Biyani's Think Tank

Concept based notes

Web Designinging & Multimedia

BCA

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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.

Author

BCA205 : Web Designing and Multimedia

Question Paper pattern for Main University Examination *Max Marks: 100*

Part – I (very short answer) consists 10 questions of **two marks** each with two questions from each unit. Maximum limit for each question is up to 40 words.
Part – II (short answer) consists 5 questions of **four marks** each with one question from each unit. Maximum limit for each question is up to 80 words.
Part – III (Long answer) consists 5 questions of **twelve marks** each with one question from each unit with internal choice.

UNIT – I

World Wide Web : Elements of the Web, Web browser and its types, viewing pages with a browser, using a browser for Mail, News and chat, Security and Privacy issues (cookies, firewalls, executable Applets and scripts, blocking system), Plug-Ins and Active controls, dealing with Web pages that contain Active X, playing streaming Audio and Video, playing MP music. Using Search engines, subscriptions and channels, making use of web resources (Portal, News and weather, sports Personal Financing and Investing, Entertainment, shopping, Computers and Internet, Travel, Health and Medicine, Communities and Clubs).

UNIT – II

HTML Fundamentals: Introduction to HTML, Creating HTML Pages, incorporating Horizontal Rules and Graphical Elements, Hyper-links, Creating HTML Tables, Creating HTML Forms, HTML and Image Techniques, HTML and Page, Frames, Development of Website and Webpage (Planning, Navigation and Themes, Elements of a Web page, steps of creating a site, publishing and publicizing site structuring web site.

UNIT–III

Introduction to DHTML: features of DHTML, CSS: Types of Style sheets, Different elements of Style sheets, Filter effects, IFrame, DIV and Layer Tags.

UNIT–IV

Java Script Fundamental: Introduction to Java Script Working with Variables and Data Functions, Methods and Events, Controlling Programming Flow. The Java Script Object Model Java Script language Objects, Developing Interactive Forms, Cookies and Java Script Security Controlling Frames in Java Script, Client – Side Java Script Custom, JavaScript Objects. Introduction to JQuery and AJAX.

UNIT – V

Introduction of Photoshop
Creating a New File:- Main Selections, Picking color, Filling a selection with color, More ways to choose colors and fill selections, Painting with paintbrush tool, Using the magic wand tool and applying a filter, Saving your document (save your file:- Save file as a JPEG, TIFF, GIF, PNG), Introduction and use of layers, Introduction and use of tool of PhotoShop.
Introduction to Coral draw-
Introduction to coral draw, use and importance in designing, various graphic file and file extension, vector image and raster images, introduction to screen and work area.
Introduction and use of tool of coral draw.

Unit 1

World Wide Web

Q:1 What is WWW and elements of WEB?

Ans: World wide web is also called www, w3 or simply web. 'Tim Berners Lee' is also known as the father of the world wide web. World wide web is a large collection of pages of information which are stored on thousands of computers called web servers and are linked to each other around the globe. These pages can contain text, graphics, audio, video and much more. These pages also contain hyperlinks for linking one file to another. Every web page can be linked to another page anywhere in the world.

Elements of the web

There are a number of hardware and software components that make up the web. These are called elements of a web. It can be defined as follows :

1. **Web Server :** Servers are basically a service provider. It is the combination of hardware and software, that have the responsibility for storing and retriving of web pages.

2. **Web Client :** The client is a program that uses to make a request to web server for required web pages. Web browsers are the example of web client software. By using the web browser softwares, users can request to web server for any web page. Then web server is responsible to retrieve these web page from its storage and send it to the client.

3. **URL and Protocols :** All web pages on the internet has an unique address which is called 'Uniform Resource Locator' (URL). URLs are the standard way that make it possible to web browser to retrieve any information on world wide web. For ex: http://www.yahoo.com

4. The first part of an URL describe the type of protocol used by the web browser to retrieve specific type of information. The main protocol used to access web pages is 'Hyper Text Transfer Protocol' (HTTP), web pages are sent from web server to browser using this protocol. The next part of the URL describe the host name of the web server.

5. **HTML :** 'Hyper Text Markup Language' (HTML) is the standard language used to design a web page. It converts the normal text to hyper text. HTML is not a programming language. It is just a markup language which is used to create a layout of a web page and tell the web browser that how to display the various kind of information that the web document contains.

6. **Java applets and ActiveX controls :** Java is a object oriented programming language which is completely platform independent. It is mainly used on website for sending small applications called applets, that can be executed by client computer to speed up interactivity. ActiveX controls are also the executable programs, embedded in a web page. These are introduced by Microsoft.

7. **Scripting languages :** Java Script and VB Script are the scripting languages that can be embedded in a web page and written as part of HTML document. Javascript was developed by NetScape and Sun Microsystems and VB Script was developed by Microsoft. VB Script is generally used with ActiveX controls. By using the VBScript we can design interactive web pages.

8. **XML :** XML is called 'Extensible Markup Language'. It is a very powerful language, provide the capability to design explanatory tags. Hence, it is also called a language for writing languages like HTML.

9. **DHTML :** DHTML is the extension of HTML. It is called Dynamic HTML. It contains the capability of HTML, Javascript and Cascading Style Sheet (CSS).

10. **Image Formats :** The graphical information are displayed on web pages in various formats like JPEG (Joint Photographic Experts Group) and GIF (Graphic Interchange Format). Images like cliparts, icons, lines and shapes are generally available in GIF format. But for images like coloured photographs, JPEG format is mostly used.

11. **Audio and Video Formats :** Audio and video can also be the part of your web pages. To play these audio and video files, your browser needs the plugins. Plugins are small programs that attached to your web browser in a seamless way and enhance the capability of your web browser. The audio and video on your web can be in streaming audio or video form or can be downloaded as complete file at a time.

12. **.VRML :** To include three dimensional images on objects in your web pages, you can use virtual modelling language which is also called VRML.

13. **Web pages and websites :** Web pages are simply web documents written in HTML and stored on web server with a unique Id called its URL.Websites are collection of interlinked web pages related to a particular thing, person or organization.

Q:2 What is web browser & its Types?

Ans: A web browser is a software application that uses to communicate with web server on world wide web and display the contents like web pages, images,

audio, video and other file available on the Internet. In the world of Internet, browser is basically a client-side software that is used by client computer to request for some information from web server. The web server then send requested information back to the web browser. A user can also navigate on a website with the help of a browser.

Type of Web Browsers : Browsers can be text based or graphical. There are number of web browsers available now. But the most popular browser are :

- **Internet Explorer** : This is the most popular browser that was introduced by Microsoft in 1995 and launched with Windows 95.

- **Netscape :** Netscape was introduced in 1994. This is also one of the most popular web browsers.

- **Firefox** : Now a days, Firefox is commonly used web browser. It was derived from Mozilla in 2004

.

- **Opera:** Opera is small browser which is very fast and user friendly.

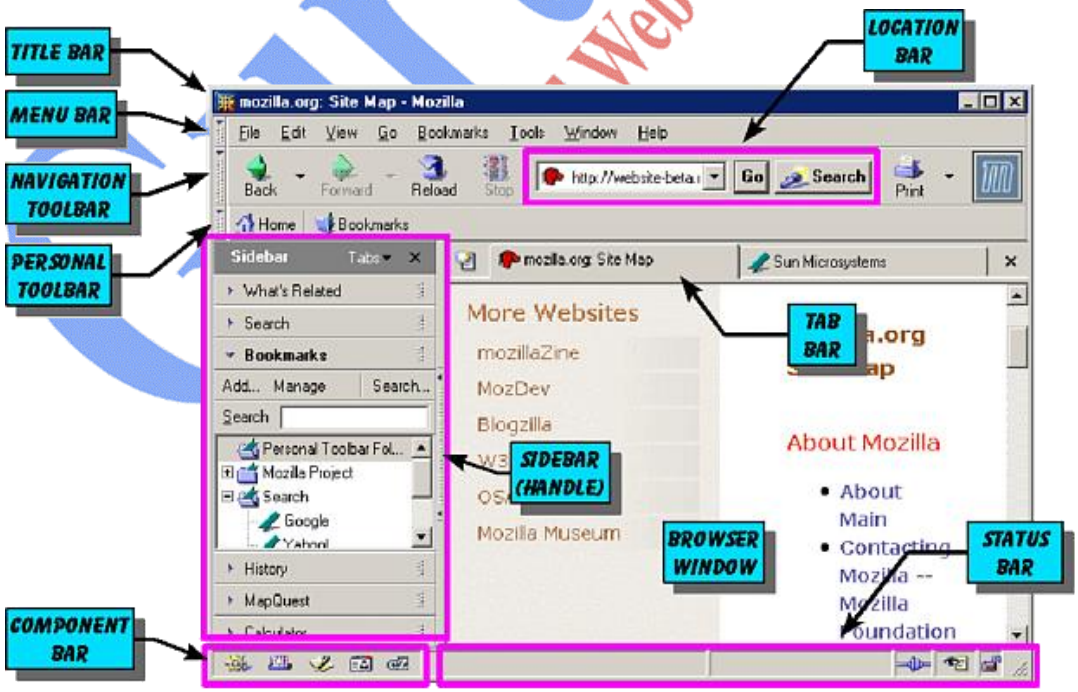
- **Google chrome :** This was developed by Google and now it becomes the fourth most widely used browser in the market.

- **Lynx :** It is fully featured Internet web browser used with Unix operating system.

- **Safari :** It was introduced by Apple Inc and included Mac OS. It provides support for most of the new web technologies like XHTML, CSS2 etc.

Component of a Browser Window

Generally most of the browser windows have similar layout. In a browser window you may find these basic elements :



Q:3 Write steps for viewing pages with browser ?

Ans: Viewing web pages stored on your computer

To view HTML document stored on your computer you should follow these steps :

- Open any web browser by double click on it.
- Go to the 'File' menu and click on 'Open'
- Select the HTML document, which you want to open and click on 'Open' button.
- Now document will be displayed in browser window.

Viewing web pages stored on web server

You can open the web page that stored on any web server on the Internet by following these steps:

- Open any web browser by double click on it
- In the address or location bar of the browser enter the URL of the web page which you want to open
- You can also select the URL from the drop down list in location bar, if it is displayed. Generally browsers like Internet explorer can remember last 20 to 25 URLs that you have typed before in the address bar.
- You can also move from one page to another by clicking on the hyperlink available on that page.
- You can also view a webpage by selecting it from bookmark list from favourite menu or from history folder.

