.

Q13: Define JavaScript Function with Example.

Ans:

Example

```
<html>
<head>
<script type="text/javascript">
function displaymessage()
{
alert("biyani girls colleges");
}
</script>
</head>

<body>
<form>
<input type="button" value="Click me!" onclick="displaymessage()" />
</form>
</body>
</html>
```

If the line: alert("biyani girls colleges") in the example above had not been put within a function, it would have been executed as soon as the page was loaded. Now, the script is not executed before a user hits the input button. The function displaymessage() will be executed if the input button is clicked.

Q14: What is the return Statement?

Ans: The return statement is used to specify the value that is returned from the function.

So, functions that are going to return a value must use the return statement.

The example below returns the product of two numbers (a and b):

Example

```
<html>
<head>
<script type="text/javascript">
function product(a,b)
{
return a*b;
}
</script>
</head>

<body>
<script type="text/javascript">
document.write(product(4,3));
</script>

</body>
</html>
```

Q15: Explain the procedure of the Lifetime of JavaScript Variables

Ans: If you declare a variable, using "var", within a function, the variable can only be accessed within that function. When you exit the function, the variable is destroyed. These variables are called local variables. You can have local variables with the same name in different functions, because each is recognized only by the function in which it is declared.

If you declare a variable outside a function, all the functions on your page can access it. The lifetime of these variables starts when they are declared, and ends when the page is closed.

Q16: How many types of functions in JavaScript :

Ans: There are three types of functions:

1. When the function will return a value

2. When the function will not return a value

The general form is,

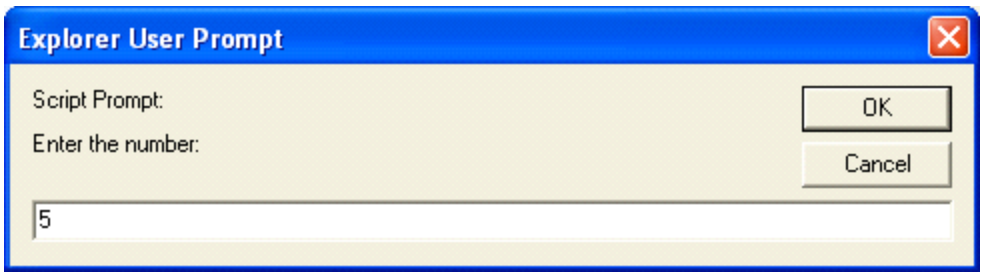
```
function functionname(argument list)
{
        body of the function
}
```

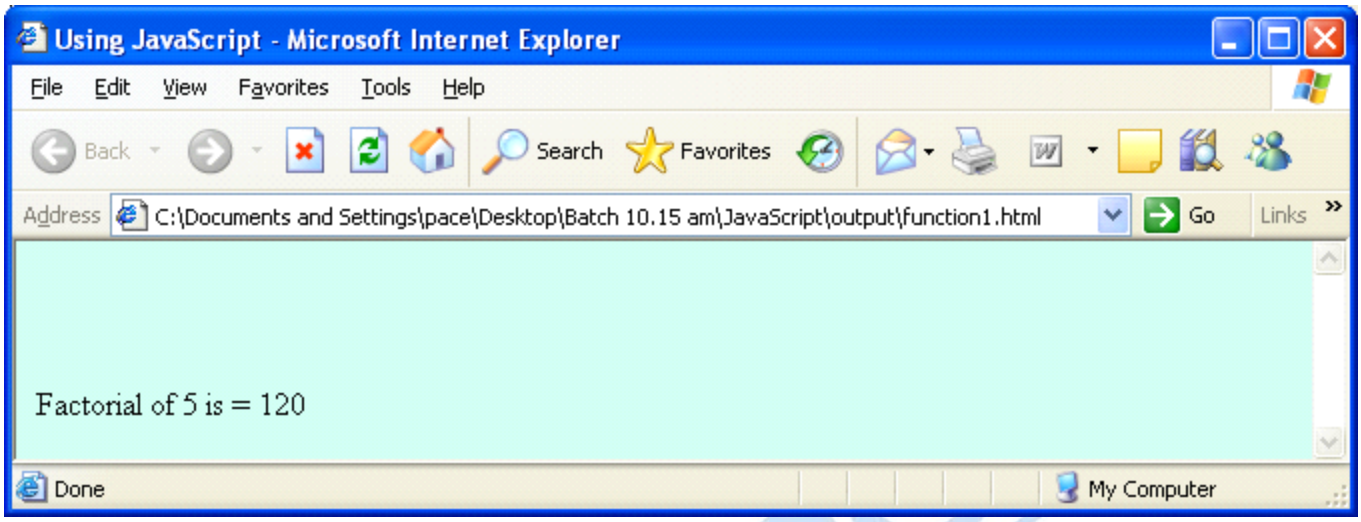
Consider the following program ,

(i) When the function will return a value

```
<html>
<head>
<title>Using JavaScript</title>
<script language="JavaScript">
    function factorial(num)
    {
        var fact,i;
        fact=1;
        for(i=1;i<=num;i++)
            fact=fact*i;
        return fact;
    }
</script>
</head>
<body bgcolor="#ccffee">
<script language="JavaScript">
    var num,fact;
    num=prompt("Enter the number:");
    document.write("<br><br><br>") ;
    fact=factorial(num);
    document.write("Factorial of " + num + " is = " + fact);
</script>
</body>
</html>
```

output :



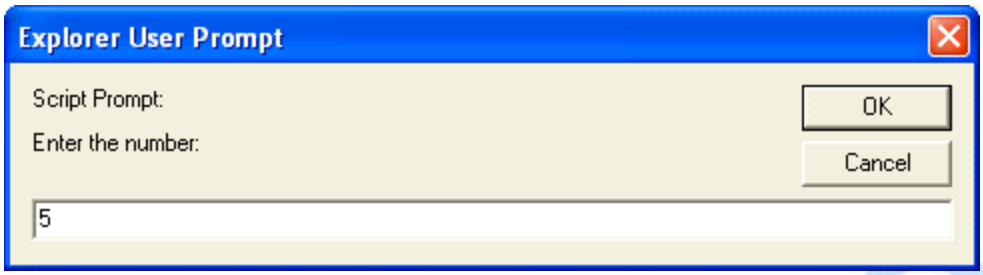


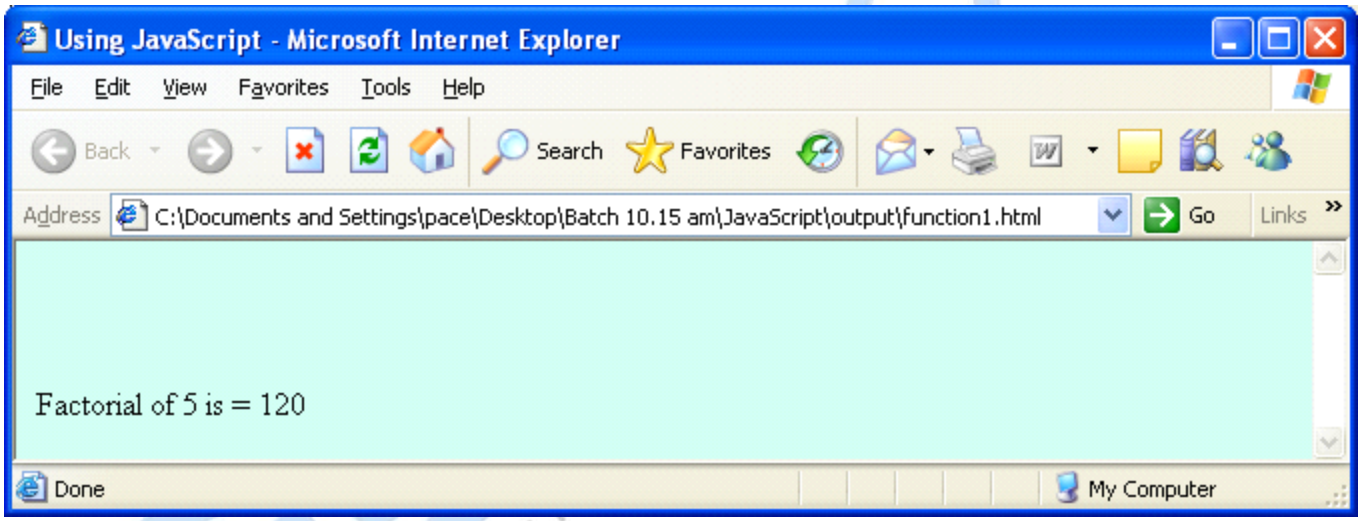
(ii) When the function will not return a value

```
<html>
<head>
<title>Using JavaScript</title>
<script language="JavaScript">
        function factorial(num)
        {
                var fact,i;
                fact=1;
                for(i=1;i<=num;i++)
                        fact=fact*i;
                document.write("Factorial of " + num + " is = " + fact);

        }
</script>
</head>
<body bgcolor="#ccffee">
<script language="JavaScript">
        var num;
        num=prompt("Enter the number:");
        document.write("<br><br><br>") ;
        factorial(num);

</script>
</body>
```

</html>

output :





JavaScript Global Properties And Global functions

Q17 Define the JavaScript global properties.
Ans: JavaScript Global Properties

Property	Description
Infinity	A numeric value that represents positive/negative infinity
NaN	"Not-a-Number" value
undefined	Indicates that a variable has not been assigned a value

Q18: Define eval() function and its usage with example.
Ans: Definition eval() :-The eval() function evaluates or executes an argument.If the argument is an expression, eval() evaluates the

expression. If the argument is one or more JavaScript statements, eval() executes the statements.

Syntax

eval(*string*)

Parameter	Description
string	A JavaScript expression, variable, statement, or sequence of statements

```
<script type="text/javascript">

eval("x=10;y=20;document.write(x*y)");
document.write("<br />" + eval("2+2"));
document.write("<br />" + eval(x+17));

</script>
```

The output of the code above will be:

```
200
4
27
```

Q19: Define String() function and its usage with example.

Ans: Definition of String():-The String() function converts the value of an object to a string.

Syntax

String(object)

Parameter	Description
object	Required. A JavaScript object

```
<script type="text/javascript">
var test1 = new Boolean(1);
var test2 = new Boolean(0);
var test3 = new Boolean(true);
var test4 = new Boolean(false);
var test5 = new Date();
```

```
var test6 = new String("999 888");
var test7 = 12345;

document.write(String(test1)+ "<br />");
document.write(String(test2)+ "<br />");
document.write(String(test3)+ "<br />");
document.write(String(test4)+ "<br />");
document.write(String(test5)+ "<br />");
document.write(String(test6)+ "<br />");
document.write(String(test7)+ "<br />");
</script>
```

The output of the code above will be:

```
true
false
true
false
Tue Aug 23 2011 18:38:43 GMT+0530 (India Standard Time)
999 888
12345
```

Q20: Define escape() function and its usage with example.

Ans: **Definition of escape():-**The escape() function encodes a string.This function makes a string portable, so it can be transmitted across any network to any computer that supports ASCII characters.This function encodes special characters, with the exception of: * @ - _ + . /

Note: Use unescape() to decode strings.

Syntax

escape(string)

Parameter	Description
String	Required. The string to be encoded

Example

Encode a string:

```
<script type="text/javascript">

document.write(escape("Need Notes? Visit BISMA!"));

</script>
```

The output of the code above will be:
Need%20Notes%3F%20Visit%20BISMA%21

Q21: Define parseFloat() function and its usage with example.

Ans: **Definition of parsefloat():-**The parseFloat() function parses a string and returns a floating point number.This function determines if the first character in the specified string is a number. If it is, it parses the string until it reaches the end of the number, and returns the number as a number, not as a string.

Syntax

parseFloat(string)

Parameter	Description
string	Required. The string to be parsed

Example

Parse different strings:

```
<script type="text/javascript">

document.write(parseFloat("10") + "<br />");
document.write(parseFloat("10.33") + "<br />");
document.write(parseFloat("34 45 66") + "<br />");
document.write(parseFloat(" 60 ") + "<br />");
document.write(parseFloat("40 years") + "<br />");
document.write(parseFloat("He was 40") + "<br />");

</script>
```

The output of the code above will be:

10
10.33
34
60
40
NaN

Q22: Define parseInt() function and its usage with example.

Ans: **Definition of parseInt():-**The parseInt() function parses a string and returns an integer.The radix parameter is used to specify which numeral system to be used, for example, a radix of 16 (hexadecimal) indicates that the number in the string should be parsed from a hexadecimal number to a decimal number.If the radix parameter is omitted, JavaScript assumes the following:

- If the string begins with "0x", the radix is 16 (hexadecimal)
- If the string begins with "0", the radix is 8 (octal). This feature is deprecated
- If the string begins with any other value, the radix is 10 (decimal)

Syntax

parseInt(string, radix)

Parameter	Description
string	Required. The string to be parsed
radix	Optional. A number (from 2 to 36) that represents the numeral system to be used

Example

Parse different strings:

```
<script type="text/javascript">

document.write(parseInt("10") + "<br />");
document.write(parseInt("10.33") + "<br />");
document.write(parseInt("34 45 66") + "<br />");
document.write(parseInt(" 60 ") + "<br />");
document.write(parseInt("40 years") + "<br />");
document.write(parseInt("He was 40") + "<br />");

document.write("<br />");
document.write(parseInt("10",10)+ "<br />");
document.write(parseInt("010")+ "<br />");
document.write(parseInt("10",8)+ "<br />");
document.write(parseInt("0x10")+ "<br />");
document.write(parseInt("10",16)+ "<br />");

</script>
```

The output of the code above will be:

10
10
34
60
40
NaN

10
8
8
16
16

Event Handling :

Q23: Explain Event Handling in Java Script?

Ans: Events as we know are the actions performed by the computer system or the user.

In case of the event handling , we have ,
(a) Type of event which is to be raised.
(b) Code which is to be executed when the event is raised.

1. Type of Events :: There are various events which we can handle.
(i) onLoad( ) : This will occur when we load the body or other tag.
(ii) onClick( ) :This will occur when we click on the item.
(iii) onDblClick( ):This will occur when we double click the item.
(iv) onFocus( ) :This will occur when the control recieve the focus.
(v) onBlur( ) :This will occur when the control will lost the focus.
(vi)onMouseOver( ):This will occur when we place the mouse over an object.
(vii) onMouseOut( ):This will occur when we move the mouse out of an object.
etc....

2.Code which is to be executed when the event is raised.

Here , we have to write a function which is to be executed when a particular event is raised.

Q24: Design the JavaScript code to display the dialog box when the page is

loaded in the memory.

Ans:

```
<html>
<head>
<title>Using Event Handling</title>
<script language="JavaScript">
function wel( )
{
        alert("Welcome to JavaScript Event Handling");
}
</script>
</head>
<body onLoad="wel( )" bgcolor="red">
</body>
</html>
```

Output :

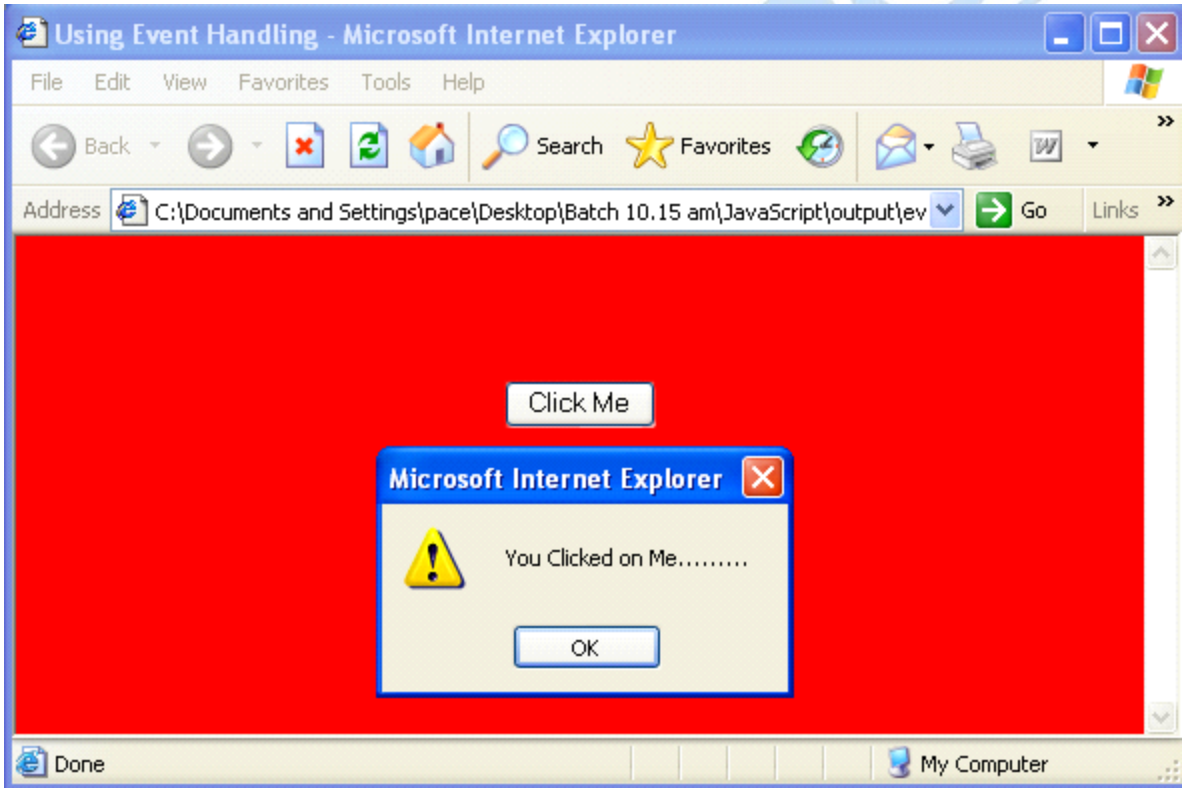
Q25 Design the JavaScript code to create the button and when the user click on it a message is displayed.