Q:4 Explain the method of sending an email through web browser?

Ans: Electronic mail (Email) is one of the most popular feature available on the Internet. By using a web browser you can send and receive messages globally through Internet.

You can send an e-mail to someone on his/her unique mail ID. Internet mail address have two parts separated by @ sign. The first part before @ symbol is name of the recipient and the second part contain the domain name of the server such as gmail.com.

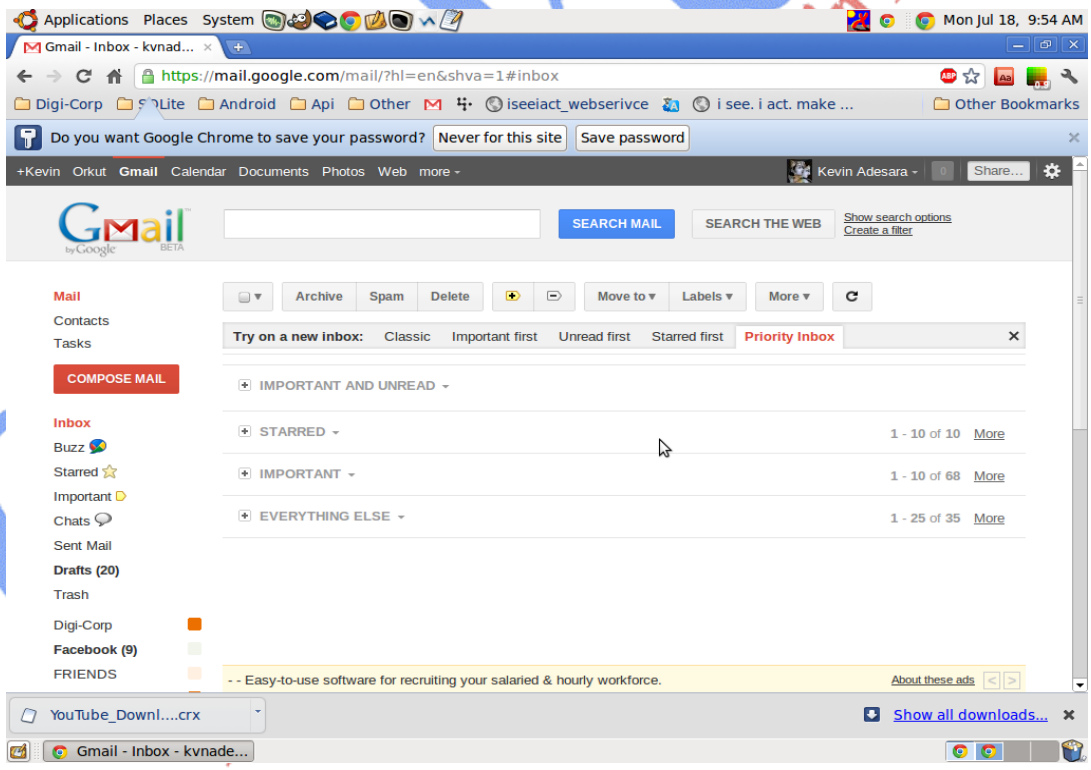
When you sent an e-mail a protocol called 'Simple Mail Transfer Protocol' (SMTP) is used. SMTP server provide space to your outgoing messages.

You can also use the web browser application to receive the messages. It may happen that you are not connected to Internet all the time i.e. when you need, you get connected to the Internet and disconnect when you have done. But an email can arrive at any time. Hence you need space on mail server until

someone is ready to read it. The incoming message are stored on mail server in mailbox by using a protocol called 'Post Office Protocol' (POP). When you connect to the Internet you can download these e-mails from mail server to your computer and read them by using e-mail program.

Sending and receiving e-mails

To send or receive any email you should connect to the Internet and open any web browser. Now open your mail application on which you have registered. Then type your login id and password and click on Sign In. Now your inbox displays all incoming mails. To read any incoming message you have to click on it. Then you can forward, reply or delete that message by clicking on the respective button or link. To send any email, click on Compose. In the compose window, type the receipent mail address in the 'To' box. You can type multiple mail address in 'To' box separated by commas. You can use 'cc' to send copy of current mail to another receipent mail id. The 'Bcc' can also be used to send 'Blind carbon copy' of the message. That means the receipents against 'To' and 'Cc' do not see the 'Bcc' mail address with the message.



In the 'subject' box type the subject of the message. Then in the next box type your messages. Now you can send your message by click on 'send' button. Before sending the message, you can attach any type of file with your mail. To attach any file click on attach icon, then browse for the file that you want to attach and double click on it. Now it will attach with your message and send along with it, when you click on 'send' button.

Q:4 Explain how can we use browser for chat?

Ans: You can also open a chat program to chat with a single or a group of people without any restriction of their geographical location. 'Internet Relay Chat' (IRC) allows you to communicate with other people at any time by typing message using your keyboard and you can also see on your monitor what the other people are typing on the screen.

The online chat can be categorized in following types:

1. **Web based chat:** Web based chatting can be done by connecting the web using your web browser. Some websites provides the facility to their user to chat with each other. Chat on a website can be divided into two main categories:
   - **Interactive web chat:** It is much like the IRC in which website provide a chat room. When you type message anyone using the same chat room can access what you typed.
   - **Web Discussion Board:** These are like newsgroup where you can send and receive message and post your thoughts. It has the facility that any number of people can participate in a chat without having to be online at the same time.
2. **Direct chat system:** Direct chat system is used for instant messaging and you can interact with your friends who are online at that time. The most popular direct chat programs are: ICQ, AOL, instant messenger, Yahoo! Pager etc.

Q:5 Explain Various security and privacy issues ?

Ans: Cookies

Cookies are online files that can be used for authenticating, session tracking and to set your preferences or shopping cart contents. For example, the information in a cookie might be a login ID for your online email account so you don't have to login to each page. Some cookies are temporary and some may stay on the hard drive and be used when visiting the site again. What people object to are third party cookies used to gather consumer behavior for marketing analysis. The purpose is to profile users as they move around on various sites and deliver precise, personalized advertising as they surf the Internet. Even if anonymous, these profiles have been the subject of privacy concerns.

Firewall

A firewall is a network security system designed to prevent unauthorized access to or from a private network. Firewalls can be implemented in both hardware and software, or a combination of both. Network firewalls are frequently used to prevent unauthorized Internet users from accessing private

networks connected to the Internet, especially *intranets*. All messages entering or leaving the intranet pass through the firewall, which examines each message and blocks those that do not meet the specified security criteria.

Executable applets and scripts :

Java applets, VB Scripts, Java Script and ActiveX control are the languages of web server to run small applications on your computer. Java Script and VB Script can embed in HTML page. The main purpose of applets and scripts is to speed up the interactivity of web page. Although these programming system are secure but sometimes some bugs can be found which arise some security risks. Hence user can disable them.

Blocking system :

World wide web is a huge collection of information. We can find any type of information on the web. But sometimes we want to block some sites to open on your web browser because we find it offensive. So we can use web browser feature to block that type of content to display on your system. To block the site containing specific type of information, we can use system called PICS (Platform for Internet Content Selection) created by W3C for enable rating system of a website. To provide rating to a website a questionnaire has been created by the rating organization. When a website owner fill these questionnaires, the rating organization issue a rating lable to the that site. This lable contain information about the content of that website. When we request for a webpage our web browser first read the lable and compare it with the criteria set by us. But to enable this system our browser should be able to read the PICS lable.

Q:6 What is the procedure to play a audio and video?

Ans: Playing streaming audio and video

A web page can contain text, graphics, audio, video files and many more. Audio and video files are available in various formats. A variety of player, plugin and active controls are also available to play these audio and video files on a web page. When we follow a link which contain audio or video file, the plug-in or ActiveX control runs automatically and play this file. If plug-in or ActiveX control is not available to play that audio or video file, we have to install it so that your browser will be enable to play them. To play a large size of audio/video file streaming is used. It allow our computer to play the audio or video file as it is downloading. It allows to start playing the part of audio video file which is arrived and rest to the part is still arriving to play streaming audio and video. Various plugins and active are available which you can install on your computer. Some popular plugins and ActiveX controls are –

- Real Player
- Quick Time
- Microsoft Windows Media Player
- VDO Live Player

Playing MP3 Music

MP3 is the most popular audio format used for storing audio files or music. MP3 files are the highly compressed audio format files with extension mp3. Play any mp3 format file on mp3 players. WINAMP is the most popular mp3 player which you can download from the net.

Every time you watch a video on sites like YouTube or Netflix, you're actually watching a video stream instead of say watching a video on your computer that you've downloaded and saved. When you stream video you need an Internet connection, when you watch a video you have saved on your computer it doesn't matter if you have an Internet connection. Did you know that you could stream video yourself, too? It's true and it's easy to get started.

There are really two types of streaming video – live video, and on demand video. Live online video, or "live streaming," transmits a real-time live video feed over the web as your event occurs. Live streaming is common for events like conference keynote addresses or sporting events such as the Super Bowl live stream. On demand video, on the other hand, is intended for viewers who can watch your video at any time. Think: watching a music video online. Posting on demand video presents fewer technical challenges and generally provides viewers better picture quality. Both live and on demand video can be posted online on at video sharing sites that offer simple online tools to post video, and then provide a way to embed and stream the video on your own web page too.

Q:7 Write different types of search engines?

Ans **1. Google –** No need for further introductions. The search engine giant holds the first place in search with a stunning difference of 45% from second in place Bing. According to the latest **comscore report** (October 2012) 69.5% of searches were powered by Google and 25% by Bing. Google is also dominating the mobile/tablet search engine market share with 89%!

2. **Bing –** Bing is Microsoft's attempt to challenge Google in the area of search but despite their efforts they still did not manage to convince users that their search engine can produce better results than Google.

3. **Yahoo** – Since October 2011 Yahoo search is powered by Bing. Yahoo is still the most popular email provider and according to **reports** holds the third place in search.
4. **Ask.com** – Formerly known as Ask Jeeves, Ask.com receives approximately 3% of the search share. ASK is based on a question/answer format where most questions are answered by other users or are in the form of polls. It also has the general search functionality but the results returned lack quality compared to Google or even Bing and Yahoo.
5. **AOL**.com – According to **netmarketshare** the old time famous AOL is still in the top 10 search engines with a market share that is close to 0.6%. The AOL network includes many popular web sites like engadget.com, techchrunch.com and the huffingtonpost.com.
6. **Blekko**.com – **Blekko.com** was developed by ex-Googlers and they present themselves as the "spam free search engine". It is better suited for webmasters and SEO's who need more data for SEO purposes rather than normal users.
7. **Wolfram alpha – wolfram alpha** is different that all the other search engines. They market it as a Computational Knowledge Engine which can give you facts and data for a number of topics. It can do all sorts of calculations, for example if you enter *"mortgage 2000"* as input it will calculate your loan amount, interest paid etc. based on a number of assumptions.
8. **DuckDuckGo** – Has a number of advantages over the other search engines. It has a clean interface, it does not track users, it is not fully loaded with ads and has a number of very nice features (only one page of results, you can search directly other web sites etc). I am sure that some of the features of duckduckgo will be used by other search engines and with some proper funding duckduckgo can get a decent search engine market share.
9. **WayBackMachine** – **archive.org** is the internet archive search engine. You can use it to find out how a web site looked since 1996. It is very useful tool if you want to trace the history of a domain and examine how it has changed over the years.
10. **ChaCha.com** – According to **alexa** chacha.com is the 8th most popular search engine with a ranking position of 297 in the US. It is similar to ask.com where users can ask or answer a particular question. They also have a number of quizzes that can help you decide on a number of topics. It's not bad at all and the answers are precise and to the point. For example if you search "What is the best search engine?" you will get an answer that Google is the best and most popular search engine and Yahoo is on the second place.

Q:8 Write different types of web resources?

Ans: The web provide a variety of information to you. Here we are describing the various resources of information or services available on the web.

1. Web Portals – Web portals are the websites that provide a wide range of information and services such as e-mail, news services, search engines, chat rooms, online shopping etc. You can set the web portal as a start page when you open the browser. It can be a starting point for internet users to explore and access information on the world wide web. The concept behind the web portal is to collect information from different sources and provided a single point of access to information for internet users web portal provides various free service like email, chatting, news service etc. Some popular web portal are yahoo. Lycrics, MSN, excite etc. Various services that can be provided by a web portal are –

(i) **Search Engine –** Web portal can also work as search engine and provide the facility to search for any type of information, based on the text or phase entered by you in its search text box.

(ii) **Email –** Portal can also provided you the facility to create for email account on its website.

(iii) **Chatting –** There are a number of Chat rooms available on a portal. You can join the chat room on the portal & Start chatting on any topic of your interest.

(iv) **News Services –** Portal provide you many type of updates like news about weather, sports, health or any topic of your interest.

(v) **Games –** A variety of games are provided by web portal which you can play with other users loged into the portal.

(vi) **Online Communities –** Some web portals provided you the facility to create or be a part of online club or communities with people of Common interest.

(vii) **Home Page –** Some portals also provided you a small amount of space on its server to store web pages posed by you. They also provided you a free home page facility.

(viii) **Maps –** Some portals provided you online maps which can help you to find an address.

(ix) **Shopping Tools –** Various shopping tools are available on portals. You can make online shopping, see details about any products or compare prices of various products of different manufacturers.

(x) **Personalizing Home Page –** You can customize your home page by providing the information about your interest such as you can customize your home page to always display weather report or news headline or

stock market updations etc.

2. **News & Weather –** Now a day most of the news papers magazines and news channels are available online on the web. The website displays the headings & breaking news on its first page as the links. When you want to know that news in detail you have to click on the links. These websites are updated regularly throughout the day and provides you all the current news. You can also see the news from a week or month ago by selecting that particular date from calendar available on these site. Now weather information also available on the internet, updated regularly. To know about the weather you can see the websites or portals which provided information about weather condition. Like minimum or maximum temperature. Today forcast for cloud, rain etc.

3. **Sports –** Sports news are available online on all the news websites, sports channels or an portals. These websites provides all updated news about sports. Various sports categories are available on first page of the website you can select the category of your choice and view all current news score, audio or video highlights of that particulars sports. You can also view the score or details of a particular match or game from week or month ago by selecting that particular date from the calendar available on that site. These websites also provides the live coverage of the games.

4. **Personal financing and Investing –** These are various financial websites & portals available that provides you current updates from stock market, investment strategy of various investors, online money transfer and much more. It also provide the facility to set your interest criteria & receive the Information according to it. Online calculator help you in complicated financial calculations. Online broker's website are also available which provides you the facility of online trading.

5. **Entertainment –** There are number of entertainment facilities available on Internet. Using the Internet you can watch movies, TV shows, listen Music, watch videos, play or download computer games, see entertainment news etc. Some web portals are also connect you in the world of entertainment.

6. **Shopping –** Now a days Internet users show their internet towards online shopping. A variety of products information are available on web with best available sale price. You can view all the details about a product, compare it with the product of various retailers & place your order online. You also have the facility to pay online or on delivery of product.

7. **Computer and Internet –** You can download various freeware or shareware on your computer from web. Various software are available on the Internet. Which can be downloaded freely. Demo version of some software or games are also available on web. You can also get online hardware or software support on web from manufacturers website.

8. **Travel –** Web also support you to make a plan for your travel various travel web sites and online travel agent are available. Which provides you a list of options travel by car, trains, buses, or flights. You can see online maps and direction for any location. Some portal also provides you the facility to you can plan your route & make online reservation for flight, train or buses and also make booking for hotels using the travel websites.

9. **Health & Medicine –** There are a number of website available which provides health & medical related information to you. These websites provides you the informations about new researches in medical field, health tips, Common diseases and treatments, Pharma dictionary, first aids and much more.

10. **Communities and Clubs –** Online communities or clubs are the group of people with common Interest. Many portals provides the facility to create or join an online club to their registered users. If you are a member of a club, you can chat with the other member of the club, share your ideas or upload your photos.

Unit 2

HTML Fundamentals

Q1. What is HTML & their tags?

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

A Web page, defined in an HTML file, always has the filename extension html (Or htm if you want to be compatible with Windows 3*x* 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.

HTML Tags

Tags are instructions that are embedded directly into the text of the document. HTML tag is a signal to a browser that it should do something other than just throw text up on the screen. HTML tags begin with an open angle bracket (<) and ends with a close angle bracket (>).

HTML tags can be of two types :

1. Paired tags : A tag is said to be paired tag if it contains a companion tag i.e. both opening and closing tag. For example <B> tag with its companion tag </B> is a paired tag and causes the text contained between them to be bold.

   The opening tag activates the effect and the closing tag turn off its effect.

2. Singular tags : These tags are also known as stand-alone tag i.e. these tags does not have their companion tags. For example : <BR> tag will insert a line break.

Document Tag

- **HTML Tag :** A HTML document starts with <HTML> tag and ends with the tag </HTML>. It is necessary for all the HTML pages to have <HTML> tag which signifies the beginning of HTML document and </HTML> indicates the end of the HTML document.

- **Head Tag :** The <Head> tag is used to denote the heading of the web page. So whatever is written between <HEAD> and </HEAD> identifies the properties of entire page.
  After <HEAD> there is one other tag <TITLE>. The tag <TITLE> and </TITLE> is used to give the title to the HTM document. Title of the document describes the contents of the page. Whatever you write in between <TITLE> and </TITLE> tags, will appear on the title bar of the browser window.

- **Body Tag :** <BODY> tag contains the content of the web page. It is the area where most of the work is done. The contents in between <BODY> and </BODY> tags are displayed in the browser window. Here, we can enter the text and graphics for the web page.

  Note : The slash (/) in tags like </HTML> </HEAD>, </TITLE> and </BODY> indicates the end of their sphere of action

  - **Paragraph Tag :** The <P> tag tells the browser to leave a blank line and begin a new paragraph. Now, when the browser interprets this tag, it displays a blank line and the text following the <P> is displayed on the next line.

  - **<HR> Tag :** In order to draw a line across the page <HR> tag is used. HR stands for Horizontal rule. This tag puts a line commonly called as shadow line on the web page.

Note : Certain attributes can be used with some basic tags. For instance in case of <P> tag, you can use <P align = center > .

(Align is used to position center, right, left to paragraph).

Similarly, for <HR> tag you can use <HR width = 80% > or <HR size = 6> for manipulating the size of shadow line. These attributes are optional and can be used depending on the users need.**Line Break :** We may require the line breaks in our web page. The <BR> tag is used to separate the lines. This tag acts in the same way as the Enter key on your keyboard.

BR stands for line break. The <BR> tag actually tells the browser to go to the beginning of next line so that the text following the tag <BR> is placed there.

- **Comment Tag :** This tag is used to specify some information about coding (generally used by programmer). The text written in this tag will not be viewed in the web browser.
  Syntax : < ! ……. Message ……. >

Q:2 Explain Formatting tags in Html.

Ans: There are some tags in HTML that allows you to perform basic formatting of the text in a HTML document. Basic formatting tags mainly include:

Headings :

The header tags are used in HTML document to display heading. Header tags are used to manipulate the size of the heading. i.e. they make heading larger or smaller according to the tag used. There are six header tags in HTML from H1 to H6.