Ans:

```
<html>
<head>
<title>Using Event Handling</title>
<script language="JavaScript">
function msg( )
{
    alert("You Clicked on Me.....");
}
</script>
</head>
<body bgcolor="red">
    <br>
```

```
        <br>
        <br>
        <center>
        <form name="myform">
                <input type=button name="cmdbutton" value="Click Me"
onClick="msg( )">
        </form>
        </center>
</body>
</html>
```

Output :

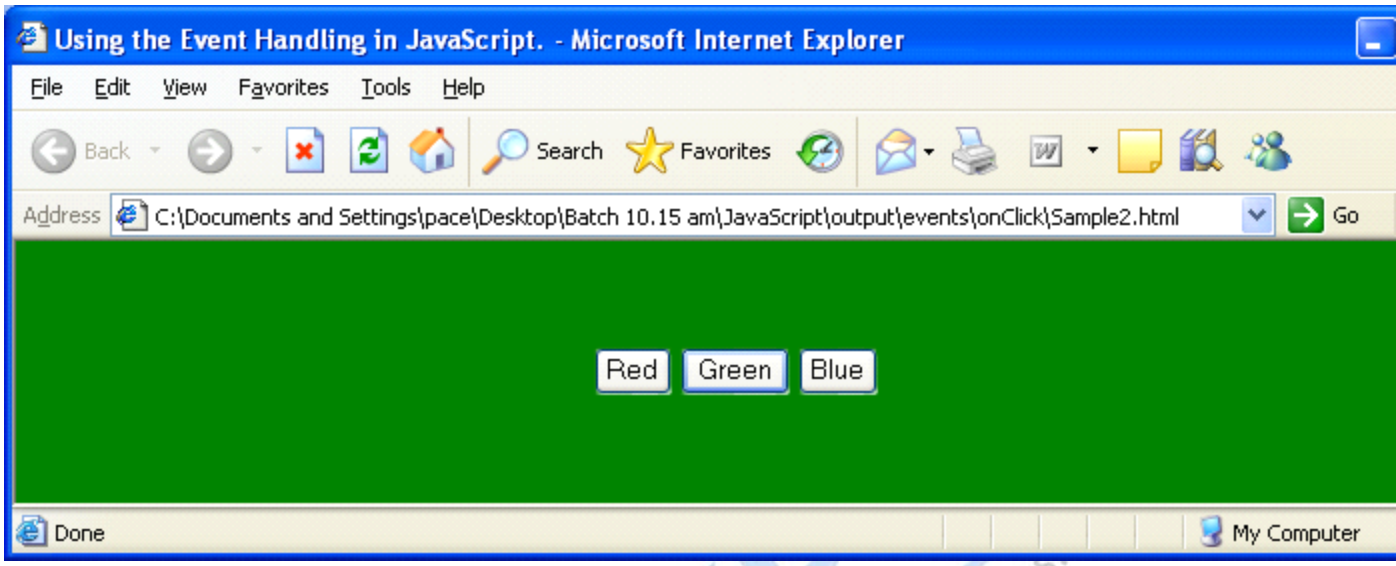


Q26 Design the JavaScript code for creating the application which contains, three buttons,
Red, Green and Blue to change the background color accordingly.

Ans

```
<html>
<head>
<title>Using the Event Handling in JavaScript.</title>
<script language="JavaScript">
function changeRed( )
{
        document.bgColor="red";
}
function changeGreen( )
{
        document.bgColor="green";
}
function changeBlue( )
{
        document.bgColor="blue";
}
</script>
</head>
<body bgcolor="#ccddee">
<center>
<br>
<br>
<form name="myform">
<input type="button" name="cmdred" onClick="changeRed( )"
value="Red">
<input type="button" name="cmdgree" onClick="changeGreen( )"
value="Green">
<input type="button" name="cmdblue" onClick="changeBlue( )"
value="Blue">
</form>
</center>
</body>
</html>
```

output :

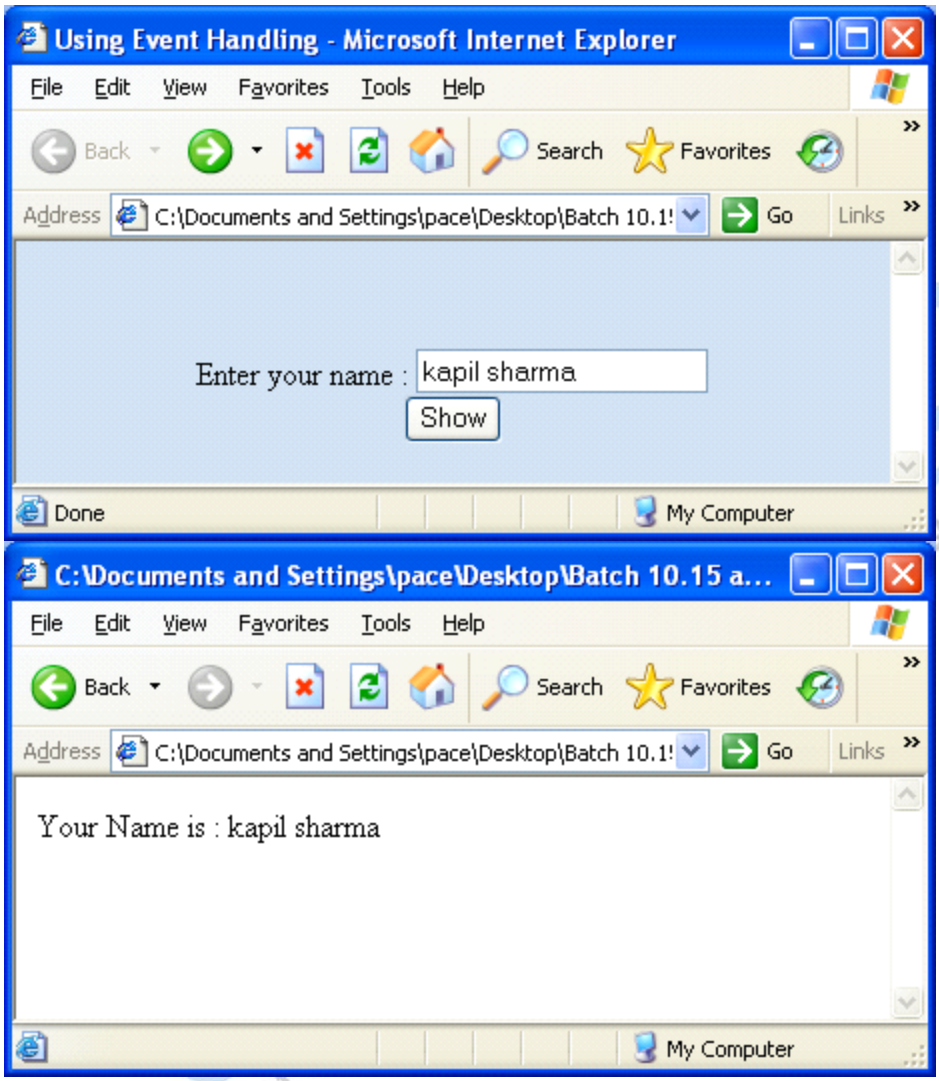


Q27 Design the application to access the value of the text box

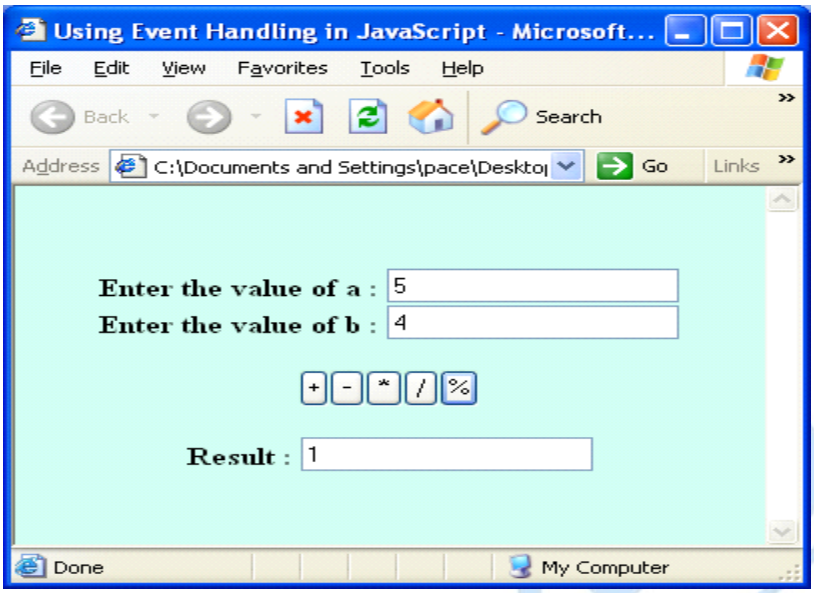
Ans

```
<html>
<head>
<title>Using Event Handling</title>
<script language="JavaScript">
function show( )
{
        var sname;
        sname=document.myform.txtname.value;
        document.write("Your Name  is : " + sname);
}
</script>
</head>
<body bgcolor="#ccddee">
<center>
<br>
<br>
<form name="myform">
Enter your name : <input type="text" name="txtname">
<br>
<input type="button" name="cmdshow" value="Show"
onClick="show()">
</form>
</center>
```

```
</body>
</html>
```



Q28: Design the application which contains three textboxes for two number and a result , and perform +,-,*,/ and %.




```
<html>
<head>
<title>Using Event Handling in JavaScript</title>
<script language="JavaScript">
function add( )
{
  var a,b,c;
  a=document.myform.txta.value;
  b=document.myform.txtb.value;
  a=parseInt(a);
  b=parseInt(b);
  c=a+b;
 document.myform.txtc.value=c;
}
function subtract( )
{
  var a,b,c;
  a=document.myform.txta.value;
  b=document.myform.txtb.value;
  a=parseInt(a);
  b=parseInt(b);
  c=a-b;
  document.myform.txtc.value=c;
}
function multiply( )
```

```
{
  var a,b,c;
  a=document.myform.txta.value;
  b=document.myform.txtb.value;
  a=parseInt(a);
  b=parseInt(b);
  c=a*b;
  document.myform.txtc.value=c;
}
function divide( )
{
  var a,b,c;

  a=document.myform.txta.value;
  b=document.myform.txtb.value;
  a=parseInt(a);
  b=parseInt(b);
  c=a/b;
 document.myform.txtc.value=c;
}

function mod( )
{
  var a,b,c;
  a=document.myform.txta.value;
  b=document.myform.txtb.value;
  a=parseInt(a);
  b=parseInt(b);
  c=a%b;
  document.myform.txtc.value=c;
}
</script>
</head>
<body bgcolor="#ccffee">
<center>
<br>
<br>
<form name="myform">
<b> Enter the value of a : </b><input type="text" name="txta"><br>
<b> Enter the value of b : </b><input type="text" name="txtb"><br>
```

```
<br>
<input type="button" name="cmdplus" value="+" onClick="add(
)"><input type="button" name="cmdminus" value="-" onClick="subtract(
)"><input type="button" name="cmdmult" value="*" onClick="multiply(
)"><input type="button" name="cmddiv" value="/" onClick="divide(
)"><input type="button" name="cmdmod" value="%" onClick="mod(
)"><br>
<br>
<b> Result : </b><input type="text" name="txtc">
<br>
</form>
</center>
</body>
</html>
```

Chapter 3
Arrays

Q1: What is an Array?

Ans: An array is a special variable, which can hold more than one value, at a time.

If you have a list of items (a list of car names, for example), storing the cars in single variables could look like this:

```
var car1="Saab";
var car2="Volvo";
var car3="BMW";
```

However, what if you want to loop through the cars and find a specific one? And what if you had not 3 cars, but 300?

The best solution here is to use an array!

An array can hold all your variable values under a single name. And you can access the values by referring to the array name.

Each element in the array has its own ID so that it can be easily accessed.

Q2 How to create an Array?

Ans: An array can be defined in three ways.

The following code creates an Array object called myCars:

1:

```
var myCars=new Array(); // regular array (add an optional integer
myCars[0]="Saab";      // argument to control array's size)
myCars[1]="Volvo";
myCars[2]="BMW";
```

2:

```
var myCars=new Array("Saab","Volvo","BMW"); // condensed array
```

3:

```
var myCars=["Saab","Volvo","BMW"]; // literal array
```

Note: If you specify numbers or true/false values inside the array then the variable type will be Number or Boolean, instead of String.

Q3. How to Access an Array?

Ans: We can refer to a particular element in an array by referring to the name of the array and the index number. The index number starts at 0.
The following code line:
document.write(myCars[0]);

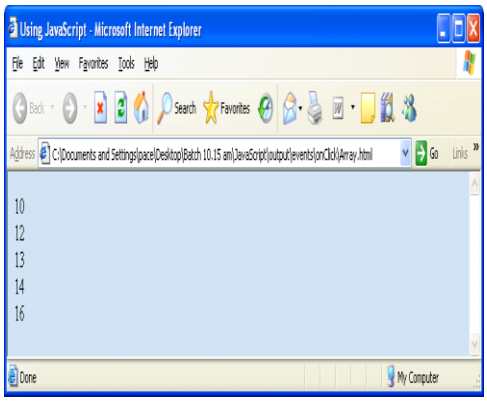
will result in the following output:
Saab

Q4. How to use array in JavaScript?

Ans: Arrays : An array is the collection of elements.In JavaScript we can declare the array by,
arrayname=new Array(size of array);
e.g. x=new Array(5);

Consider the following code,

```
<html>
<head>
<title>Using JavaScript</title>
</head>
<body bgcolor="#ccddee">
<script language="JavaScript">
x=new Array(5);
x[0]=10;
x[1]=12;
x[2]=13;
x[3]=14;
x[4]=16;
var i;
for(i=0;i<5;i++)
{
        document.write(x[i]+"<br>");
}
</script>
</body>
</html>
```



Q5: How to modify values in an Array

Ans: To modify a value in an existing array, just add a new value to the array with a specified index number:

myCars[0]="Opel";

Now, the following code line:

document.write(myCars[0]);

will result in the following output:

Opel

Object Properties and Array Object Methods

Q6: Define Array Object Properties and Array Object Methods

Ans: Array Object Properties

Property	Description
constructor	Returns the function that created the Array object's prototype
length	Sets or returns the number of elements in an array

Array Object Methods

Method	Description
concat()	Joins two or more arrays, and returns a copy of the joined arrays
join()	Joins all elements of an array into a string
pop()	Removes the last element of an array, and returns that element
push()	Adds new elements to the end of an array, and returns the new length
reverse()	Reverses the order of the elements in an array
shift()	Removes the first element of an array, and returns that element
sort()	Sorts the elements of an array

toString()	Converts an array to a string, and returns the result
unshift()	Adds new elements to the beginning of an array, and returns the new length
valueOf()	Returns the primitive value of an array

Q7: Define constructor and its usage with example.

Ans: Definition of constructor:- The constructor property returns the function that created the array object's prototype.

Syntax

array.constructor

Example

Return the function that created the Array object's prototype:

```
<script type="text/javascript">

var fruits = ["Banana", "Orange", "Apple", "Mango"];
document.write(fruits.constructor);

</script>
```

The output of the code above will be:

function Array() { [native code] }

Q8: Define length and its usage with example.

Ans: Definition of length:-The length property sets or returns the number of elements in an array.

Syntax

array.length

Example

Return and set the length of an array:

```
<script type="text/javascript">

var fruits = ["Banana", "Orange", "Apple", "Mango"];
document.write("Original length: " + fruits.length);
document.write("<br />");
fruits.length=5;
document.write("New length: " + fruits.length);

</script>
```

The output of the code above will be:
Original length: 4
New length: 5

Q9: Define concat and its usage with example.

Ans: <u>Definition of concat:</u>-The concat() method is used to join two or more arrays.

This method does not change the existing arrays, it only returns a copy of the joined arrays.

Syntax

array.concat(array2, array3, ..., arrayX);

Parameter	Description
array2, array3, ..., arrayX	Required. The arrays to be joined

Example 2

Join three arrays:

```
<script type="text/javascript">

var parents = ["Jani", "Tove"];
var brothers = ["Stale", "Kai Jim", "Borge"];
var children = ["Cecilie", "Lone"];
var family = parents.concat(brothers, children);
document.write(family);

</script>
```

The output of the code above will be:
Jani,Tove,Stale,Kai Jim,Borge,Cecilie,Lone

Q10: Define join and its usage with example.