- **Bold Tag :** In order to bold some text in your webpage, HTML provides <B> tag. To get the 'BOLD' effect, just place text in between <B> and </B> tag.
  Example: <B> Text </B>

- **Italic Tag :** The tag <I> is used to get the italic effect in your web page. It can be applied by just placing the text in between the opening <I> and closing </I> tag.
  Example : <I> Text </I>

- **UnderLine Tag :** By using the tag <U> you can underline any text of your web document.
  Example <U> Text </U>

Various Formatting Tags with their effects

Tag Name	Effect
….	Emphasis the text usually in italic
<q> …. </q>	Permits to highlight the short quotations
….	Place strong emphasis within normal body text
^{….}	Render text as superscript (text slightly above normal text)
_{….}	Render enclosed text as subscript (text slightly below the normal text)
<s> …. </s>	Strike through the enclosed text

Q:3 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

```
<a href="http://www.gurukpo.com/" target="_blank">Visit gurukpo</a>
```

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>
```

Q: 4 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:

Q:5 What is IMAP?

Ans: Image maps are used to make spots on image so that it can activate different hyperlinks. Image maps breaks the image into discrete regions called hot zones. Users can select regions by placing the cursor in desired region and clicking the mouse. Image maps definition recognizes the following regions :

Circle : It is used to select a circular region within a space. Here we have

to specify where its centre and radius is located .

Syntax : <Area shape = "circle", X,Y, Radius>

Rectangle: It is used to select a square or rectangular region. Here we have to specify the upper left and lower left right corner.

Syntax : <Area shape = "Rectangle", X^1, Y^1, X^2, Y^2>

Polygon : Here we have to specify the coordinates for the point at the vertex of each edge.

Note : Any other area which does not fall here comes under default area.

<MAP> tag : This tag is used to provide such control. The attributes that can be used with map tag are :

Area : This specifies the area for navigation. Here, we can specify the area name and the coordinates assign to it from the map.

Map Name : This will specify the name of the map to be used.

Following code can be used to understand map :

```
<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>
```

Q: 6 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

Q: 6 Explain list in html.

Ans: **Lists :** HTML supports different type of lists. The five main types of lists supported by HTML are

- Ordered (Numbered) lists
- Unordered (Bulleted) lists
- Definition (Descriptive) lists
- Menu list
- Directory list

1. **Ordered (Numbered) lists :** An ordered list is also known as numbered list. In ordered list each item is automatically numbered starting with 1. The HTML tag for an ordered list is <OL>. This tag also starts with <OL> and ends with </OL>. Each item in the list starts with <LI>.

   Note: The <LI> items can contain multiple lines or paragraphs.

2. **Unordered (Bulleted) lists :** Unordered lists are sometimes called as bulleted list. The term unordered simply means that the items in list are not numbered instead a dot called 'bullet' precedes the item. The tag <UL> indicates the beginning of an unordered list and </UL> represents the ending of this particular type of list. Here, again each item of the list starts with <LI> tag.

   Note : You can also combine the ordered and unordered list to make a nested list.

3. **Nested List :** The list within another list is called nested list.

4. **Definition (Descriptive) List :** Definition list consist of two parts, the term and its definition. Each term in the list has an indented definition.

   This list starts with a tag <DL> and ends with </DL> tag. Each term or title starts with <DT> tag. The indented definition is marked with <DD>Tag.

5. **Menu List :** This tag allows you to create a list in which each element is a word or phrase that fits on a single line. It appears in more compact way than the other lists. This tag is mostly used for linking with other documents or images.
6. **Directory List :** This list can be created by <DIR> container tags. This is normally used for list of file names or some bills.

Q: 7 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”>

Last name:<input type=”text” name=’lastname”>

</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<br />
<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.

Q: 8 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>1999</option>
<option>2000</option>
<option>2001</option>
<option>2002</option>
<option>2003</option>
<option>2004</option>
<option>2005</option>
<option>2006</option>
<option>2007</option>
<option>2008</option>
<option>2009</option>
<option>2010</option>
</select>
```
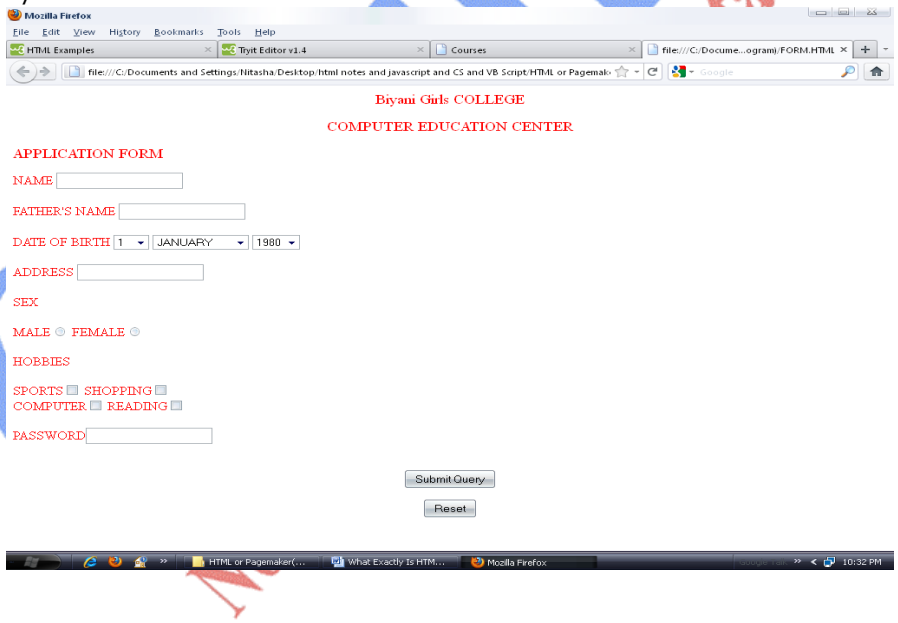

```
<br>
<br>
address  <input type="text" width=50><br><br>
sex<br><br>
male<input type="radio"name="a"value=0>
female<input type="radio"name="a"value=0>
<br>
<br>
hobbies<br><br>
sports<input type="checkbox"name="s"value=0>
shopping<input type="checkbox"name="sh"value=0>
<br>
computer<input type="checkbox"name="c"value=0>
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>
```



Q: 9 Explain HTML Frames.

Ans: Frames are used to create documents with multiple windows. Even oven can add scrollbars to different windows of a document. Thus it helps to display large amount of related or unrelated information in a systematic manner or we can say frames give a better control over the displayed information.

Hyperlinks can be used in frames which in turn may point to any other frame on the same document. Links in a frame, when selected can be used to open an entirely new full-sized window.

The frame document uses two types of elements :

1. Frameset tag
2. Frame tag

Frameset Tag : This tag is used to create frame documents. This is a container tag having corresponding closing tag </FRAMESET>.

A frame can further be divided into more frames by using nested frameset element.

Frame Tag : It defines the frames in a frameset. Frames can be manually resized in a browser. But at the same time, one cannot resize attributes of a frame element by using the corresponding attribute in the HTML code.

How to use Frames in a Browser

Browser window can be divided into one or more rows or columns by using frames. Each row and column indentifies the horizontal and vertical frame respectively.

Before creating frame-based web pages, let us examine the basic layout of a frame-based page. The layout of a frame based document is as follows :

<HTML>

<HEAD> <TITLE> Frames in webpage </TITLE> </HEAD>

<FRAMESET ROWS = “50%, 30%, 20%”>

</FRAMESET>

</HTML>

Note : While using frames in HTML code, never add <BODY> tag. Your frameset tag should immediately follow either the <HTML> tag or the <HEAD> tag. The opening <FRAMESET> tag and closing </FRAMESET> tag can include the frame elements or a combination of other frameset elements along with the frame elements.

The <FRAMESET> tag has two attributes, rows and columns.

The tag <FRAMESET ROWS = 50%, 50%> divides the browser window into two equal horizontal frames whereas the tag < FRAMESET COLS = 50%, 50%> divides the browser window into two equal vertical frames.

Frame element has different attributes but the most important one is “SRC”. The “SRC” denotes the URL of the document to be displayed in the frame. For example,

<FRAME SRC = “one.html”>

Manipulating the Frames

Till now you have seen the use of frames in your web page. Now we will discuss the attributes which can change the appearance of frames.

Following are the attributes of the Frame element :

1. **Name :** This attribute is optional and is used whenever a document has to be opened in the frame from a link in another frame. This attribute gives name to the frame. It can be used as :

<FRAME SRC = “one.html” NAME = “First”>

2. **Scrolling :** One can adjust the frames through using scrollbars. This attribute is used to decide whether a frame should have scrollbars or not.

   Yes : On setting scrolling = Yes, the browser will always display the scrollbars on the frame.

   No : On setting scrolling = No, the browser will not display the scrollbars on the frame whatever may be the size of the document in that particular frame.

For example:

<FRAME SRC = “one.html” scrolling = “No” Name = “First”>

3. **Noresize :** By default, the size of the frames can be adjusted by dragging the frame edge to a new position. So, one can turn the resizing feature using the noresize attribute.

For example:

<FRAME SRC = “one.html” scrolling = “No” Name = “First” Noresize>

Turns off the default resizing attribute of the frame.

4. **Margin Width :** This attribute manipulates the left and right margins of the frames. This attribute is optional. The value for this attribute is specified in the form of pixels.

5. **Margin Height :** This attribute manipulates the top and bottom margins of the frame. In this attribute, the value is again specified in the form of pixels. Let us use both the above attributes.

For example :

<FRAME SRC = “one.html” margin width = 10 margin height = 10 >

6. Target

There is one attribute in the Frame tag called name, which is used whenever a document has to be opened in the frame using link from another frame. To target a frame, use the target attribute of the <A> anchor tag.

The value assigned to the Target attribute should be the name of the frame you want to target. In order to target the frame mentioned above, use the Target attribute in the following way:

<A HREF = URL TARGET = “one”>

Thus the name and the target attribute can be used to connect the frames. The values that can be assigned to the target attribute are blank, self or parent

Unit 3

DHTML

Q1: Define DHTML in Short note?

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."***

Features of DHTML :

- Dynamic Styles : You can change the colour, font, size of the text all this in response to user interaction. Styles include colours, typefaces, spacing, indentation, positioning and visibility of the text.
- Dynamic Content : You can change the content of the page in response to user input or events like mouse clicks.
- Positioning : You can specify the exact position, either absolute or relative in terms of X coordinate and Y coordinates. Absolute positioning is when you specify the exact location in terms of pixels. Relative positioning is when you specify the relative position of the elements. The browser handles the actual position.
- Data Binding : Supported by Internet Explorer you can bind the table in your web page to a database when the page is loaded, the data from the database on the server is displayed in the table.
- Downloadable Fonts : Supported by Netscape downloads fonts is a feature that allows you to insert fonts of your choice in a web page.
- Scripting : You can write scripts to change the style and content of your web page.
- Object Structure : DHTML followed an object structure where each element is treated as object in the structure. Each object can be accessed and programmed independently.

Q: 2 What is CSS? How we can define CSS?

Ans: CSS is Cascading Style Sheets. Style sheets are powerful mechanism for adding styles (eg. Fonts, colours, spacing) to web documents. CSS adds more attributes to create dynamic effects. With style sheets, text and image formatting properties can be predefined in a single list. HTML elements on a web page can then be bound to the style sheet. The advantage of a style sheet includes the ability to make global change to all documents from a single location.

To accomplish style assignment <style> </style> tags is used. Style tags are written within the <Head>…</Head> tags.

Syntax :

<Style type = "text/CSS">

Tag { attribute : value; attribute : value …. }

…..

</Style>

Q: 3 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>
```

Q:4 Define different types of elements of style.

Ans: There are many attributes that can be specified to the <Style> tag like Font Attributes, color and background attributes, text attributes, border attributes, margin attributes and list attributes.

1. **Font Attributes :** This attribute consist of font family, font style, weight and size.

   Following table will explain their values.

Attributes	Values
Font_Family	A comma-delimited sequence of font family names (serif, sans-serif, cursive).
Font_Style	Normal, italic or oblique
Font_Weight	Normal, bold, bolder, lighter or one of the nine numerical values (100,200,300,400,500,600,700,800,900)
Font_Size	A term that denotes absolute size (XX-small, X-small, small, medium, large, X-large, XX-large) relative size (larger, smaller) a number (of pixels), percentage (of the parent element's size).

2. **Color and Background Attributes :**

   Following table will explain their values.

Attributes	Values
Color	Sets an element text color. A color name or a color code.
Background_color	Specifies the color in an element background. A color name or a color code.
Background_image	Sets the background image. A URL or none.
Background_repeat	With a background image specified, sets up how the image repeats throughout the page. Repeat-x (repeats horizontally), repeat-y (repeats vertically), repeat(both), no-repeat.

3. Text Attributes :

Following table will explain their values.

Attributes	Values
Text_decoration	Adds decoration to an element's text. None, underline, overline, line-through, blink.
Vertical_align	Determines an element's vertical position, baseline, sub, super, top, text top, middle, bottom, text_bottom, also percentage of the element's height.
Text_transform	Aligns text within an element. Left, right, center or justify.
Text_indent	Indents the first line of text. A percentage of the element's width or a length.

4. Border Attributes :

Following table will explain their values.

Attributes	Values
Border_style	Solid, double, groove, ridge, inset, outset
Border_color	A color name or color code.
Border_width	Thin, medium, length
Border_top_width	Thin, medium, length
Border_bottom_width	Thin, medium, length
Border_left_width	Thin, medium, length
Border_right_width	Thin, medium, length
Border_top	Specifies width, color and style
Border_bottom	Specifies width, color and style
Border_left	Specifies width, color and style
Border_right	Specifies width, color and style
Border	Sets all the properties at once

5. **Margin related Attributes** :

Following table will explain their values.

Attributes	Values
Margin_top	Percent, length or auto
Margin_bottom	Percent, length or auto
Margin_left	Percent, length or auto
Margin_right	Percent, length or auto
Margin	Percent, length or auto

6. **List Attributes**

Following table will explain their values.

Attributes	Values
List_style	Disc, circle, square, decimal, lower-roman, upper-roman, lower-alpha, upper-alpha, none

:

Q: 5 Explain Filter in Web Designing.

Ans: The filter property provides for effects like blurring or color shifting on an element's rendering before the element is displayed. Filters are commonly used to adjust the rendering of an image, a background, or a border.

Using just CSS we are able to create all these effects on images.

- Greyscale
- Blur
- Saturate
- Sepia
- Hue Rotate
- Invert
- Brightness
- Contrast
- Opacity

How To Use Filters

To use a filter in CSS it's as easy as using any other CSS property.

```
img
{
    filter: type(value);
}
```

Like most of new features in CSS3 you need to use browser prefixes.

CSS Greyscale

Greyscale property will convert the colour in your images to a shade of grey.

The value of the property can be either decimal or percentage. 100% or 1.0 will make the image full greyscaled, 0% or 0 will add no effect of greyscale to the image.

Here is the HTML we are going to use.

```
<section class="grayscale">
        <h2>CSS Greyscale</h2>
        <img height="200" src="images/water.jpg" />
</section>
```

CSS Blur

The blur effect will take your image and blur all of it, the amount of blurred is decided by the value of the property..

Blur is measured in pixels, so the more pixels you place the more blurred the image will be.

```
<section class="blur">
        <h2>CSS Blur</h2>
        <img height="200" src="images/water.jpg" />
</section>
```

CSS Saturate

The saturate effect adds colour saturating to the colours in your images.

The value used in saturate can be either decimal or percentage, the normal saturation value on your images will be 100%. To add more saturation to your image apply a percentage higher than 100%.

```
<section class="saturate">
        <h2>CSS Saturate</h2>
        <img height="200" src="images/water.jpg" />
</section>
```

CSS Sepia

This will add a sepia tint to your images, which makes your image look like older photographs.

```
<section class="sepia">
        <h2>CSS Sepia</h2>
        <img height="200" src="images/water.jpg" />
</section>
}
```

CSS Hue Rotate

The Hue rotate property will change the colour around to be completely different depending of the degree value you provide it.

The best way to think of this is like a colour spectrum wheel, the colour that it's starting at will will take the degree value of the hue rotate and use the new colour instead.

```
<section class="hue-rotate">
        <h2>CSS Hue Rotate</h2>
        <img height="200" src="images/water.jpg" />
</section>
```

The value of this will take a value of degrees, the normal is 0 degrees. If you set the value to 360 degrees the spectrum goes full circle and will be exactly the same.

CSS Invert

The invert effect will apply the same look as negatives on images back in the days when we used films in cameras.

The value of 100% will set this to full inverted effect.

```
<section class="invert">
        <h2>CSS Invert</h2>
        <img height="200" src="images/water.jpg" />
```

```
</section>
```

CSS Brightness

The brightness property will just change the brightness applied to the image, the normal image will start at 0%. To increase the brightness of the image you need to go higher than 0% so change it to 50% to see the brightness change.

```
<section class="brightness">
        <h2>CSS Brightness</h2>
        <img height="200" src="images/water.jpg" />
</section>
```

The value of this can be decimal or percentage 100% or 1 will be full brightness, the 0% or 0 will be the normal image.

CSS Contrast

The contrast value will change the difference between the lightest and darkest part of the image.

```
<section class="contrast">
        <h2>CSS Contrast</h2>
        <img height="200" src="images/water.jpg" />
</section>
```

The value of this can be either decimal or percentage the normal image will have a contrast of 1. To make it darker use a value less than 1, to make it brighter you change the value more than 1.

CSS Opacity

The opacity setting will change the transparency of the image. Changing the opacity of the image will make the image more transparent.

```
<section class="opacity">
        <h2>CSS Opacity</h2>
        <img height="200" src="images/water.jpg" />
```

```
</section>
```

The normal opacity setting will be set to 1, if you want to me this transparent then you can set this value to less than 1.

Q:6 What do you mean by I Frame?

Ans: The <iframe> element represents a nested browsing context.

An **IFrame** (Inline Frame) is an HTML document embedded inside another HTML document on a website. The **IFrame** HTML element is often used to insert content from another source, such as an advertisement, into a Web page.

Although an IFrame behaves like an inlineimage, it can be configured with its own scrollbar independent of the surrounding page's scrollbar.

Point

- If the src attribute and the srcdoc attribute are both specified together, the srcdoc attribute takes priority. This allows authors to provide a fallback URL for legacy user agents that do not support the srcdoc attribute.

HTML Attributes

- src = URL potentially surrounded by spaces
  Gives the address of a page that the nested browsing context is to contain.
- srcdoc = HTML contents
  Gives the content of the page that the nested browsing context is to contain.
- name = browsing-context name
  Represents the browsing-context name. When the browsing context is created, if the attribute is present, the browsing context name must be set to the value of this attribute; otherwise, the browsing context name must be set to the empty string.
- sandbox = allow-same-origin/ allow-top-navigation/ allow-forms/ allow-scripts
  Enables a set of extra restrictions on any content hosted by the iframe.
- If presents, given in the following list set.
- prevents content from navigating browsing contexts other than the sandboxed browsing context itself.
- prevents content from navigating their top-level browsing context.
- prevents content from instantiating plugins, whether using the embed element, the object element, the applet element, or through navigation of a nested browsing context.
- prevents content from using the seamless attribute on descendant iframe

elements.

- forces content into a unique origin, thus preventing it from accessing other content from the same origin.
- blocks form submission, blocks script execution.
- blocks features that trigger automatically, such as automatically playing a video or automatically focusing a form control.

- allow-same-origin
  allows the content to be treated as being from the same origin instead of forcing it into a unique origin.
- allow-top-navigation
  allows the content to navigate its top-level browsing context
- allow-forms and allow-scripts
  re-enable forms and scripts respectively (though scripts are still prevented from creating popups).
- seamless = boolean
  Indicates that the iframe element's browsing context is to be rendered in a manner that makes it appear to be part of the containing document (seamlessly included in the parent document).
- width = non-negative integer
  Give the width of the visual content of the element, in CSS pixels.
- height = non-negative integer
  Give the height of the visual content of the element, in CSS pixels.

Example:

- the srcdoc attribute in conjunction with the sandbox and seamless attributes:

```
<iframe seamless sandbox="allow-same-origin"
    srcdoc="<p>Yeah, you can see it <a
href="/gallery?mode=cover&amp;page=1">in my gallery</a>.">
</iframe>
```

Q:7 Explain layers?

Ans: The flexibility of positioning an element above or below other elements within same document makes layers very useful in any kind of publishing. HTML layer are poised to create a new kind of web pages: faster, cleaner, more dynamic – a revolution in the way we look at online documents.

Creating Layers

To create a layer the syntax is same as other HTML elements. Each layer has a width, a background or BG colour and other layer specific attributes. Using layer you can add a number of dynamic effects to your site without increasing the size of the file so that it take little time to load in browser.

Example:

<Layer top = 50 name = "head" bgcolor=red>

Choose your destiny

</Layer>

We can perform the same in IE using <DIV> and CSS.

<DIV id = "head" style = "position : absolute; background_color : "red">

Choose your destiny

</DIV>

Positioning Layer :

Layer and JavaScript when mixed can produce dynamic effect to the website. The two main properties that are used related to positioning of layers are left and top. Both these properties are used in conjuction with position property.

For left and top property we pass integer values in pixels which specifies property. We also pass integer values in pixels which specifies the position of the layer on the window. Top specifies the Y coordinate or row position whereas left specifies the X coordinate or column position of the layer.

<Layer id = "A" position = "absolute" left = 50 top = 250>

There is no shortcut for success

</Layer>

Properties of Layer

Property	Value	Description
position	absolute	Defines whether a layer's position is absolute when compared to the parent document or relative to where it is in the flow of HTML.
id	(any string value)	A name for the layer, the ID can be anything but must with an alphabetic character.
left and top	number of pixels	Specifies the horizontal and vertical position of the upper-left corner of a layer in relation to the top-left corner of its parent container, which can be either the page or another layer.
width	number of pixels or percentage	Specifies the layer's width. The percentage value is based on the parent's container width.
height	number of pixels or percentage	Specifies the layer's height. The percentage value is based on the parent's container height.
Visibility	Show/hide/inherit	The visibility attribute controls whether the layer is shown. Setting it to the inherit means that it follows the lead of its parent layer.
z-index	positive number	The z-index allows you to control the z-order, or stacking order of your layers. Higher, z-index value layers are above lower ones. (if one layer had a z-index of 2, the second layer would be above the first).
above and below	a layer ID	Setting on above or below parameter is an alternate way to control the stacking order of layers. Let's say you have three layers, with IDs of lay1, lay2 and lay3. You can make sure that lay1 is below lay3 by setting the below attribute on lay3 to above = "lay1". You can also use one of the three (above, below or z-index) parameters when working with the z-order on your layers.
clip	"#,#,#,#" or "#,#"	The clip property sets a visible rectangle area of the layer. By default, a layer's clipped area is determined by its height and width or content, the numbers correspond to the left value, top value, right value and bottom value. If you just set two numbers, this affects the left and top values of the visible rectangle. As a suggestion, if you do not use the quotes, make sure there are no spaces between any number.
src	URL to file	The src attribute loads an external file into a layer.
bgcolor	RGB or color name	Just as you set the background color for a webpage or table, you can specify the background color for a layer. If you omit the bgcolor attribute, the HTML layer defaults to having a transparent background.
background	URL to file	The background property functions exactly like the background for a web page. If you specify a background, that layer will load a tiled version of the image pointed to by that URL.

Unit 4

Java Script Fundamentals

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

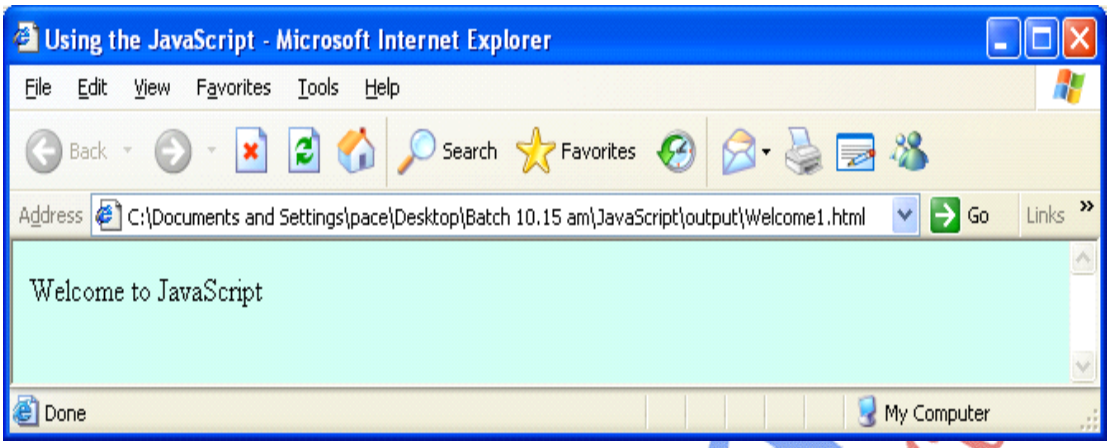
Ans : (a) **document. write( )**The document object is used to identify the webpage and it provides the method or the function known as write( ) to display the information on the browser windows.

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.

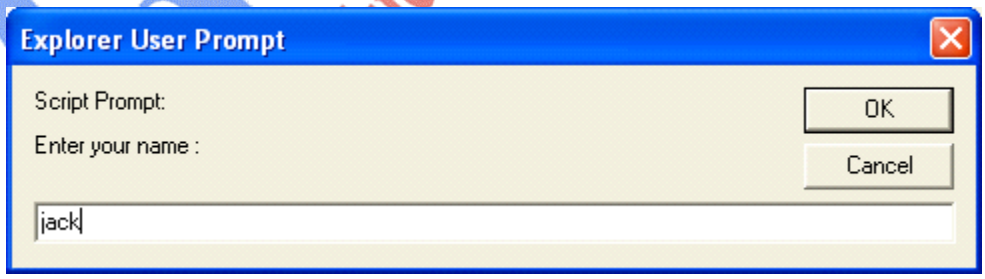
The general form is ,

```
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 :



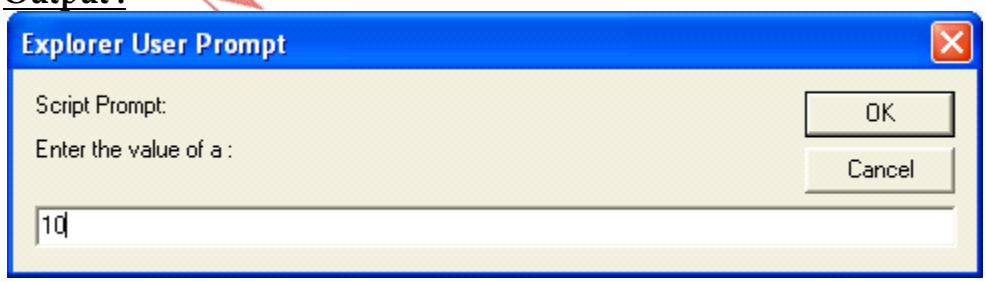
Note : Whatever you enter or input using the prompt( ) will be considered as a string.

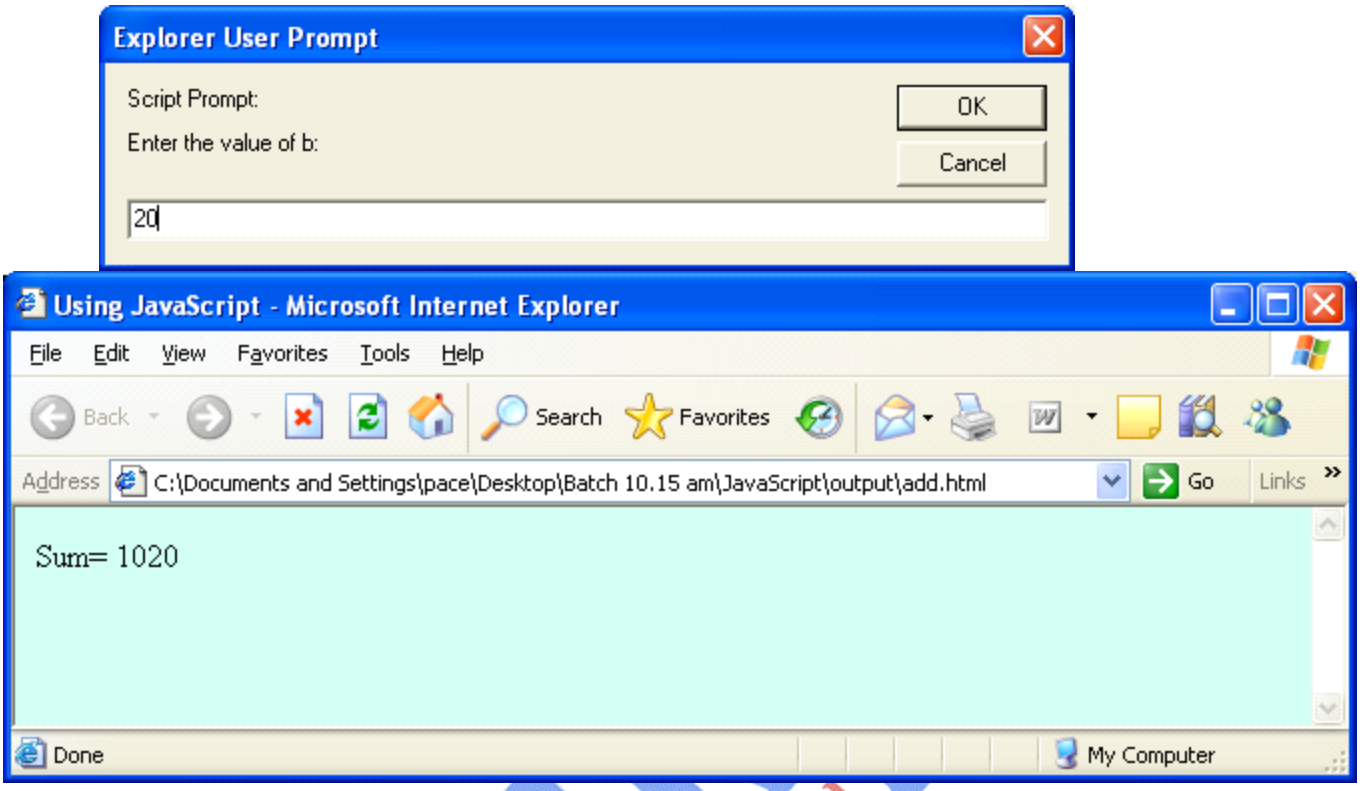
Q5: Write a JavaScript code to add two numbers.