Ans: <u>Definition of join</u>:-The join() method joins all elements of an array into a string, and returns the string.The elements will be separated by a specified separator. The default separator is comma (,).

Syntax

array.join(separator)

Parameter	Description
separator	Optional. The separator to be used. If omitted, the elements are separated with a comma

Example

Join all elements of an array into a string:

```
<script type="text/javascript">

var fruits = ["Banana", "Orange", "Apple", "Mango"];
document.write(fruits.join() + "<br />");
document.write(fruits.join("+") + "<br />");
document.write(fruits.join(" and "));

</script>
```

The output of the code above will be:

Banana,Orange,Apple,Mango
Banana+Orange+Apple+Mango
Banana and Orange and Apple and Mango

Q11: Define POP() and its usage with example.

Ans: Definition of POP():-The pop() method removes the last element of an array, and returns that element.

Note: This method changes the length of an array!

Syntax

Array.pop()

Example

Remove the last element of an array (this will also change the length of the array):

```
<script type="text/javascript">

var fruits = ["Banana", "Orange", "Apple", "Mango"];
document.write(fruits.pop() + "<br />");
document.write(fruits + "<br />");
document.write(fruits.pop() + "<br />");
document.write(fruits);

</script>
```

The output of the code above will be:

Mango
Banana,Orange,Apple
Apple

Banana,Orange

Q12: Define Push() and its usage with example.

Ans: Definition of Push():-The push() method adds new elements to the end of an array, and returns the new length.

Note: This method changes the length of an array!

Syntax

array.push(element1, element2, ..., elementX)

Parameter	Description
element1, element2, ..., elementX	Required. The element(s) to add to the end of the array

Example

Add new elements to the end of an array, and return the new length:

```
<script type="text/javascript">

var fruits = ["Banana", "Orange", "Apple", "Mango"];
document.write(fruits.push("Kiwi") + "<br />");
document.write(fruits.push("Lemon","Pineapple") + "<br />");
document.write(fruits);

</script>
```

The output of the code above will be:

5
7
Banana,Orange,Apple,Mango,Kiwi,Lemon,Pineapple

Q13 : Define Reverse and its usage with example.

Ans: Definition of Reverse:-The reverse() method reverses the order of the elements in an array (makes the last element first, and the first element last).

Note: This method changes the original array!

Syntax

array.reverse()

Example

Reverse the order of the elements in an array:

```
<script type="text/javascript">

var fruits = ["Banana", "Orange", "Apple", "Mango"];
document.write(fruits.reverse());

</script>
```

The output of the code above will be:
Mango,Apple,Orange,Banana

Q14: Define sort and its usage with example.

Ans: **Definition of Sort:- The sort() method sorts the elements of an array.**
Note: This method changes the original array!

Syntax

array.sort(sortfunc)

Parameter	Description
sortfunc	Optional. A function that defines the sort order

Example 1
Sort an array (alphabetically and ascending):

```
<script type="text/javascript">

var fruits = ["Banana", "Orange", "Apple", "Mango"];
document.write(fruits.sort());

</script>
```

The output of the code above will be:
Apple,Banana,Mango,Orange

Sort numbers (numerically and ascending):

```
<script type="text/javascript">

function sortNumber(a,b)
{
return a - b;
}

var n = ["10", "5", "40", "25", "100", "1"];
```

```
document.write(n.sort(sortNumber));

</script>
```

The output of the code above will be:

1,5,10,25,40,100

Sort numbers (numerically and descending):

```
<script type="text/javascript">

function sortNumber(a,b)
{
return b - a;
}

var n = ["10", "5", "40", "25", "100", "1"];
document.write(n.sort(sortNumber));

</script>
```

The output of the code above will be:

100,40,25,10,5,1

Q15: Define Tostring and its usage with example.

Ans: Definition of Tostring:- The toString() method converts an array to a string and returns the result.

Note: The returned string will separate the elements in the array with commas.

Syntax

array.toString()

Example

Convert an array to a string:

```
<script type="text/javascript">

var fruits = ["Banana", "Orange", "Apple", "Mango"];
document.write(fruits.toString());

</script>
```

The output of the code above will be:

Banana,Orange,Apple,Mango

Q16: Define Valueof and its usage with example.

Ans: Definition of Valueof:-The valueOf() method returns the primitive value of an array.

Note: This method is usually called automatically by JavaScript behind the scenes, and not explicitly in code.

Syntax

array.valueOf()

Example

Return the primitive value of an array:

```
<script type="text/javascript">

var fruits = ["Banana", "Orange", "Apple", "Mango"];
document.write(fruits.valueOf());

</script>
```

The output of the code above will be:

Banana,Orange,Apple,Mango

Q17: Define shift and its usage with example.

Ans: Definition of Shift:-The shift() method removes the first element of an array, and returns that element.

Note: This method changes the length of an array!

Syntax

array.shift()

Example

Remove the first element of an array (this will also change the length of the array):

```
<script type="text/javascript">

var fruits = ["Banana", "Orange", "Apple", "Mango"];
document.write(fruits.shift() + "<br />");
document.write(fruits + "<br />");
document.write(fruits.shift() + "<br />");
document.write(fruits);

</script>
```

The output of the code above will be:

Banana
Orange,Apple,Mango
Orange
Apple,Mango

Q18: Define unshift and its usage with example.

Ans: **Definition of Unshift:-**

The unshift() method adds new elements to the beginning of an array, and returns the new length.

Note: This method changes the length of an array!

Syntax

array.unshift(element1,element2, ..., elementX)

Parameter	Description
element1,element2, ..., elementX	Required. The element(s) to add to the beginning of the array

Example

Add new elements to the beginning of an array, and return the new length:

```
<script type="text/javascript">

var fruits = ["Banana", "Orange", "Apple", "Mango"];
document.write(fruits.unshift("Kiwi") + "<br />");
document.write(fruits.unshift("Lemon","Pineapple") + "<br />");
document.write(fruits);

</script>
```

The output of the code above will be:

5
7
Lemon,Pineapple,Kiwi,Banana,Orange,Apple,Mango

Chapter 4
Number Object

Q1 Define Number Object.

Ans: The Number object is an object wrapper for primitive numeric values. Number objects are created with new Number().

Syntax

Var num = new Number(value);

Note: If the value parameter cannot be converted into a number, it returns NaN (Not-a-Number).

Q2. Define number object properties and methods list.

Ans:

Number Object Properties

Property	Description
constructor	Returns the function that created the Number object's prototype
MAX_VALUE	Returns the largest number possible in JavaScript
MIN_VALUE	Returns the smallest number possible in JavaScript
NEGATIVE_INFINITY	Represents negative infinity (returned on overflow)
POSITIVE_INFINITY	Represents infinity (returned on overflow)
prototype	Allows you to add properties and methods to an object

Number Object Methods

Method	Description
toExponential(x)	Converts a number into an exponential notation
toFixed(x)	Formats a number with x numbers of digits after the decimal point
toPrecision(x)	Formats a number to x length
toString()	Converts a Number object to a string

valueOf()	Returns the primitive value of a Number object

Q3: Define MAX_VALUE and its usage with example.

Ans: Definition of MAX_VALUE:-The MAX_VALUE property returns the largest number possible in JavaScript.
This static property has a value of 1.7976931348623157e+308.
Note: Numbers larger than this are represented as infinity.
Syntax

Number.MAX_VALUE

Example

Return the largest number possible in JavaScript.

```
<script type="text/javascript">

document.write(Number.MAX_VALUE);

</script>
```

The output of the code above will be:

1.7976931348623157e+308

Q4: Define MIN_VALUE and its usage with example.

Ans: Definition of MIN_VALUE:-The MIN_VALUE property returns the smallest number possible in JavaScript.This static property has a value of 5e-324.

Note: Numbers smaller than this are converted to 0.

Syntax

Number.MIN_VALUE

Example

Return the smallest number possible in JavaScript:

```
<script type="text/javascript">

document.write(Number.MIN_VALUE);

</script>
```

The output of the code above will be:

5e-324

Q5: Define NEGATIVE_INFINITY and its usage with example.

Ans: Definition NEGATIVE_INFINITY:The NEGATIVE_INFINITY property represents negative infinity, returned on overflow.

Syntax

Number.NEGATIVE_INFINITY;

Example

Create overflow:

```
<script type="text/javascript">

var x=(-Number.MAX_VALUE)*2;
if (x==Number.NEGATIVE_INFINITY)
{
document.write(x);
}

</script>
```

The output of the code above will be:

-Infinity

Q6: Define POSITIVE_INFINITY and its usage with example.

Ans: POSITIVE_INFINITY:The POSITIVE_INFINITY property represents infinity, returned on overflow.

Syntax

Number.POSITIVE_INFINITY;

Example

Create overflow:

```
<script type="text/javascript">

var x=(Number.MAX_VALUE)*2;
if (x==Number.POSITIVE_INFINITY)
{
document.write(x);
}

</script>
```

The output of the code above will be:

Infinity

Q7 Define prototype property and its usage with example.

Ans: Definition prototype property:The prototype property allows you to add properties and methods to an object**.**

Note: Prototype is a global property which is available with almost all JavaScript objects.

Syntax

object.prototype.name=value

Example

Use the prototype property to add a property to an object:

```
<script type="text/javascript">

function employee(name,jobtitle,born)
{
this.name=name;
this.jobtitle=jobtitle;
this.born=born;
}

var fred=new employee("Fred Flintstone","Caveman",1970);
employee.prototype.salary=null;
fred.salary=20000;

document.write(fred.salary);

</script>
```

The output of the code above will be:

20000

Q8 Define toExponential() and its usage with example.

Ans: The toExponential() method converts a number into an exponential notation.

Syntax

number.toExponential(x)

Parameter	Description
x	Optional. An integer between 0 and 20 representing the number of digits in the notation after the decimal point. If omitted, it is set to as many digits as necessary to represent the value

Example

Convert a number into an exponential notation:

```
<script type="text/javascript">
```

```
var num = new Number(13.3714);
document.write(num.toExponential()+"<br />");
document.write(num.toExponential(2)+"<br />");
document.write(num.toExponential(3)+"<br />");
document.write(num.toExponential(10));

</script>
```

The output of the code above will be:

```
1.33714e+1
1.34e+1
1.337e+1
1.3371400000e+1
```

Q9 Define toFixed() and its usage with example.

Ans: Definition toFixed(): The toFixed() method formats a number to use a specified number of trailing decimals**.**
The number is rounded up, and nulls are added after the decimal point (if needed), to create the desired decimal length.

Syntax

number.toFixed(x)

Parameter	Description
x	Optional. The number of digits after the decimal point. Default is 0 (no digits after the decimal point)

Example

Format a number:

```
<script type="text/javascript">

var num = new Number(13.3714);
document.write(num.toFixed()+"<br />");
document.write(num.toFixed(1)+"<br />");
document.write(num.toFixed(3)+"<br />");
document.write(num.toFixed(10));

</script>
```

The output of the code above will be:

```
13
```

13.4
13.371
13.3714000000

Q10 Define toPrecision() and its usage with example.

Ans: Definition toPrecision():-The toPrecision() method formats a number to a specified length.
A decimal point and nulls are added (if needed), to create the specified length.

Syntax

number.toPrecision(x)

Parameter	Description
X	Optional. The number of digits. If omitted, it returns the entire number (without any formatting)

Example

Format a number to a specified length:

```
<script type="text/javascript">

var num = new Number(13.3714);
document.write(num.toPrecision()+"<br />");
document.write(num.toPrecision(2)+"<br />");
document.write(num.toPrecision(3)+"<br />");
document.write(num.toPrecision(10));

</script>
```

The output of the code above will be:

13.3714
13
13.4
13.37140000

Q11 Define toString() and its usage with example.

Ans: Definition toString():-The toString() method converts a Number object to a string.

Note: This method is automatically called by JavaScript whenever a Number object needs to be displayed as a string.

Syntax

number.toString(radix)

Parameter	Description
radix	Optional. Which base to use for representing a numeric value. Must be an integer between 2 and 36. • 2 - The number will show as a binary value • 8 - The number will show as an octal value • 16 - The number will show as an hexadecimal value

Example

Convert a number to a string, with different bases:

```
<script type="text/javascript">

var num=new Number(15);
document.write(num.toString()+"<br />");
document.write(num.toString(2)+"<br />");
document.write(num.toString(8)+"<br />");
document.write(num.toString(16)+"<br />");

</script>
```

The output of the code above will be:

15
1111
17
f

Q12 Define valueOf() and its usage with example.

Ans: Definition valueOf():-The valueOf() method returns the primitive value of a Number object.

Note: This method is usually called automatically by JavaScript behind the scenes, and not explicitly in code.

Syntax

number.valueOf()

Example

Return the primitive value of a Number object:

```
<script type="text/javascript">

var num=new Number(15);
document.write(num.valueOf());
```

```
</script>
```

The output of the code above will be:

15

Chapter 5
Object Oriented Programming

Q1. Define Object Oriented Programming in Java Script?

Ans: JavaScript is an Object Oriented Programming (OOP) language. An OOP language allows you to define your own objects and make your own variable types.

JavaScript is an Object Oriented Programming (OOP) language. An OOP language allows you to define your own objects and make your own variable types.

Note that an object is just a special kind of data. An object has properties and methods.

Q2. Define the Properties of an object?

Ans: Properties are the values associated with an object.In the following example we are using the length property of the String object to return the number of characters in a string:

```
<script type="text/javascript">
var name="biyani's!";
document.write(name.length);
</script>
```

The output of the code above will be:

9

Q3. What are the Methods of javascript?

Ans: Methods are the actions that can be performed on objects.In the following example we are using the toUpperCase() method of the String object to display a text in uppercase letters:

```
<script type="text/javascript">
var name="biyani";
```

```
document.write(name.toUpperCase());
</script>
```

The output of the code above will be:

BIYANI

Q4: Define String object in JavaScript.

Ans: The String object is used to manipulate a stored piece of text. The following example uses the length property of the String object to find the length of a string:

```
var txt="Hello world!";
document.write(txt.length);
```

The code above will result in the following output:

12

The following example uses the toUpperCase() method of the String object to convert a string to uppercase letters:

```
var txt="Hello world!";
document.write(txt.toUpperCase());
```

The code above will result in the following output:

HELLO WORLD!

Q5: How to Create a Date Object in javascript?

Ans: The Date object is used to work with dates and times. Date objects are created with the Date() constructor.There are four ways of instantiating a date:

```
New Date() // current date and time
new Date(milliseconds) //milliseconds since
1970/01/01
new Date(dateString)
new Date(year, month, day, hours, minutes, seconds,
milliseconds)
```

Most parameters above are optional. Not specifying, causes 0 to be passed in.

Once a Date object is created, a number of methods allow you to operate on it. Most methods allow you to get and set the year, month, day, hour, minute, second, and milliseconds of the object, using either local time or UTC (universal, or GMT) time.

All dates are calculated in milliseconds from 01 January, 1970 00:00:00 Universal Time (UTC) with a day containing 86,400,000 milliseconds.
Some examples of instantiating a date:

```
var today = new Date()
var d1 = new Date("October 13, 1975
11:13:00")
var d2 = new Date(79,5,24)
var d3 = new Date(79,5,24,11,33,0)
```

Q6: How to Set Dates in JavaScript?

Ans: We can easily manipulate the date by using the methods available for the Date object.
In the example below we set a Date object to a specific date (14th January 2010):

```
 var myDate=new Date();
 myDate.setFullYear(2010,0,14);
```

And in the following example we set a Date object to be 5 days into the future:

```
var myDate=new Date();
myDate.setDate(myDate.getDate()+5);
```

Note: If adding five days to a date shifts the month or year, the changes are handled automatically by the Date object itself!

Q7: How to Compare Two Dates in JavaScript ?

Ans: The Date object is also used to compare two dates.The following example compares today's date with the 14th January 2100:

```
Var x=new Date();
x.setFullYear(2100,0,14);
var today = new Date();
if (x>today)
 {
 alert("Today is before 14th January
2100");
 }
else
 {
 alert("Today is after 14th January 2100");
 }
```

Q8: How to Create a Boolean Object in JavaScript?

Ans: The Boolean object represents two values: "true" or "false".The following code creates a Boolean object called myBoolean:

```
var myBoolean=new Boolean();
```

If the Boolean object has no initial value, or if the passed value is one of the following:

- 0
- -0
- null
- ""
- false
- undefined
- NaN

the object it is set to false. For any other value it is set to true (even with the string "false")!

Q9: How to Create a Math Object in JavaScript?

Ans: The Math object allows you to perform mathematical tasks.The Math object includes several mathematical constants and methods.

Syntax for using properties/methods of Math:

```
var x=Math.PI;
var y=Math.sqrt(16);
```

Note: Math is not a constructor. All properties and methods of Math can be called by using Math as an object without creating it.

Q10: What is Mathematical Constants in javascript

Ans: JavaScript provides eight mathematical constants that can be accessed from the Math object. These are: E, PI, square root of 2, square root of 1/2, natural log of 2, natural log of 10, base-2 log of E, and base-10 log of E.