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 :

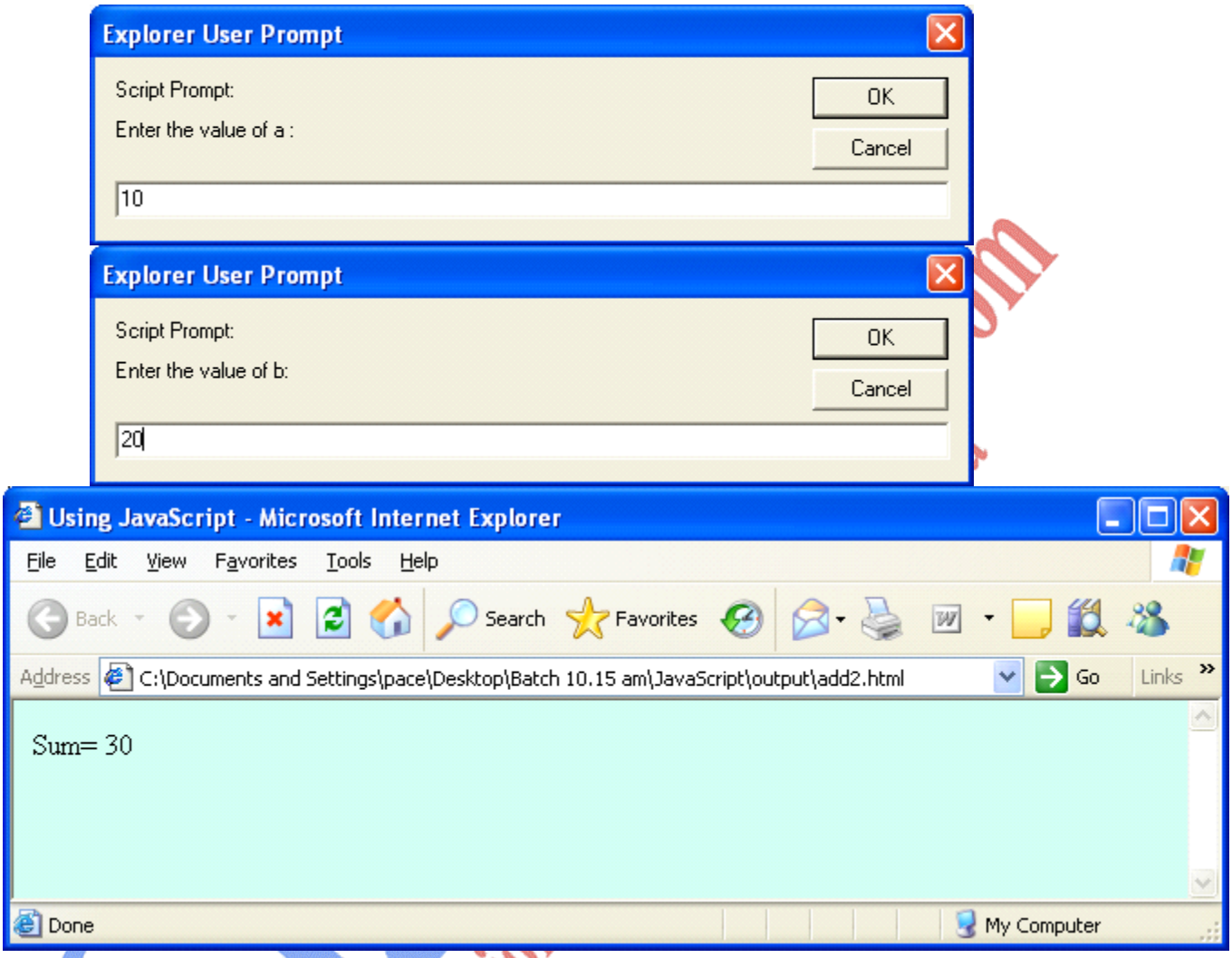




Now, consider the following program, Which display addition in integer format

```
<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;
```

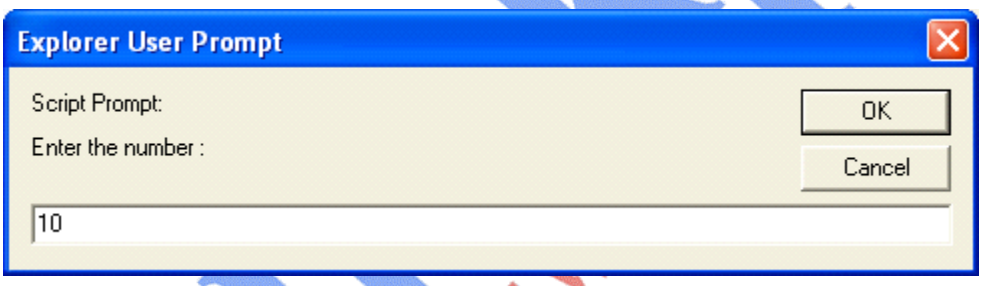
where,statement1 will get executed when the condition is true and the statment2 will get executed when the condition is false.

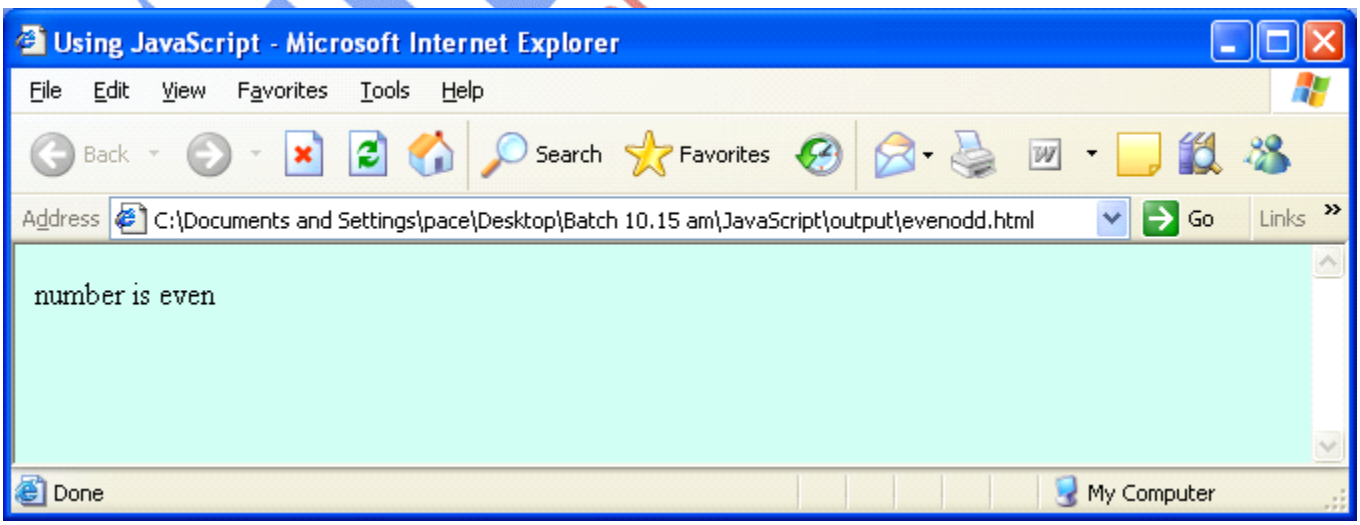
Q7. Write a JavaScript code to check whether the number is even or odd.

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 ,

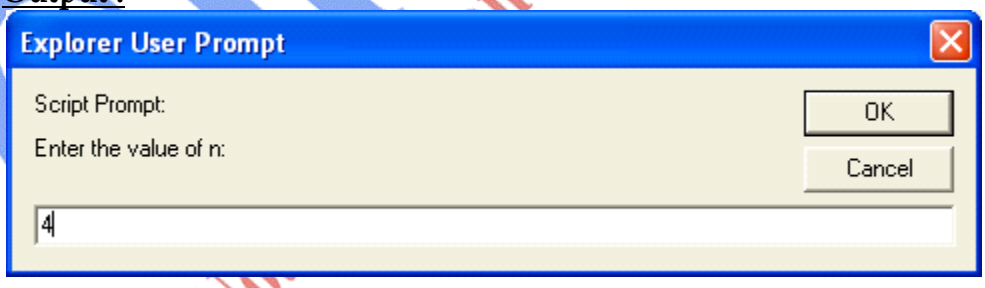
```
for(initliase the variable;condition;increament/decreament)
{
        body of loop
}
```

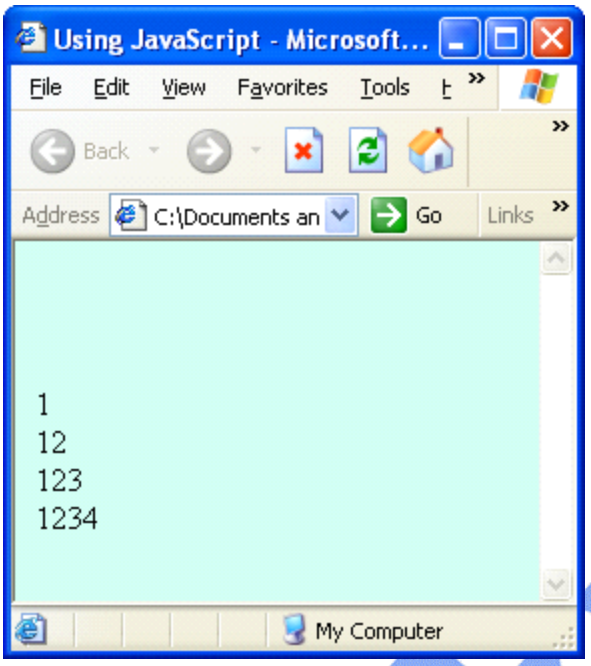
Consider the following Example:

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

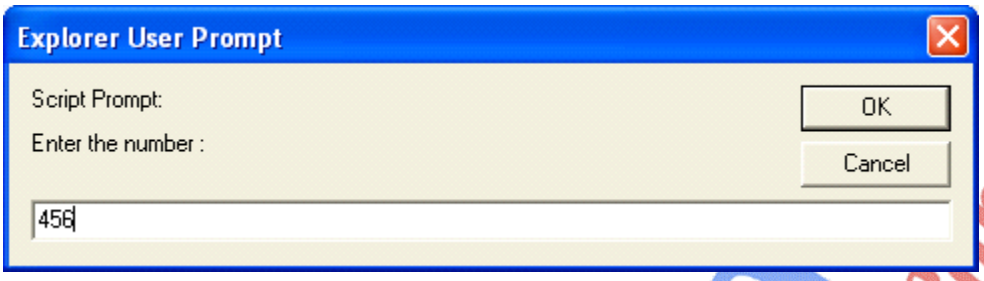
```
/*initialise the variable*/
while(condition)/*test the condition*/
{
        /*body of the loop*/
        /*increament or decreament the variable*/
}
```