You may reference these constants from your JavaScript like this:

```
Math.E
Math.PI
Math.SQRT2
Math.SQRT1_2
Math.LN2
Math.LN10
Math.LOG2E
```

Math.LOG10E

Q11: Define Mathematical Methods in javascript

Ans: In addition to the mathematical constants that can be accessed from the Math object there are also several methods available.

The following example uses the **round() method** of the Math object to round a number to the nearest integer:

```
document.write(Math.round(4.7));
```

The code above will result in the following output:

5

The following example uses the **random() method** of the Math object to return a random number between 0 and 1:

```
document.write(Math.random());
```

The code above can result in the following output:

0.05386168003942715

The following example uses **the floor() and random() methods** of the Math object to return a random number between 0 and 10:

```
document.write(Math.floor(Math.random()*11));
```

The code above can result in the following output:

1

Chapter 6
DHTML

Q1: Define DHTML in Short note?

Ans:

1. DHTML is NOT a language.
2. DHTML is a TERM describing the art of making dynamic and interactive web pages.
3. DHTML combines HTML, JavaScript, the HTML DOM, and CSS.
4. DHTML is the art of combining HTML, JavaScript, DOM, and CSS.

Q2: DHTML is NOT a Language How?

Ans: **D**HTML stands for **D**ynamic **HTML**.DHTML is NOT a language or a web standard.To most people DHTML means the combination of HTML, JavaScript, DOM and CSS. According to the World Wide Web Consortium (W3C):

"Dynamic HTML is a term used by some vendors to describe the combination of HTML, style sheets and scripts that allows documents to be animated."

Q3: What are the w3c html standard

Ans : The W3C HTML 4 standard has rich support for dynamic content:

- HTML supports JavaScript
- HTML supports the Document Object Model (**DOM**)
- HTML supports HTML Events
- HTML supports Cascading Style Sheets (**CSS**)

Note: DHTML is about using these features, to create dynamic and interactive web pages.

Q4: Why we use CSS in html?

Ans: CSS defines how to display HTML elements. DHTML is about using JavaScript and the HTML DOM to change the style and positioning of HTML elements.

Q5: What is the HTML DOM?

Ans:

The HTML DOM is a W3C standard. It describes the Document Object Model for HTML. The HTML DOM defines a standard way for accessing and manipulating HTML documents. DHTML is about using the DOM to access and manipulate HTML elements.HTML events are a part of the HTML DOM.DHTML is about creating web pages that reacts to (user) events. The HTML DOM is:

- A Document Object Model for HTML
- A standard programming interface for HTML
- Platform- and language-independent
- A W3C standard

The HTML DOM defines the objects and properties of all HTML elements, and the methods (interface) to access them.

In other words: The HTML DOM is a standard for how to get, change, add, or delete HTML elements.

Q6 How to Change an HTML Element give example?

Ans: The following example changes the content of an h1 element:

Example

```
<html>
<body>

<h1 id="header">Old Header</h1>

<script type="text/javascript">
document.getElementById("header").innerHTML="New Header";
</script>

</body>
</html>
```

Example explained:

- The HTML document above contains an h1 element with id="header"
- We use the HTML DOM to get the element with id="header"

- A JavaScript changes the content (innerHTML) of that element

Q7 How to Change an HTML Attribute give example?

Ans: Change an HTML Attribute

The following example changes the src attibute of an img element:

Example

```
<html>
<body>

<img id="image" src="smiley.gif">

<script type="text/javascript">
document.getElementById("image").src="landscape.jpg";
</script>

</body>
</html>
```

Example explained:

- The HTML document above contains an img element with id="image"
- We use the HTML DOM to get the element with id="image"
- A JavaScript changes the src attribute of that element from "smiley.gif" to "landscape.jpg"

Q8 Define HTML Events

Ans: Every element on an HTML page has events which can trigger a JavaScript.

For example, we can use the onClick event of a button element to indicate that a function will run when a user clicks on the button. We define the events in the HTML tags.

Examples of events:

- A mouse click
- A web page or an image loading
- Mousing over a hot spot on the web page
- Selecting an input field in an HTML form
- Submitting an HTML form
- A keystroke

In the following example, the content of the h1 element will change when a user clicks on it:

Example

```
<html>
```

```
<body>
<h1 onclick="this.innerHTML='Ooops!'">Click on this text</h1>
</body>
</html>
```

You can also add the script in the head section, and then call a function from the event handler:

Example

```
<html>
<head>
<script type="text/javascript">
function changetext(id)
{
id.innerHTML="Ooops!";
}
</script>
</head>
<body>
<h1 onclick="changetext(this)">Click on this text</h1>
</body>
</html>
```

Chapter 7
Dhtml –css

Q1: How could Change Style of the Current HTML Element.

Ans: To change the style of the current HTML element, use the following statement:

this.style.*property=new style*

Example

```
<html>
<body>

<h1 onclick="this.style.color='red'">Click Me!</h1>

</body>
</html>
```

Q2: How to Change Style of a Specific HTML Element

Ans: To change the style of a specific HTML element, use the following statement:

document.getElementById(*id*).style.*property=new style*

Example

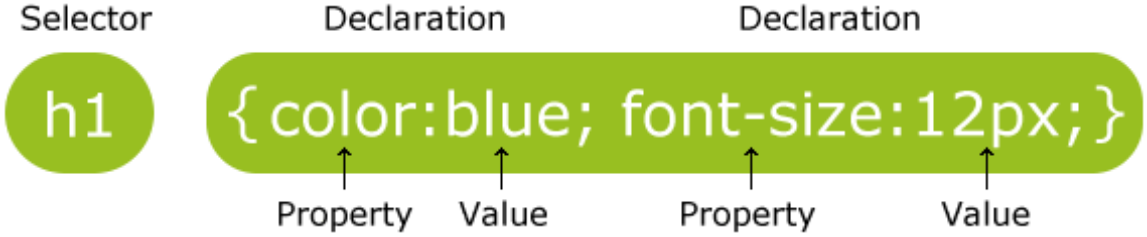
```
<html>
<body>

<h1 id="h1" onclick="document.getElementById('h1').style.color='red'">Click
Me!</h1>

</body>
</html>
```

Q3: What is CSS?

Ans: CSS stands for Cascading Style Sheets.Styles define how to display HTML elements.Styles were added to HTML 4.0 to solve a problem.External Style Sheets can save a lot of work.External Style Sheets are stored in CSS files

CSS Syntax

A CSS rule has two main parts: a selector, and one or more declarations:



The selector is normally the HTML element you want to style.Each declaration consists of a property and a value.

The property is the style attribute you want to change. Each property has a value.

A CSS declaration always ends with a semicolon, and declaration groups are surrounded by curly brackets:

p {color:red;text-align:center;}

To make the CSS more readable, you can put one declaration on each line, like this:

Example

```
p
{
color:red;
text-align:center;
}
```

Q4 How to define CSS Comments?

Ans: Comments are used to explain your code, and may help you when you edit the source code at a later date. Comments are ignored by browsers.

A CSS comment begins with "/*", and ends with "*/", like this:

```
/*This is a comment*/
p
{
text-align:center;
/*This is another comment*/
color:black;
```

```
font-family:arial;
}
```

Q5 Define The id and class Selectors

Ans:

The id Selector

The id selector is used to specify a style for a single, unique element.
The id selector uses the id attribute of the HTML element, and is defined with a "#".
The style rule below will be applied to the element with id="para1":

Example

```
#para1
{
text-align:center;
color:red;
}
```

The class Selector

The class selector is used to specify a style for a group of elements. Unlike the id selector, the class selector is most often used on several elements.
This allows you to set a particular style for many HTML elements with the same class.
The class selector uses the HTML class attribute, and is defined with a "."
In the example below, all HTML elements with class="center" will be center-aligned:

Example

```
.center {text-align:center;}
```

You can also specify that only specific HTML elements should be affected by a class.
In the example below, all p elements with class="center" will be center-aligned:

Example

```
p.center {text-align:center;}
```

Q6 How to Insert CSS define all with example.

Ans: Three Ways to Insert CSS

There are three ways of inserting a style sheet:

- External style sheet
- Internal style sheet
- Inline style

1.External Style Sheet

An external style sheet is ideal when the style is applied to many pages. With an external style sheet, you can change the look of an entire Web site by changing one file. Each page must link to the style sheet using the <link> tag. The <link> tag goes inside the head section:

```
<head>
<link rel="stylesheet" type="text/css" href="mystyle.css" />
</head>
```

An external style sheet can be written in any text editor. The file should not contain any html tags. Your style sheet should be saved with a .css extension. An example of a style sheet file is shown below:

```
Hr {color:sienna;}
p {margin-left:20px;}
body {background-image:url("images/back40.gif");}
```

Note :Do not leave spaces between the property value and the units! "margin-left:20 px" (instead of "margin-left:20px") will work in IE, but not in Firefox or Opera.

2.Internal Style Sheet

An internal style sheet should be used when a single document has a unique style. You define internal styles in the head section of an HTML page, by using the <style> tag, like this:

```
<head>
<style type="text/css">
hr {color:sienna;}
p {margin-left:20px;}
body {background-image:url("images/back40.gif");}
</style>
</head>
```

3.Inline Styles

An inline style loses many of the advantages of style sheets by mixing content with presentation. Use this method sparingly!

To use inline styles you use the style attribute in the relevant tag. The style attribute can contain any CSS property. The example shows how to change the color and the left margin of a paragraph:

```
<p style="color:sienna;margin-left:20px">This is a paragraph.</p>
```

Chapter 8
PHP

Q1: What is PHP?

Ans:

- PHP stands for **P**HP: **H**ypertext **P**reprocessor
- PHP is a server-side scripting language, like ASP
- PHP scripts are executed on the server
- PHP supports many databases (MySQL, Informix, Oracle, Sybase, Solid, PostgreSQL, Generic ODBC, etc.)
- PHP is an open source software
- PHP is free to download and use

Q2: What is a PHP File?

Ans:

- PHP files can contain text, HTML tags and scripts
- PHP files are returned to the browser as plain HTML
- PHP files have a file extension of ".php", ".php3", or ".phtml"

Q3: What is MySQL?

Ans:

- MySQL is a database server
- MySQL is ideal for both small and large applications
- MySQL supports standard SQL
- MySQL compiles on a number of platforms
- MySQL is free to download and use

PHP + MySQL

- PHP combined with MySQL are cross-platform (you can develop in Windows and serve on a Unix platform)

Q 4: Why PHP?

Ans:

- PHP runs on different platforms (Windows, Linux, Unix, etc.)
- PHP is compatible with almost all servers used today (Apache, IIS, etc.)
- PHP is FREE to download from the official PHP resource: www.php.net
- PHP is easy to learn and runs efficiently on the server side

Q5: Where to Start?

Ans: To get access to a web server with PHP support, you can:

- **Install Apache (or IIS) on your own server, install PHP, and MySQL**
- **Or find a web hosting plan with PHP and MySQL support**

Q6: What do you Need?

Ans: If your server supports PHP you don't need to do anything.Just create some .php files in your web directory, and the server will parse them for you. Because it is free, most web hosts offer PHP support.However, if your server does not support PHP, you must install PHP.PHP code is executed on the server, and the plain HTML result is sent to the browser.

Q7: Define basic PHP Syntax.

Ans: A PHP scripting block always starts with <?php and ends with ?>. A PHP scripting block can be placed anywhere in the document.On servers with shorthand support enabled you can start a scripting block with <? and end with ?>.For maximum compatibility, we recommend that you use the standard form (<?php) rather than the shorthand form.

```
<?php
?>
```

A PHP file normally contains HTML tags, just like an HTML file, and some PHP scripting code.Below, we have an example of a simple PHP script which sends the text "Hello World" to the browser:

```
<html>
<body>
<?php
echo "Hello World";
?>
</body>
</html>
```

Each code line in PHP must end with a semicolon. The semicolon is a separator and is used to distinguish one set of instructions from another.There are two basic statements to output text with PHP: **echo** and

print. In the example above we have used the echo statement to output the text "Hello World".
Note: The file must have a .php extension. If the file has a .html extension, the PHP code will not be executed.

Q8: Define Advantages and Disadvantages of PHP

Ans: PHP is one of the most popular server side scripting languages running today. It is used for creating dynamic webpages that interact with the user offering customized information. PHP offers many advantages; it is fast, stable, secure, easy to use and open source (free).

Advantages:

- PHP is accessible
- ** It's available for free
    - It's available with documentation in many languages
    - There are many support groups, forums, and teams supporting PHP
    - There is a wealth of online information regarding PHP
- It's quick to develop in PHP
- ** A basic PHP script can be created without a firm understanding of programming principals, compilation, and other currently important programming concepts
    - PHP is loosely typed, which makes basic scripts much faster to develop with less attention to design
- Programmers of Java, PERL, BASIC, and other popular languages can find many parallels to ease transition to PHP
- PHP is flexible. Use OOP or not. Use naming convention(s) or not
- It runs on many different operating systems
- It can be optimized, even "compiled" for performance closer to that of more established compiled languages

Disadvantages:

- Out of the box, PHP tends to execute more slowly than assembly, C, and other compiled languages
- PHP is loosely typed. For developers of all skill levels, this allows room for unexpected behavior due to programmer error that many other languages might not permit. [Of course, few if any languages can protect from developer error!]
- There are many ways to do one thing, and many cases where a function has ambiguous handling due to legacy support or PHP development history.

Q9: How can we used comments in PHP?

Ans: Comments in PHP, In PHP, we use // to make a single-line comment or /* and */ to make a large comment block.

```
<html>
<body>
<?php
//This is a comment
/*
This is
a comment
block
*/
?>
</body>
</html>
```

Q10 How to define variable in PHP?

Ans: Variables in PHP::A variable is used to store information.
Variables are used for storing values, like text strings, numbers or arrays.
When a variable is declared, it can be used over and over again in your script.
All variables in PHP start with a $ sign symbol.The correct way of declaring a variable in PHP:

```
$var_name = value;
```

New PHP programmers often forget the $ sign at the beginning of the variable. In that case it will not work.
Let's try creating a variable containing a string, and a variable containing a number:

```
<?php
$txt="Hello World!";
$x=16;
?>
```

Q11 Define the term PHP is a Loosely Typed Language

Ans: PHP is a Loosely Typed Language::In PHP, a variable does not need to be declared before adding a value to it.In the example above, you see that you do not have to tell PHP which data type the variable is.

PHP automatically converts the variable to the correct data type, depending on its value.
In a strongly typed programming language, you have to declare (define) the type and name of the variable before using it.In PHP, the variable is declared automatically when you use it.

Q12: What are the Naming Rules for Variables in PHP?
Ans: Naming Rules for Variables

- A variable name must start with a letter or an underscore "_"
- A variable name can only contain alpha-numeric characters and underscores (a-z, A-Z, 0-9, and _)
- A variable name should not contain spaces. If a variable name is more than one word, it should be separated with an underscore ($my_string), or with capitalization ($myString)

Q13: Define string variables.
Ans: String variables::
1.A string variable is used to store and manipulate text.
2.String variables are used for values that contain characters.
3. A string can be used directly in a function or it can be stored in a variable.
Below, the PHP script assigns the text "Hello World" to a string variable called $txt:

```
<?php
$txt="Hello World";
echo $txt;
?>
```

The output of the code above will be:
Hello World

Q14 Define Concatenation Operator in PHP with example.
Ans: Concatenation Operator in PHP:: There is only one string operator in PHP.
The concatenation operator (.) is used to put two string values together.

To concatenate two string variables together, use the concatenation operator:

```
<?php
$txt1="Hello World!";
$txt2="What a nice day!";
echo $txt1 . " " . $txt2;
?>
```

The output of the code above will be:

Hello World! What a nice day!

.

Q15 How to find out string length in PHP with example?

Ans: The strlen() function:: The strlen() function is used to return the length of a string.

Let's find the length of a string:

```
<?php
echo strlen("hello nitas!");
?>
```

The output of the code above will be:

12

Q16 How to find out string position in PHP with example.

Ans: The strpos() function::

The strpos() function is used to search for a character/text within a string. If a match is found, this function will return the character position of the first match. If no match is found, it will return FALSE.

Let's see if we can find the string "world" in our string:

```
<?php
echo strpos("Hello world!","world");
?>
```

The output of the code above will be:

6

Note : The position of the string "world" in the example above is 6. The reason that it is 6 (and not 7), is that the first character position in the string is 0, and not 1.

Q17 Define PHP Operators with example and description.

Ans: PHP Operators

Arithmetic Operators

Operator	Description	Example	Result

+	Addition	x=2 x+2	4
-	Subtraction	x=2 5-x	3
*	Multiplication	x=4 x*5	20
/	Division	15/5 5/2	3 2.5
%	Modulus (division remainder)	5%2 10%8 10%2	1 2 0
++	Increment	x=5 x++	x=6
--	Decrement	x=5 x--	x=4

Assignment Operators

Operator	Example	Is The Same As
=	x=y	x=y
+=	x+=y	x=x+y
-=	x-=y	x=x-y
*=	x*=y	x=x*y
/=	x/=y	x=x/y
.=	x.=y	x=x.y
%=	x%=y	x=x%y

Comparison Operators

Operator	Description	Example
==	is equal to	5==8 returns false
!=	is not equal	5!=8 returns true
<>	is not equal	5<>8 returns true
>	is greater than	5>8 returns false
<	is less than	5<8 returns true
>=	is greater than or equal to	5>=8 returns false
<=	is less than or equal to	5<=8 returns true

Logical Operators

Operator	Description	Example
&&	and	x=6 y=3 (x < 10 && y > 1) returns true
||	or	x=6 y=3 (x==5 || y==5) returns false
!	not	x=6 y=3 !(x==y) returns true

Q18 Define the conditional statements in php.

Ans: Conditional statements are used to perform different actions based on different conditions.In PHP we have the following conditional statements:

- **if statement** - use this statement to execute some code only if a specified condition is true
- **if...else statement** - use this statement to execute some code if a condition is true and another code if the condition is false
- **if...elseif....else statement** - use this statement to select one of several blocks of code to be executed
- **switch statement** - use this statement to select one of many blocks of code to be executed

Q19 Define the if statement with example

Ans: The if Statement to execute some code only if a specified condition is true.

Syntax

if (*condition*) *code to be executed if condition is true;*

The following example will output "Have a nice weekend!" if the current day is Friday:

```
<html>
<body>

<?php
$d=date("D");
if ($d=="Fri") echo "Have a nice weekend!";
?>

</body>
</html>
```

Notice that there is no ..else.. in this syntax. The code is executed **only if the specified condition is true**.

Q10 Define the if…else statement with example

Ans: The if...else Statement to execute some code if a condition is true and another code if a condition is false.

Syntax

```
if (condition)
  code to be executed if condition is true;
else
  code to be executed if condition is false;
```

Example

The following example will output "Have a nice weekend!" if the current day is Friday, otherwise it will output "Have a nice day!":

```
<html>
<body>

<?php
$d=date("D");
if ($d=="Fri")
  echo "Have a nice weekend!";
else
  echo "Have a nice day!";
?>

</body>
</html>
```

Q11: Define the if…elseif….else statement with example

Ans: The if...elseif....else Statement to select one of several blocks of code to be executed.

Syntax

```
  if (condition)
    code to be executed if condition is true;
  elseif (condition)
    code to be executed if condition is true;
  else
    code to be executed if condition is false;
```

Example

The following example will output "Have a nice weekend!" if the current day is Friday, and "Have a nice Sunday!" if the current day is Sunday. Otherwise it will output "Have a nice day!":

```
<html>
<body>

<?php
$d=date("D");
if ($d=="Fri")
  echo "Have a nice weekend!";
elseif ($d=="Sun")
  echo "Have a nice Sunday!";
else
  echo "Have a nice day!";
?>

</body>
</html>
```

Q12: Define the if statement with example

Ans: The PHP Switch Statement to select one of many blocks of code to be executed.

Syntax

```
 switch (n)
 {
 case label1:
   code to be executed if n=label1;
   break;
 case label2:
   code to be executed if n=label2;
   break;
 default:
   code to be executed if n is different from both label1 and label2;
 }
```

This is how it works: First we have a single expression *n* (most often a variable), that is evaluated once. The value of the expression is then compared with the values for each case in the structure. If there is a match, the block of code associated with that case is executed. Use **break**

to prevent the code from running into the next case automatically. The default statement is used if no match is found.

Example

```
<html>
<body>

<?php
switch ($x)
{
case 1:
  echo "Number 1";
  break;
case 2:
  echo "Number 2";
  break;
case 3:
  echo "Number 3";
  break;
default:
  echo "No number between 1 and 3";
}
?>

</body>
</html>
```

Q13: What is an Array?

Ans : An array stores multiple values in one single variable. A variable is a storage area holding a number or text. The problem is, a variable will hold only one value. An array is a special variable, which can store multiple values in one single variable.

If you have a list of items (a list of car names, for example), storing the cars in single variables could look like this:

```
$cars1="Saab";
$cars2="Volvo";
$cars3="BMW";
```

However, what if you want to loop through the cars and find a specific one? And what if you had not 3 cars, but 300?the best solution is array.An array can hold all your variable values under a single name. And you can

access the values by referring to the array name.Each element in the array has its own index so that it can be easily accessed.

Q14 : How many types of arrays in php?

Ans: In PHP, there are three kind of arrays:

- **Numeric array** - An array with a numeric index
- **Associative array** - An array where each ID key is associated with a value
- **Multidimensional array** - An array containing one or more arrays

Q15 Define all types of array with example.

Ans: 1.Numeric Arrays

A numeric array stores each array element with a numeric index.
There are two methods to create a numeric array.
1. In the following example the index are automatically assigned (the index starts at 0):

```
$cars=array("Saab","Volvo","BMW","Toyota");
```

2. In the following example we assign the index manually:

```
$cars[0]="Saab";
$cars[1]="Volvo";
$cars[2]="BMW";
$cars[3]="Toyota";
```

Example

In the following example you access the variable values by referring to the array name and index:

```
<?php
$cars[0]="Saab";
$cars[1]="Volvo";
$cars[2]="BMW";
$cars[3]="Toyota";
echo $cars[0] . " and " . $cars[1] . " are Swedish cars.";
?>
```

The code above will output:

Saab and Volvo are Swedish cars.

2.Associative Arrays

An associative array, each ID key is associated with a value.
When storing data about specific named values, a numerical array is not always the best way to do it.

With associative arrays we can use the values as keys and assign values to them.

Example 1

In this example we use an array to assign ages to the different persons:

```
$ages = array("Peter"=>32, "Quagmire"=>30, "Joe"=>34);
```

Example 2

This example is the same as example 1, but shows a different way of creating the array:

```
$ages['Peter'] = "32";
$ages['Quagmire'] = "30";
$ages['Joe'] = "34";
```

The ID keys can be used in a script:

```
<?php
$ages['Peter'] = "32";
$ages['Quagmire'] = "30";
$ages['Joe'] = "34";

echo "Peter is " . $ages['Peter'] . " years old.";
?>
```

The code above will output:

Peter is 32 years old.

3.<u>Multidimensional Arrays</u>

In a multidimensional array, each element in the main array can also be an array. And each element in the sub-array can be an array, and so on.

Example

In this example we create a multidimensional array, with automatically assigned ID keys:

```
$families = array
  (
  "Griffin"=>array
  (
  "Peter",
  "Lois",
  "Megan"
  ),
  "Quagmire"=>array
  (
  "Glenn"
```

```
Array
(
[Griffin] => Array
  (
  [0] => Peter
  [1] => Lois
  [2] => Megan
  )
[Quagmire] => Array
  (
  [0] => Glenn
  )
[Brown] => Array
  (
  [0] => Cleveland
  [1] => Loretta
  [2] => Junior
  )
)
 ),
 "Brown"=>array
 (
 "Cleveland",
 "Loretta",
 "Junior"
 )
 );
```

The array above would look like this if written to the output:

Example 2

Lets try displaying a single value from the array above:

```
echo "Is " . $families['Griffin'][2] .
" a part of the Griffin family?";
```

The code above will output:

Is Megan a part of the Griffin family?

Q16: Define Loops in PHP

Ans:PHP Loops::

Often when you write code, you want the same block of code to run over and over again in a row. Instead of adding several almost equal lines in a script we can use loops to perform a task like this.
In PHP, we have the following looping statements:

- **while** - loops through a block of code while a specified condition is true
- **do...while** - loops through a block of code once, and then repeats the loop as long as a specified condition is true
- **for** - loops through a block of code a specified number of times
- **foreach** - loops through a block of code for each element in an array

Q17 Define while loop with example.

Ans: The while Loop

The while loop executes a block of code while a condition is true.

Syntax

```
while (condition)
 {
 code to be executed;
 }
```

Example

The example below defines a loop that starts with i=1. The loop will continue to run as long as i is less than, or equal to 5. i will increase by 1 each time the loop runs:

```
<html>
<body>

<?php
$i=1;
while($i<=5)
 {
 echo "The number is " . $i . "<br />";
 $i++;
 }
?>

</body>
</html>
```

Output:

```
The number is 1
The number is 2
The number is 3
```

The number is 4
The number is 5

Q18 Define do…while loop with example.

Ans: The do….while Loop ::The do...while statement will always execute the block of code once, it will then check the condition, and repeat the loop while the condition is true.

Syntax

```
do
 {
 code to be executed;
 }
while (condition);
```

Example

The example below defines a loop that starts with i=1. It will then increment i with 1, and write some output. Then the condition is checked, and the loop will continue to run as long as i is less than, or equal to 5:

```
<html>
<body>

<?php
$i=1;
do
 {
 $i++;
 echo "The number is " . $i . "<br />";
 }
while ($i<=5);
?>

</body>
</html>
```

Output:

The number is 2
The number is 3
The number is 4
The number is 5
The number is 6

Q19 Define for loop with example.

Ans: The for Loop::The for loop is used when you know in advance how many times the script should run.

Syntax

```
for (init; condition; increment)
  {
  code to be executed;
  }
```

Parameters:

- *init*: Mostly used to set a counter (but can be any code to be executed once at the beginning of the loop)
- *condition*: Evaluated for each loop iteration. If it evaluates to TRUE, the loop continues. If it evaluates to FALSE, the loop ends.
- *increment*: Mostly used to increment a counter (but can be any code to be executed at the end of the loop)

Note: Each of the parameters above can be empty, or have multiple expressions (separated by commas).

Example

The example below defines a loop that starts with i=1. The loop will continue to run as long as i is less than, or equal to 5. i will increase by 1 each time the loop runs:

```
<html>
<body>

<?php
for ($i=1; $i<=5; $i++)
  {
  echo "The number is " . $i . "<br />";
  }
?>

</body>
</html>
```

Output:

```
The number is 1
The number is 2
The number is 3
The number is 4
The number is 5
```

Q10 Define foreach loop with example.

Ans: The foreach Loop

The foreach loop is used to loop through arrays.

Syntax

```
foreach ($array as $value)
  {
  code to be executed;
  }
```

For every loop iteration, the value of the current array element is assigned to $value (and the array pointer is moved by one) - so on the next loop iteration, you'll be looking at the next array value.

Example

The following example demonstrates a loop that will print the values of the given array:

```
<html>
<body>

<?php
$x=array("one","two","three");
foreach ($x as $value)
 {
 echo $value . "<br />";
 }
?>

</body>
</html>
```

Output:

one
two
three

Chapter 9

ODBC Connectivity

Programming Interface (API) that allows you to connect to a data source (e.g. an MS Access database).

Q1. How to Create an ODBC Connection

Ans: Create an ODBC Connection

With an ODBC connection, you can connect to any database, on any computer in your network, as long as an ODBC connection is available. Here is how to create an ODBC connection to a MS Access Database:

1. Open the **Administrative Tools** icon in your Control Panel.
2. Double-click on the **Data Sources (ODBC)** icon inside.
3. Choose the **System DSN** tab.
4. Click on **Add** in the System DSN tab.
5. Select the **Microsoft Access Driver**. Click **Finish.**
6. In the next screen, click **Select** to locate the database.
7. Give the database a **Data Source Name (DSN)**.
8. Click **OK**.

Note that this configuration has to be done on the computer where your web site is located. If you are running Internet Information Server (IIS) on your own computer, the instructions above will work, but if your web site is located on a remote server, you have to have physical access to that server, or ask your web host to to set up a DSN for you to use.

Q2: How to connect ODBC?

Ans: Connecting to an ODBC

The odbc_connect() function is used to connect to an ODBC data source. The function takes four parameters: the data source name, username, password, and an optional cursor type.

The odbc_exec() function is used to execute an SQL statement.

Example

The following example creates a connection to a DSN called northwind, with no username and no password. It then creates an SQL and executes it:

```
$conn=odbc_connect('northwind','','');
$sql="SELECT * FROM customers";
$rs=odbc_exec($conn,$sql);
```

Q3 How to retrieve the records ?

Ans: Retrieving Records:

The odbc_fetch_row() function is used to return records from the result-set. This function returns true if it is able to return rows, otherwise false.

The function takes two parameters: the ODBC result identifier and an optional row number:

```
odbc_fetch_row($rs)
```

Q4 How to retrieve fields from the records ?

Ans: Retrieving Fields from a Record

The odbc_result() function is used to read fields from a record. This function takes two parameters: the ODBC result identifier and a field number or name.

The code line below returns the value of the first field from the record:

```
$compname=odbc_result($rs,1);
```

The code line below returns the value of a field called "CompanyName":

```
$compname=odbc_result($rs,"CompanyName");
```

Q5 How to close the ODBC Connection ?

Ans: Closing an ODBC Connection

The odbc_close() function is used to close an ODBC connection.

```
odbc_close($conn);
```

Q6 PHP code to explain How to first create a database connection, then a result-set, and then display the data in an HTML table.

Ans:

```
<html>
<body>
```

```
<?php
$conn=odbc_connect('northwind','','');
if (!$conn)
  {exit("Connection Failed: " . $conn);}
$sql="SELECT * FROM customers";
$rs=odbc_exec($conn,$sql);
if (!$rs)
  {exit("Error in SQL");}
echo "<table><tr>";
echo "<th>Companyname</th>";
echo "<th>Contactname</th></tr>";
while (odbc_fetch_row($rs))
  {
  $compname=odbc_result($rs,"CompanyName");
  $conname=odbc_result($rs,"ContactName");
  echo "<tr><td>$compname</td>";
  echo "<td>$conname</td></tr>";
  }
odbc_close($conn);
echo "</table>";
?>

</body>
</html>
```

Vbscript

Q1. How to use VBScript in HTML coding?

Ans: HTML is used for designing the static web pages. The scripting languages are used for adding the programming capability to the static web pages, some what providing them a dynamic look.
The commonly used scripting languages are JavaScript,VBScript etc...
The scripting code is enclosed in the separate tag, known as <script> tag
The general form is ,

```
<script language="Language_Name">
            :     :     :     :     :     :
            :     :     :     :     :     :
</script>
```

In the case of the VBScript the <script> tag will look like,

```
<script language="VBScript">
      :     :     :     :     :
      :     :     :     :     :
</script>
```

The <script> tag can be given in the <head> or the <body> part depending on the requirement.

Q2. How to Display the Information in VBScript:

Ans: There are two process to display the information in VBScript
1. document.Write( )
2.MsgBox
(i) document.Write( )
In the case of the Scripting Language , we have DOM , which stands for the Document Object Model, the document object will represent the entire web page.Using this object we can access any of the element present on the web page.

The write() is the function of the document object, and it is used to display the information on the browser window.
The general form is ,
document.Write("expression")

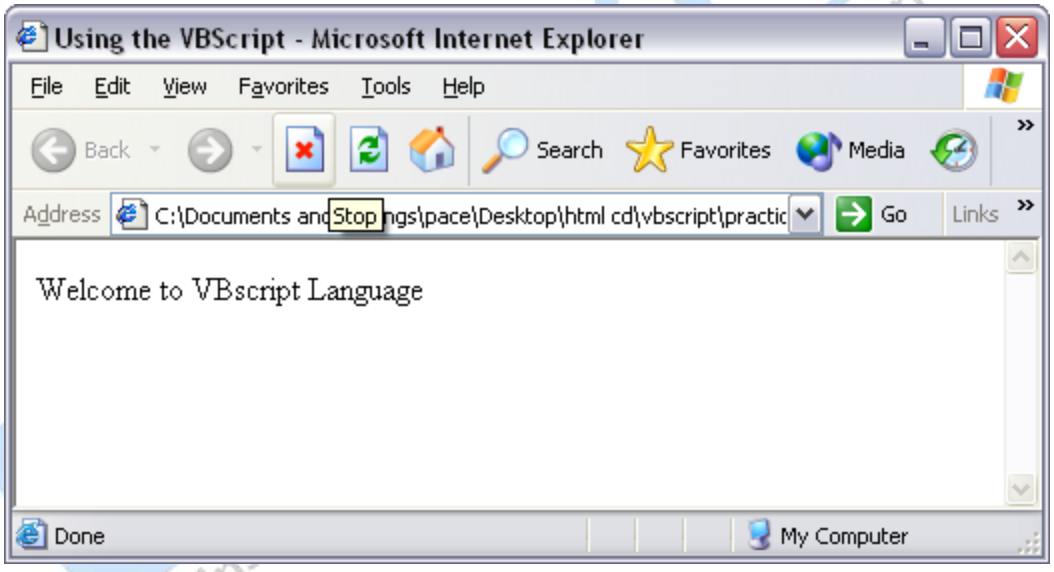
Q3. Consider the following code,which explain you document.write()

function.

Ans:

```
<html>
<head>
<title>Using the VBScript </title>
</head>
<body>
<script language="VBScript">
        document.Write("Welcome to VBscript Language")
</script>
</body>
</html>
```

output :



Q4. How to use html tag in document.write function with example?

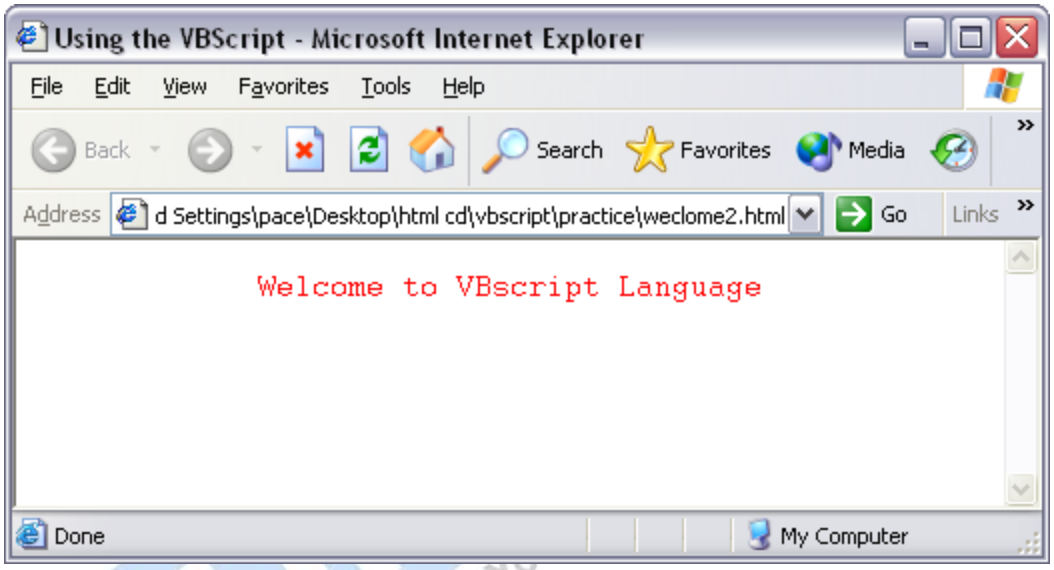
Ans: We can also use the HTML tag in the document.Write() statement, we have to enclose the HTML tags in the double quotes.

Consider the following code,

```
<html>
<head>
<title>Using the VBScript </title>
</head>
<body>
```

```
<script language="VBScript">
        document.Write("<center><font face=courier new
color=red>Welcome to VBscript Language</font></center>")
</script>
</body>
</html>
```

output :



Q5. Explain the MsgBox function with example?

Ans: The Msgbox function is used to display the Message in the message box on the Screen .

The general form is ,

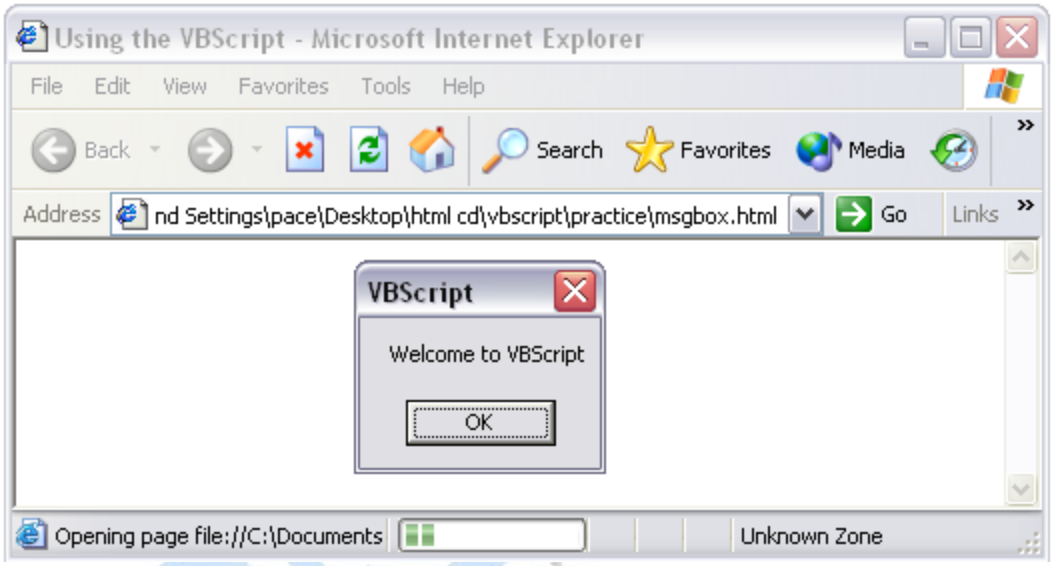
```
MsgBox "message"
```

Consider the following code,

```
<html>
<head>
<title>Using the VBScript </title>
</head>
<body>
```

```
<script language="VBScript">
        MsgBox "Welcome to VBScript"
</script>
</body>
</html>
```

output :



Q6. Explain the modified syntax of the MsgBox function with example?

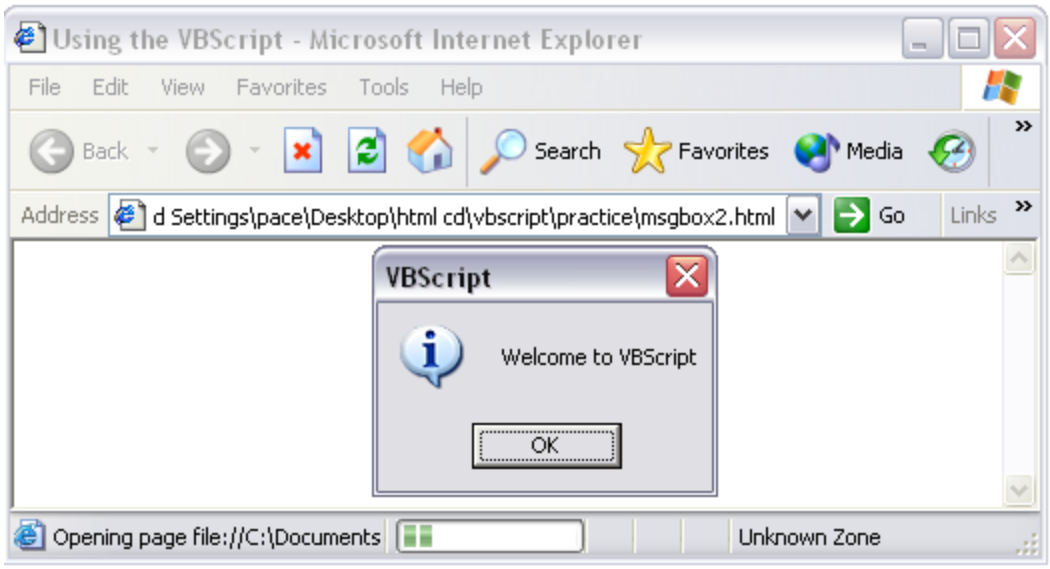
Ans: The modified syntax of the MsgBox function?
are,Syntax
Msgbox "message"[,msgboxtype[,title]]

Consider the following code ,

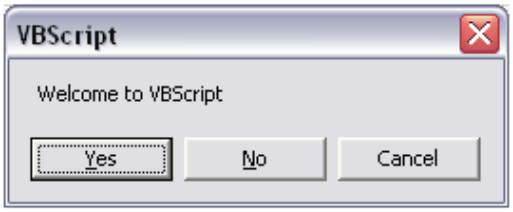
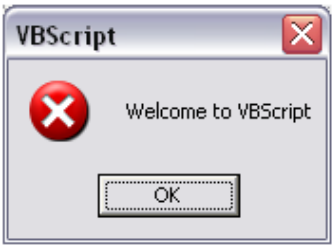
```
<html>
<head>
<title>Using the VBScript </title>
</head>
<body>
<script language="VBScript">
        MsgBox "Welcome to VBScript",vbInformation
</script>
</body>
```

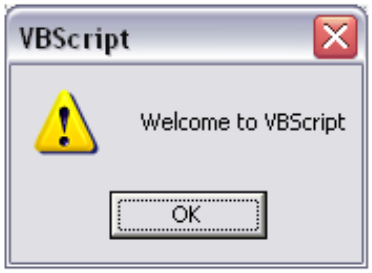
```
</html>
```

output :



Q7. Explain different types of message boxes available in VBScript?
Ans:

Message Box Type	Output
VbYesNoCancel	
vbInformation	
VbCritical	

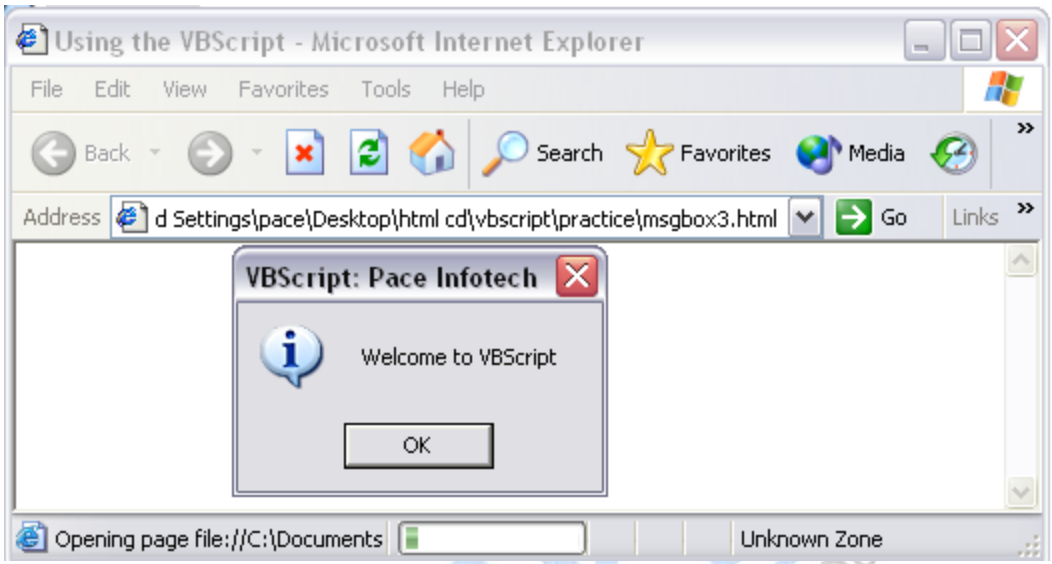
vbYesNo	
vbExclamation	

prompt is used to specify the information which we want to display on the title bar on the Messsage Box .

Consider the following code ,

```
<html>
<head>
<title>Using the VBScript </title>
</head>
<body>
<script language="VBScript">
        MsgBox "Welcome to VBScript",vbInformation,"Pace Infotech"
</script>
</body>
</html>
```

output:



Q8. How to declare the variable in VScript?

Ans: Declaring the variables in Visual Script1

Syntax:

Dim varaiblename;

The Dim keyword is used for declaraing the variable and this variable is capable of storing any kind of value.

Q9 How to read the data from user?

Ans: Reading the data from the user by using the InputBox() function.

Q10 Explain InputBox() function?

Ans: InputBox( ) : The InputBox( ) function will present the dialog box on the screen and it is used to read the data from the user. The general form is ,variablename=InputBox("prompt","title",default_value,x,y)

where,

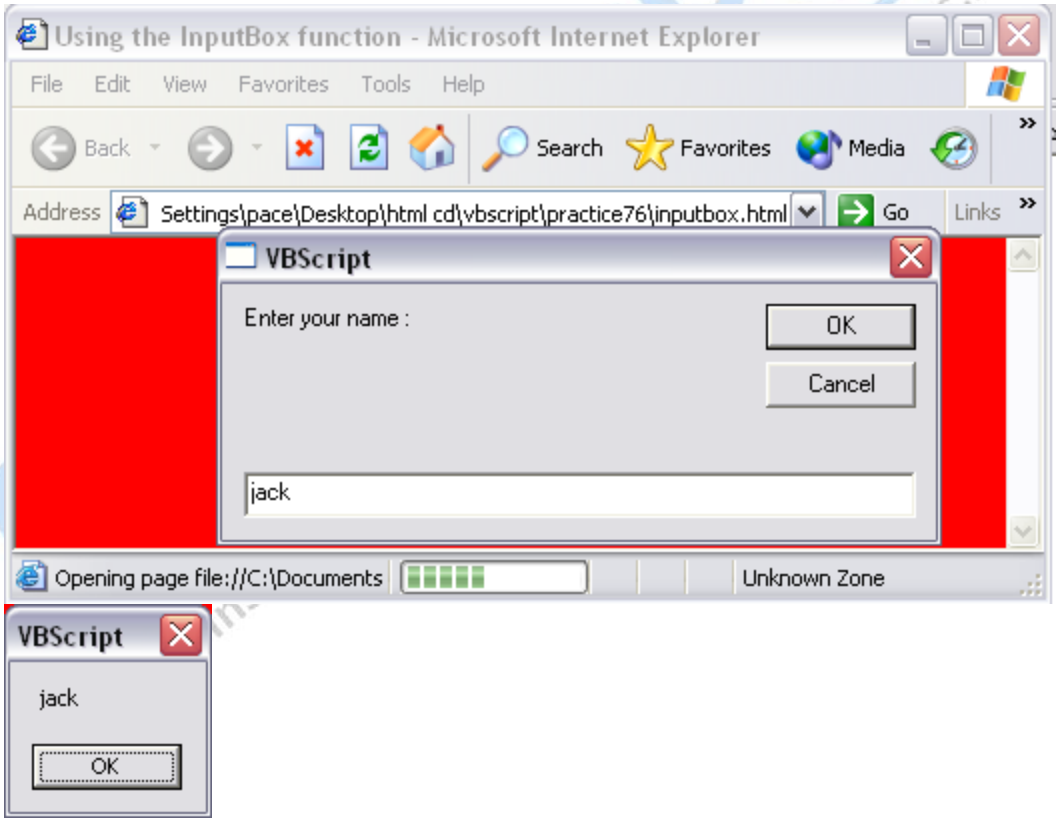
1.prompt : It will specify the information which is to be displayed on the InputBox dialog box.

Consider the following code ,

```
<html>
<head>
<title>Using the InputBox function </title>
</head>
```

```
<body bgcolor=red>
<script language="VBscript">
        Dim name

        name=InputBox("Enter your name :")

        MsgBox name

</script>
</body>
</html>
```

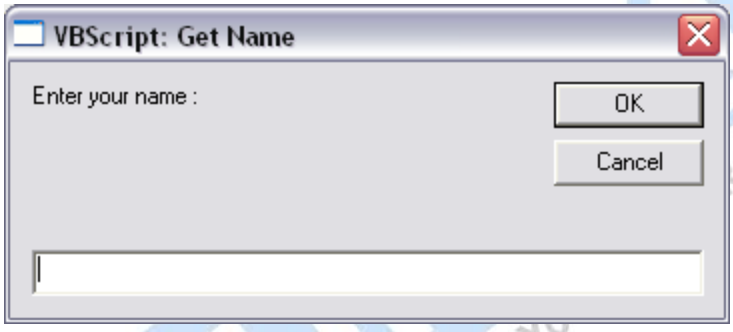
output :



2. Title : It is used to specfy the information to be displayed on the title bar of the InputBox.
Consider the following code ,

```
<html>
<head>
<title>Using the InputBox function </title>
</head>
<body bgcolor=red>
<script language="VBscript">
        Dim name
        name=InputBox("Enter your name :","Get Name")
        MsgBox name
</script>
</body>
</html>
```

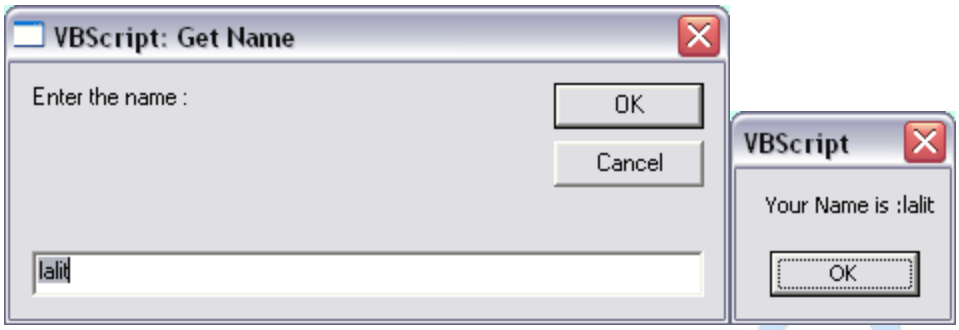
output :



3.Default_value:This argument is used to specify the default value,which will be get displayed when the Input Box is displayed on the screen . Consider the following code ,

```
<html>
<head>
<title>Using the VBScript code</title>
</head>
<body bgcolor="#ccffee">
<script language="VBscript">
        Dim name

        name=InputBox("Enter the name :","Get Name","lalit")
        MsgBox "Your Name is :" & name
</script>
</body>
</html>
```

output :

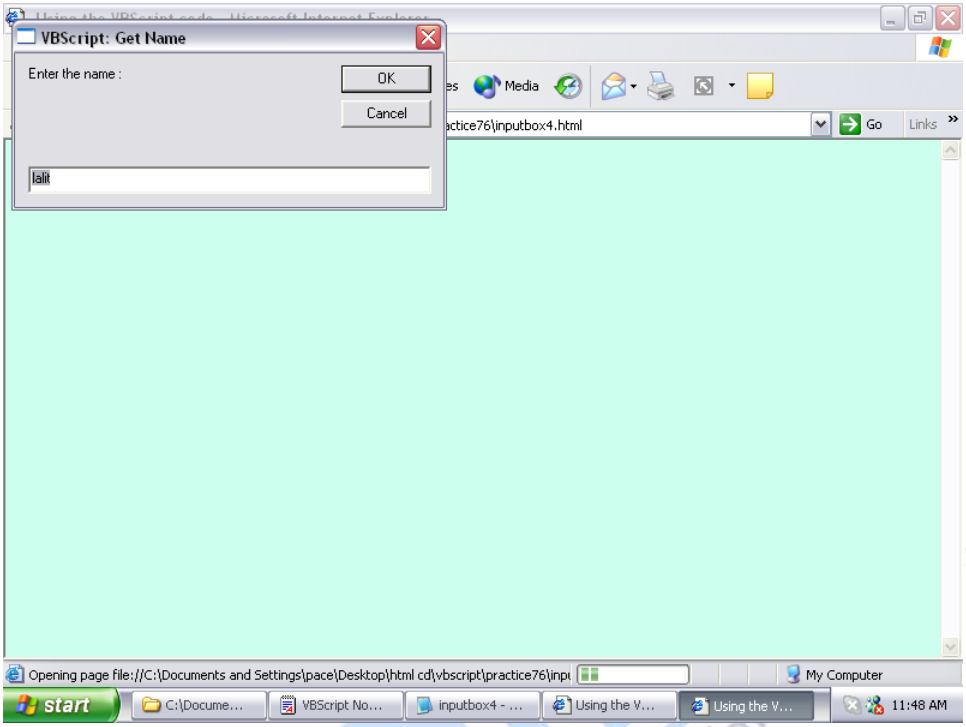


4. **x,y coordinates**

The x and y coordinates are used to specify the position where the InputBox will be displayed.

```
<html>
<head>
<title>Using the VBScript code</title>
</head>
<body bgcolor="#ccffee">
<script language="VBscript">
        Dim name
        name=InputBox("Enter the name :","Get      Name","lalit",100,200)
        MsgBox "Your Name is :" & name
</script>
</body>
</html>
```

output :



Q11. What was the purpose of using & and+ operator in VBScript?

Ans; In VBScript , the & and + operators are used for the contactenation purpose.

Consider the following examples,

1. + operator

(i) If both the operands are of type string , then the resultant value will be string.

"jack" + "jill"

output :

"jackjill"

(ii) "jack" + 12

output : Error

(iii) If both the arguments are numeric , then it will simply add them.

12 + 123

output :135

& operator

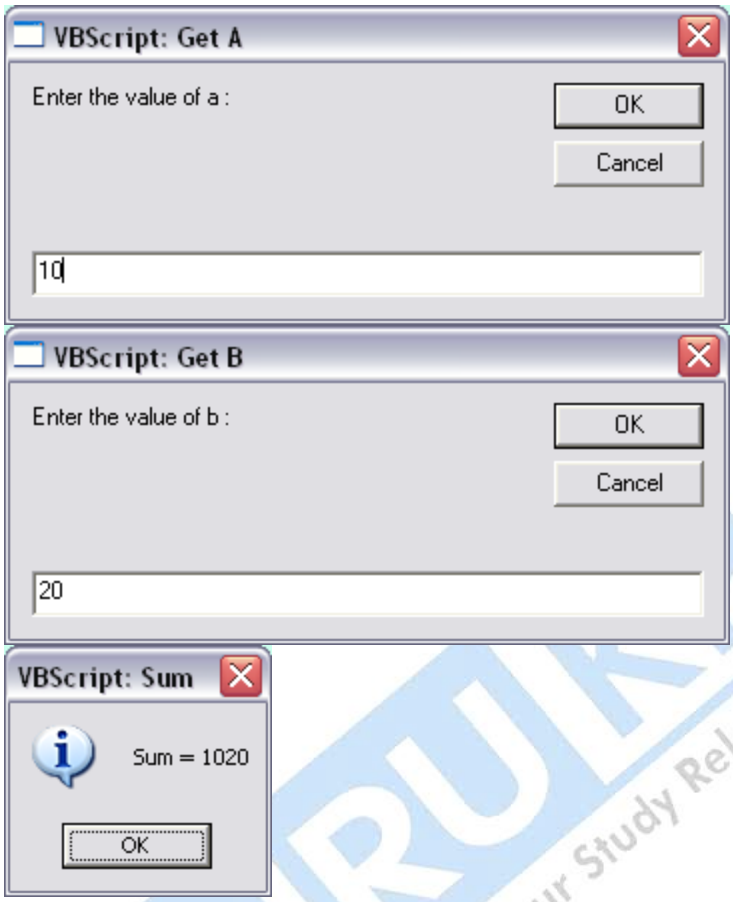
If will combine any two values and the resultant value is always string.

(i) "jack" & "jill"
output :"jackjill"
(ii)"jack" & 12
output : "jack12"
(iii) 12 & 131
output :"1213"

Q12. How two convert string value in integer value in VBScript?
Ans: Type conversion function in VBScript:
eval( ) :This function is used to convert the string type expression into the numeric value.
The general form is ,
eval(stringvalue)
example:
eval("123") will return the output
123 as a integer value
Consider the following code,

```
<html>
<head>
<title>Using the VBScript code</title>
</head>
<body bgcolor="#ccffee">
<script language="VBscript">
Dim a,b,c
a=InputBox("Enter the value of a :","Get A")

b=InputBox("Enter the value of b :","Get B")
c=a+b
MsgBox "Sum = " & c , vbInformation,"Sum"
</script>
</body>
</html>
```

output :



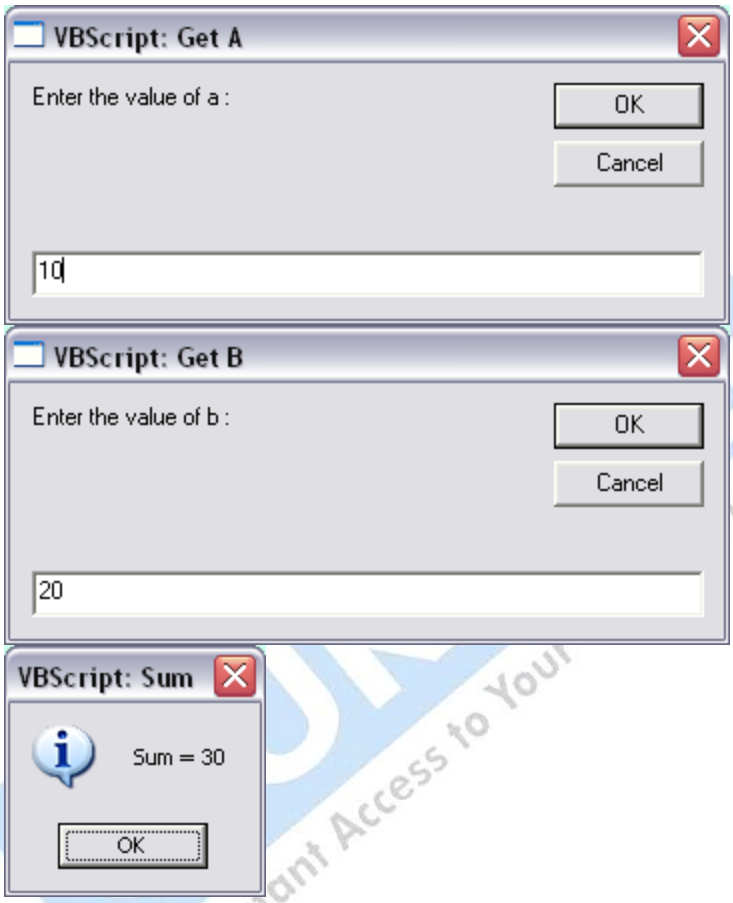
The value which we enter with the help of the InputBox( ) function, will by default will be consider as string.

Now, we have modified the code ,

```
<html>
<head>
<title>Using the VBScript code</title>
</head>
<body bgcolor="#ccffee">
<script language="VBscript">
        Dim a,b,c
        a=InputBox("Enter the value of a :","Get A")
        b=InputBox("Enter the value of b :","Get B")
        a=eval(a)
        b=eval(b)
        c=a+b
```

```
        MsgBox "Sum = " & c , vbInformation,"Sum"
</script>
</body>
</html>
```

output :



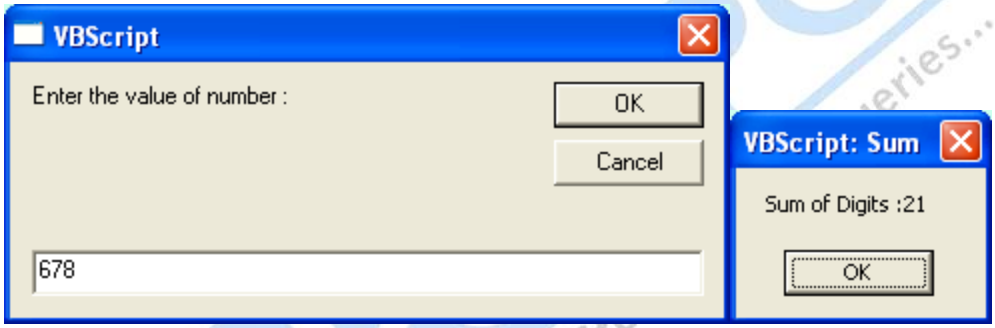
Q13 Write a VB Script code , to read a three digit number and find its sum of digits.

num=456 m msum =4+5+6=15

Ans:

```
<html>
<head>
<title>Using the VBscript code</title>
</head>
<body bgcolor="#ccffee">
<script language="VBscript">
```

```
        dim num,sum
        num=InputBox("Enter the value of number :")
        num=eval(num)                    '678
        sum=num mod 10                 ' 678 mod 10 = 8
        num=int(num/10)              ' 678/10=67.8 int(67.8) =67
        sum=sum+num mod 10           ' 8+ 67 mod 10 = 8+7=15
        num=int(num/10)              ' 67/10=6.7 int(6.7)=6
        sum=sum+num                  ' 15+6=21
    MsgBox "Sum of Digits :" & sum,vbInfomation,"Sum"
</script>
</body>
</html>
```



Q14 Write a VB Script code, to find the reverse of the three digit number.e.g.
num=456
rev=654

Ans:

```
<html>
<head>
<title>Using the VBscript code</title>
</head>
<body bgcolor="#ccffee">
<script language="VBscript">
        dim num,sum
num=InputBox("Enter the value of number :")
        num=eval(num)                          '456
rev=num mod 10                        '456 mod 10 = 6
        num=num\10                                    '456\10 = 45
        rev=rev*10+num mod 10    ' 6 * 10 + 45 mod 10 = 60 + 5=65
        num=num\10                                    '45\10=4
        rev=rev*10+num                        '65*10+4=650+4=654
```

```
        MsgBox "Reverse  :" & rev,vbInfomation,"Reverse"
</script>
</body>
</html>
```

Q15. Explain the Conditional Statements in VBScript?

Ans;

(a) If ... Then ...Else

The general form is ,

If condition then

statement1

Else

statement2

End if

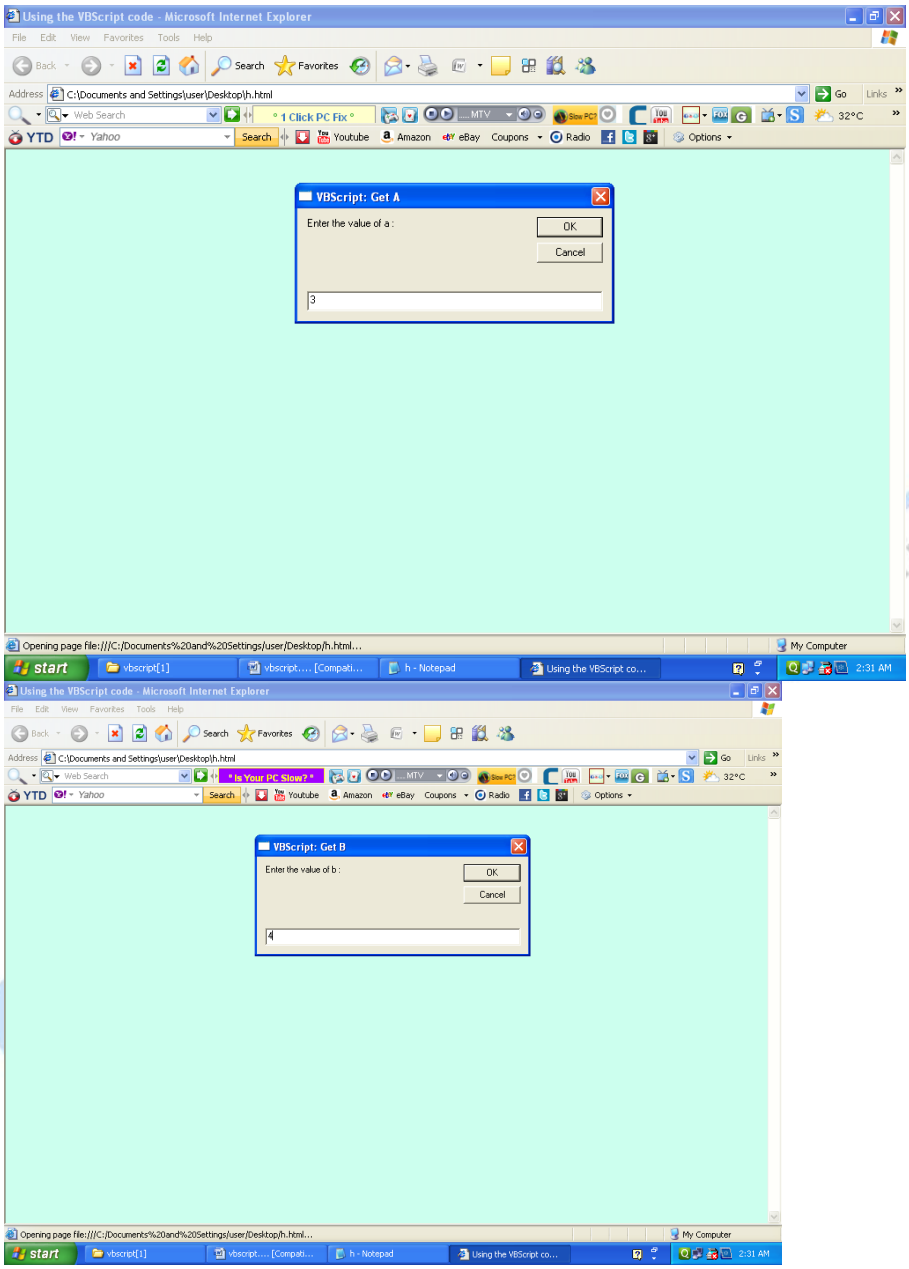
The statement1 will get executed when the condition is true and statement2 will get executed when the condition is false.

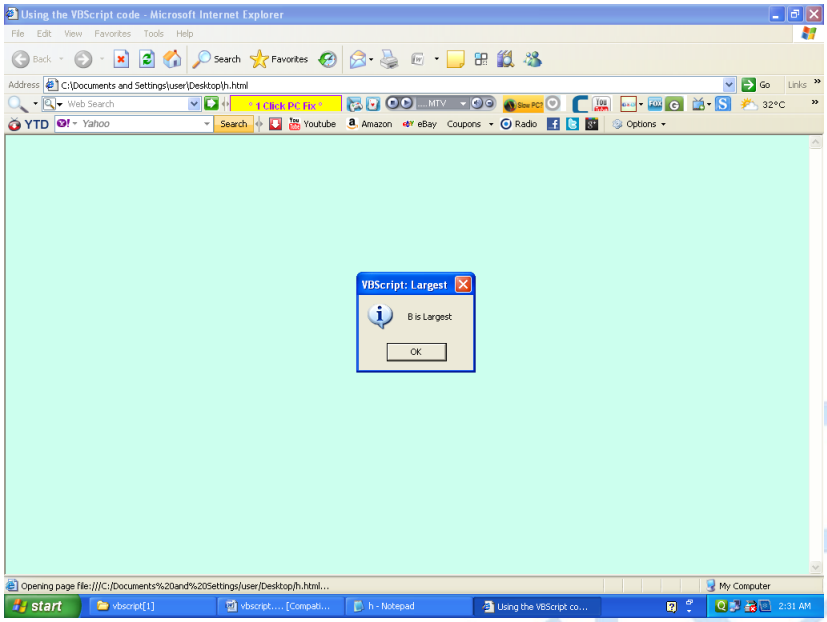
Q16 Write a VBScript code, to find the largest of two numbers

Ans:

```
<html>
<head>
<title>Using the VBScript code</title>
</head>
<body  bgcolor="#ccffee">
<script language="VBscript">
        Dim a,b
        a=InputBox("Enter the value of a :","Get A")
        b=InputBox("Enter the value of b :","Get B")
        a=eval(a)
        b=eval(b)
        if a>b then
                MsgBox "A is Largest",vbInformation,"Largest"
        else
                MsgBox "B is Largest",vbInformation,"Largest"
        end if
</script>
</body>
</html>
```

output :


Using the VBScript code - Microsoft Internet Explorer
VBScript: Get A
Enter the value of a :
OK
Cancel
3
Using the VBScript code - Microsoft Internet Explorer
VBScript: Get B
Enter the value of b :
OK
Cancel
4



Q17 How to create an array in VBScript?

Ans: An array's beginning position is 0, so if we specify an array of size 3 that means we can store 4 presents (positions 0, 1, 2 and 3)! This is often confusing for first time VBScript programmers.

```
<script type="text/vbscript">
Dim myArray(3)
</script>
```

Q18 How to store and accessing data in an array?

Ans:

Store the data in an array:

```
<script type="text/vbscript">
Dim myArray(3)
myArray(0) = "Clean Under"
myArray(1) = "Vacuum Cleaner"
myArray(2) = "New Computer"
myArray(3) = "Talking Bass"
</script>
```

Access the data in an array:

```
<script type="text/vbscript">
Dim myArray(3)
myArray(0) = "Clean Under"
myArray(1) = "Vacuum Cleaner"
myArray(2) = "New Computer"
myArray(3) = "Talking Bass"
document.write(myArray(0))
</script>
```

Display:

Clean Under

Q19 How to accessing all Data in VBScript?

Ans:

```
<script type="text/vbscript">
Dim myArray(3)
myArray(0) = "Clean Under"
myArray(1) = "Vacuum Cleaner"
myArray(2) = "New Computer"
myArray(3) = "Talking Bass"
For Each present In myArray
document.write(present)
document.write("<br />")
Next
</script>
```

Display:

Clean Under Vacuum Cleaner
New Computer
Talking Bass

Q20 Explain Select case in VBScript?

Ans: VBScript *Select Case* statement can be summed up into three main parts.

- Variable - The variable contains the value which we are trying to determine. Our example will be a variable containing the name of a person.
- Case Statements - The case statements contain the values we are checking for. Our example will contain a few names, each their own case statement.
- Case Code Blocks - Each case statement has a block of code associated with it. When its case statement is True then the block of code is executed. Our example will print out a greeting depending on the person's name.

For Example

```
<script type="text/vbscript">
Dim myName
myName = "Charles"
Select Case myName
Case "Bob"
  document.write("Been busy Bob?")
Case "Sara"
  document.write("Seen any slick sunglasses Sara?")
Case "Charles"
  document.write("Did you chuck your chowder Charles?")
End Select

</script>
```

Display:

Did you chuck your chowder Charles?

Q21 How to insert Comment in VBScript ?

Ans: VBScript only has support for single line comments, so commenting out large blocks of code or leaving yourself long notes can be quite a bit of work. The apostrophe is the special character VBScript uses as its comment initiator.

```
  <script type="text/vbscript">
Dim myMessage
'myMessage = "I am having a great day!"( comment line)s
myMessage = "I could use a nap..."
```

```
'This will print out myMessage to the visitor
document.write(myMessage)

</script>
```

Display:

I could use a nap...

Q22 How to use for loop in VBScript?

Ans: Syntax for **for loop** in VBScript

```
For counterVariable = 0 to MAX
```

You would replace *counterVariable* with the name of your counter (most often counter variable used is *i*). *MAX* would also be replaced with an integer to specify how many times you would want the *For Loop's* code executed.

```
<script type="text/vbscript">
For count = 0 to 3
   document.write("<br />Loop #" & count)
Next

</script>
```

Display:

Loop #0
Loop #1
Loop #2
Loop #3

Q23 How to use foreach loop in VBScript?

Ans: VBScript *For Each Loop* is useful when you want to go through every element in an array, but you do not know how many elements there are inside the array.

```
<script type="text/vbscript">
Dim myCloset(2)
myCloset(0) = "Coat"
myCloset(1) = "Suit"
```

```
myCloset(2) = "Boxes"

document.write("In my closet is:")
For Each item In myCloset
   document.write(item & "<br />")
Next
</script>
```

Display:

In my closet is:Coat
Suit
Boxes

Q24 How to use while wend loop in VBScript?

Ans:

Syntax:

```
While condition
        Statements1
        Statements2
        :
        :
        Statements n
Wend
```

For example

```
<script type="text/vbscript">
Dim counter
counter = 10
While counter > 0
   document.write(counter)
   document.write("<br />")
   counter = counter - 1
Wend
document.write("BANG!")
</script>
```

Display:

```
10
9
8
7
6
5
4
3
2
1
BANG!
```

Q25. How to use functions in VBScript?

Ans: We can use the function keyword to define the functions in VBScript with the closing tag end function.

For example:

```
<script type="text/vbscript">
Function myAdd(x,y)
myAdd = x + y
End Function
'Let's use our function!
Dim result
result = myAdd(10,14)
document.write(result)
</script>
```

Display:

```
24
```

Multiple Choice Questions

1.The Basic format for text link is:
a.<A HREF="URL">The text describing link</A>
b.<HREF ="URL">The text describing link</A>
c.<HREF="URL"></A>
d.None of the above

2.The text used to create a hypertext relationship between the current document and another URL is:
a.<ISINDEX>
b.<A>
c.<P>
d.<LINK>

3) When images are used as links they get a blue border.
a) Always
b) Never
c) Unless border is set to zero

4) A 6 digit Hex color (#FF9966) defines values of Red, Blue and Green in which order ?
a) #BBRRGG
b) #BBGGRR
c) #RRGGBB

5) When you count to 15 using hexadecimal numbers, the highest number is what ?
a) F
b) B
c) 15

6) The <small> and <big> tags are special in what way ?
a) They can be repeated
b) They work on anything
c) They are for images only

7) What does vlink mean ?
a) visited link
b) very good link
c) active link

8) Banners, buttons, dividers, clipart and other simple images usually work best as ?
a) fonts
b) gif
c) jpg

9) Which format usually works best for photos ?
a) JPG
b) HTML
c) GIF

9) <a> and are the tags used for ?
a) Audio-voiced text
b) Adding links to your page
c) Aligning text

10) What does the GENERATOR meta tag tell ?
a) What type of server your page is on
b) Which program was used to produce the page
c) Who designed the page

11) What tag is used to add columns to tables ?
a) <colspan>
b) <td>
c)<tr>

12) Use<td> and </td>to add what to your tables?
a) columns
b) rows
c) steps

13) What is the REFRESH meta tag used for ?
a) Refresh your keywords
b) Allow search engines to relist your page
c) Redirect to a new domain

14) Screen colors are defined by which colors ?
a) Green, Blue, and Yellow
b) Crayola Colors
c) Red, Green and Blue

15) What tag can prevent sites with adult content from being seen on MSIEbrowsers ?
a) <meta refresh> tag
b)<meta keywords> tag
c) icra.org registered <meta http-equiv="pics-label">

16) To specify a font for your whole page add which tag ?
a) <targetfont>
b) <defaultfont>
c)<basefont>

17) Increasing the cellpadding value will what ?
a) Increase the distance between cell and content
b) Increase the space between cells
c) Increase the softness of your site

18) Which of the following is NOT true of metatags use ?
a) Which of the following is NOT true of metatags use ?
b) Do not include words that are not present on your pages
c) Use as many keywords as you can

19) To change the size of an image in HTML use what ?
a) pliers
b) height and width
c) bigger and smaller

20) Hex-colors are the only way to define colors on the web?
a) True for Internet Explorer, False for Netscape browsers
b) False, colors can also be specified with names and CSS
c) True, computer screens only understands hexadecimal values.

21) Is it a common myth that meta tags seriously improve search engine rankings ?
a) no
b) only in Nepal
c) yes

22) Choose the correct HTML tag to make a text italic
a) <italic>
b) <i>

23) Choose the correct HTML tag to make a text bold
a) <bold>
b) <b>

24) If the background image is smaller than the screen, what will happen ?
a) It will be stretched
b) It will leave a blank space at the bottom of your page
c) It will be repeated

25) HTML defines colors using hexidecimal values, while graphics programs most often use what ?
a) Names
b) Normal numbers
c) RGB Code

26) The <title> tag belongs where in your HTML ?
a) Head
b) Arm
c) Body

27) If you don't want the frame windows to be resizeable, simply add what to the <frame> lines ?
a) save
b) dontresize
c) noresize

28)How can you make a list that lists the items with numbers?
a) <dl>
b)
c)
d)<list>

29) Most search engines give serious importance to meta tags when ranking websites in their listings ?
a) True
b) It depends on the keywords
c) False

30) Which colors consist of equal amounts of all basic colors ?
a) purple, green, and red
b) black, blue, and gray
c) white, black and gray

31) Which has higher priority, cell settings or table settings ?
a) Neither
b) Cell settings
c) Table settings

32)What does HTML stand for?
a) Hyper Text Markup Language
b) Hyperlinks and Text Markup Language
c) Home Tool Markup Language

33) What is the correct HTML for adding a background color?
a) <body background="yellow">
b)<background>yellow</background>
c) <body style="background-color:white">

34) To make the appearance of the colors more powerful on your site do which of the following ?
a) Do not use colors
b) Limit their use
c) Splash them all over

35) When is the content of a table shown ?
a) In pieces as it loads
b) Before the border loads
c) After the table is loaded

36) To add rows to your tables use which tags?
a) <td> and </td>
b)<cr> and </cr>
c) <tr> and </tr>

37) Gif and jpg are the two main types of what ?
a) animated effects
b) outlines
c) images

38) WYSIWYG stands for ?
a) What You See Is What You Get
b) When You Start Is When You Go
c) What You See Is What You Gain

39) Choose the correct HTML tag for the largest heading
a) <heading>
b)<h6>
c) <head>
d) <h1>

40) Choose the correct HTML to left-align the content inside a tablecell
a) <td valign="left">
b) <tdleft>
c) <td align="left">
d)<td leftalign>

41) To create a bulleted list use ?
a) <il>
b)
c)

42) Besides<B>, another way to make text bold is what ?
a)
b) <dark>
c) <fat>

43) Hexadecimal numbers are numbers based on the value of what ?
a) 10
b) 8
c) 16

44) Which is NOT a predefined target for links ?
a) _son
b) _parent
c) _blank

45) If you do not include a DESCRIPTION meta tag, most search engine will simply list what ?
a) Nothing
b) All text above the fold of your page
c) The first few words on the page

46) How many characters can be written with 1 Kilobyte ?
a) 1024
b) 1
c) Depends on the font used

47)To start a list at the count of 3, use which ?
a) <ol start="3">
b) <ol begin="3">
c)<ol list="5">

48) Who is making the Web standards?
a) The World Wide Web Consortium
b) Mozilla
c) Microsoft

49) Which tag can set the background color for your page?
a) <body>
b)<head>
c)<font>

50) What is the correct HTML tag for inserting a line break?
a) <lb />
b)
c)<break />

51) The attribute used to choose the type of font in HTML is ?
a) Character
b) Face
c) Text-type

52) colspan=n can be added to only what tag?
a)<table>
b)<td>
c)<tr>

53) Rather than using Hspace and Vspace you can use which of the following to add spacing to your image ?
a) height and width
b) 1x1 pixel transparent image
c) align=+2

55) In the code <frameset cols="120,*"> the following would be true.
a) Top frame would be 120 pixels high
b) Left frame would be 120 inches wide
c) Left frame would be 120 pixels wide

56) Which program do you need to write HTML?
a) Any text editor
b) HTML-development suite 4
c) A graphics program

57) When making bulleted lists you have what options ?
a) disc, circle, square

b) triangle, square, circle
c) square, disc, polygon

58) A file that specifies how the screen is divided into frames is called a _____
a) frameset
b) frametable
c) tablelink

59) Which of these is not valid HTML?
a) <font face="verdana,arial">
b)<fontface="verdana">
c) <font face="verdana">

60) Which of these tags are all <table>tags?
a) <thead><body><tr>
b) <table><tr><td>
c)<table><head><tfoot>
d)<table><tr><tt>

61) The
tag adds what to your webpage ?
a) Line break
b) Little bubbles
c) Long breaks

---

62) What tag tells where a link starts ?
a) <l>
b) <start>
c) <a>

63) Settings for columns(<td> tag) have higher priority than settings for rows(<tr> tag)
a) Sometimes true, sometimes not
b) True
c) False

64) Colors in plain HTML can be specified using ?
a) Meta tags
b) Images
c) Hexadecimal Colors

65) Relative path make your hypertext links_____.
a) Portable
b) Discrete
c) Uniform

66) tags will create what kind of list ?
a) Numbered List
b) Bulleted List
c) Grocery List

Answer Key
1)a 2)d (3) c (4) c (5) a (6) a (7) a (8) b (9) a(10) b (11) b (12) b (13) a (14) c (15) c (16) c(16) c (17) a (18) c (19) b (20) b (21) c (22) b (23) b (24) c(25) c (26) a (27) c (28) b (29) c (30) c (31) b (32) a (33) c(34) b (35) c (36) c (37) c (38) a (39) d (40) c (41) b (42) a(43) c (44) a (45) c (46) a (47) a (48) a (49) a(50) b (51) b(52) b (53) b (55) c (56) a (57) a (58) a(59) b (60) b (61) a (62) c (63) b (64) c (65) a(66) a

Multiple Choice Questions

1) <script type="text/javascript">
x=4+"4";
document.write(x);
</script>

Output------?
a) 44
b) 8
c) 4
d) Error output

---

2) <script type="text/javascript" language="javascript">
var qpt = "**Qualiyt Point Technologies**";
var result = qpt.split(" ");
document.write(result);
</script>
a) Quality
b) Q,u,a,l,i,t,y,P,o,i,n,t,T,e,c,h,n,o,l,o,g,i,e,s
c) Qualiyt,Point,Technologies
d) QualityPointTechnologies

---

3) Is it possible to nest functions in JavaScript?
a) True
b) False

---

4) <script>
document.write(navigator.appCodeName);
</script>
a) get code name of the browser of a visitor
b) set code name of the browser of a visitor
c) None of the above

---

5) Which of the following is true?
a) If onKeyDown returns false, the key-press event is cancelled.
b) If onKeyPress returns false, the key-down event is cancelled.
c) If onKeyDown returns false, the key-up event is cancelled.
d) If onKeyPress returns false, the key-up event is canceled.

6) Scripting language are
a) High Level Programming language
b) Assembly Level programming language
c) Machine level programming language

---

7) Which best explains getSelection()?
a) Returns the VALUE of a selected OPTION.
b) Returns document.URL of the window in focus.
c) Returns the value of cursor-selected text
d) Returns the VALUE of a checked radio input.

---

8) <script language="javascript">
function x()
{
var s= "**Good 100**%";
var pattern = **/\D/g**;
var output= s.match(pattern);
document.write(output);
}
</script>
a) Good %
b) 1,0,0
c) G,o,o,d,%
d) Error

---

9) **<script** language="javascript"**>**
var qpt="QUALITY POINT TECHNOLOGIES";
alert(qpt.charAt(qpt.length-1));
</script>
a) P
b) E
c) S
d) Error

---

10) Choose the client-side JavaScript object:
a) Database
b) Cursor
c) Client

d) FileUpLoad

---

11) Are java and javascript the same?
a) NO
b) YES

---

12) Syntax for creating a RegExp object:
(a). var txt=new RegExp(pattern,attributes);
(b). var txt=/pattern/attributes;
13)Which of the above mentioned syntax will correct?
a) (a) only
b) (b) only
c) Both (a) and (b)
d) None of the above

---

13) <script language="javascript">
function x(z,t)
{
alert(x.length);
}
</script>
output:
?
a) Error
b) 2
c) 1
d) 3

---

14) What is mean by "this" keyword in javascript?
a) It refers current object
b) It referes previous object
c) It is variable which contains value
d) None of the above

---

15) In JavaScript, Window.prompt() method return true or false value ?
a) False
b) True
c) None of above

---

16) Math. round(-20.51)=?

a) 20
b) -21
c) 19
d) None

---

17) <script language="javascript">
function x()
{
var s = "**Quality 100%![[!!**";
var pattern = **/\w/g**;
var output = s.match(pattern);
document.write(output);
}
</script>
a) %,!,{,[,!,!
b) Q,u,a,l,i,t,y,1,0,0
c) Quality 100
d) Error

---

18) <script type="text/javascript" language="javascript">
var qpt= new Array();
qpt[0] = "WebDevelopment";
qpt[1]="ApplicationDevelopment"
qpt[2]="Testing"
qpt[3] = "**QualityPointTechnologies**";
document.write(qpt[0,1,2,3]);
</script>
a) Error
b) QualityPointTechnologies
c) WebDevelopment
d)
WebDevelopmnet,ApplicationDevelopment,Testing,QualityPointTechnologies

---

19) Choose the server-side JavaScript object:
a) FileUpLoad
b) Function
c) File
d) Date

---

20) parseFloat(9+10)=?

a) 19
b) 910
c) None

---

21) <script language="javascript">
function x()
{
document.write(2+5+"8");
}
</script>
a) 258
b) Error
c) 7
d) 78

---

22)_____ keyword is used to declare variables in javascript.
a) Var
b) Dim
c) String

Answer key
(1) a (2) c (3) a (4) a (5) a (6) a (7) c (8) c (9) c (10) d (11) a (12) c (13) b (14) a (15) a (16) b (17) b (18) b (19) c (20) c (21) d (22) a