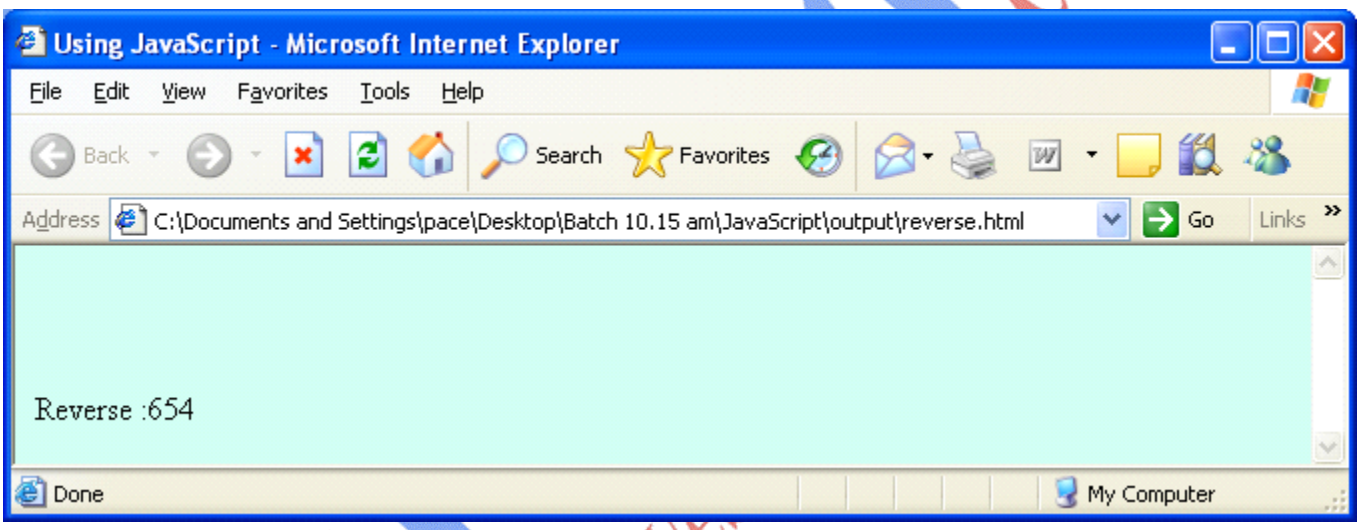
For example

```
<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 ,

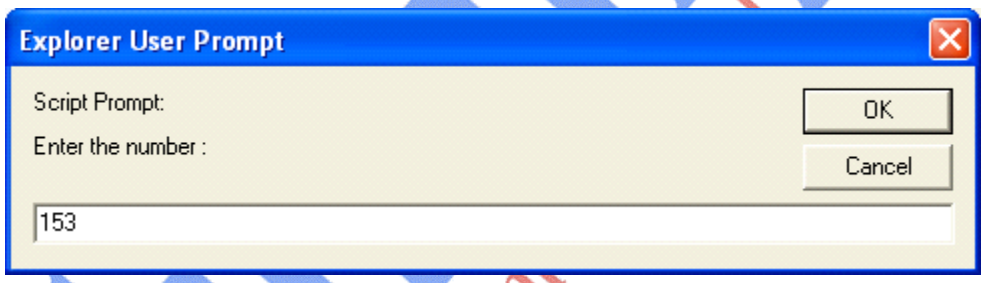
```
/*initialise the variable*/
do
{
   /*body of the loop*/
   /*increament or decreament the variable*/
}while(condition);
```

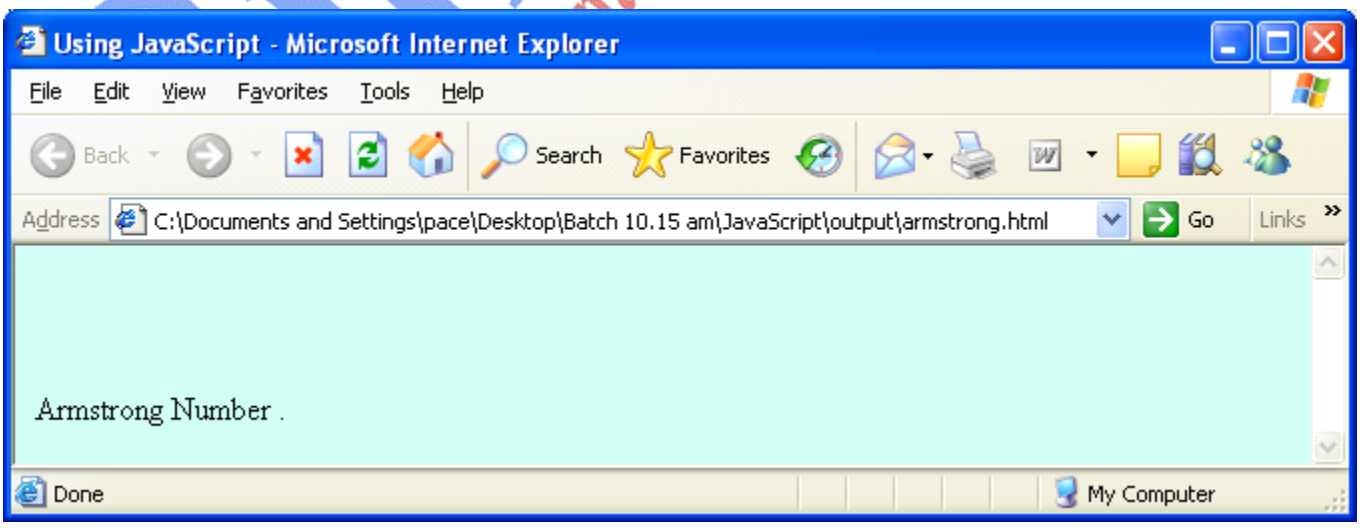
For example

```
<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 :





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,

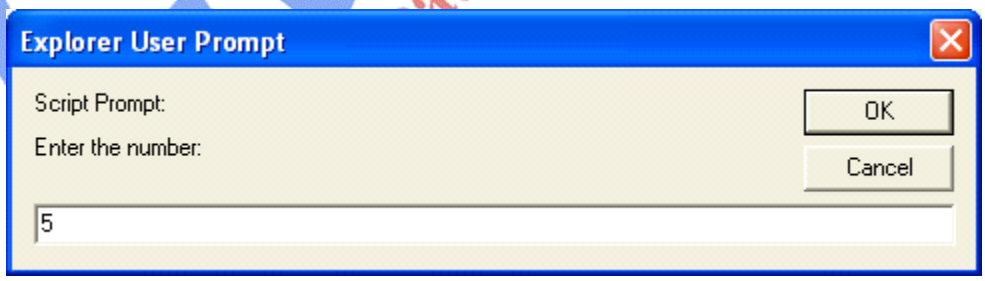
```
function functionname(argument list)
{
        body of the function
}
```

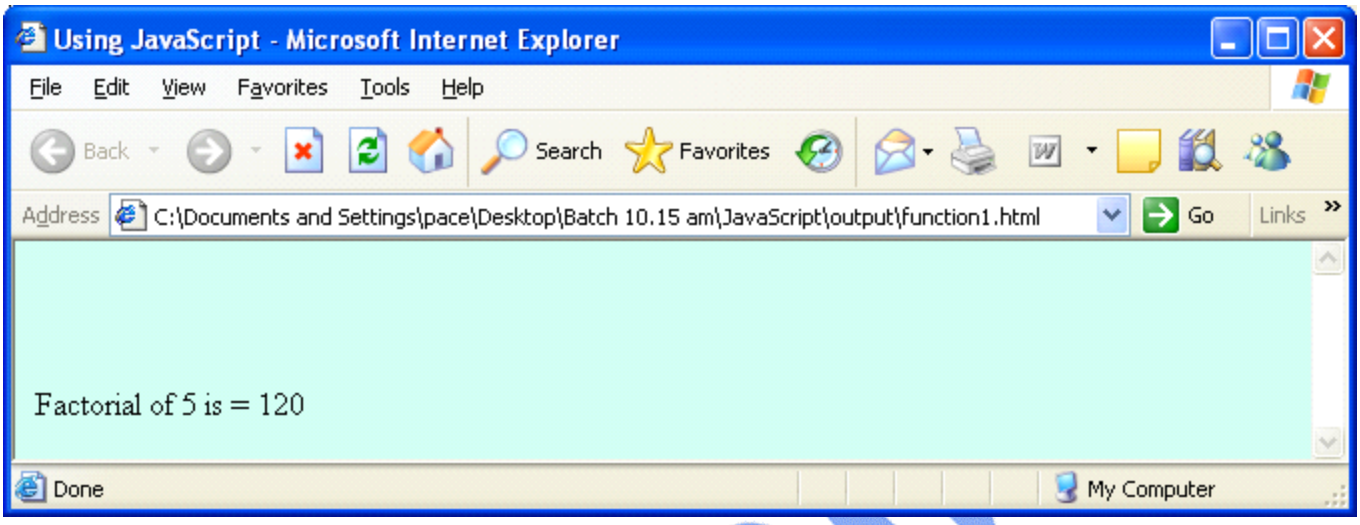
Consider the following program ,

(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 :

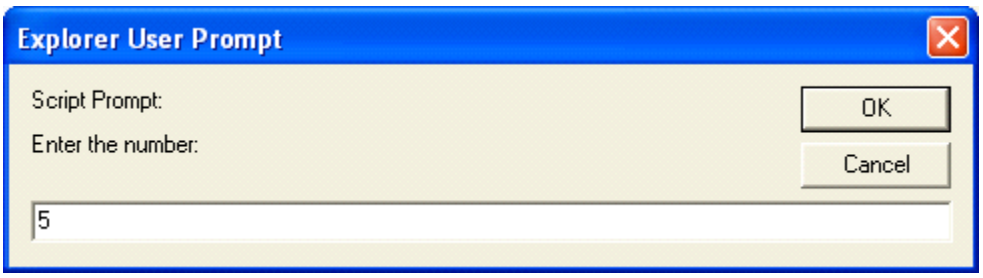


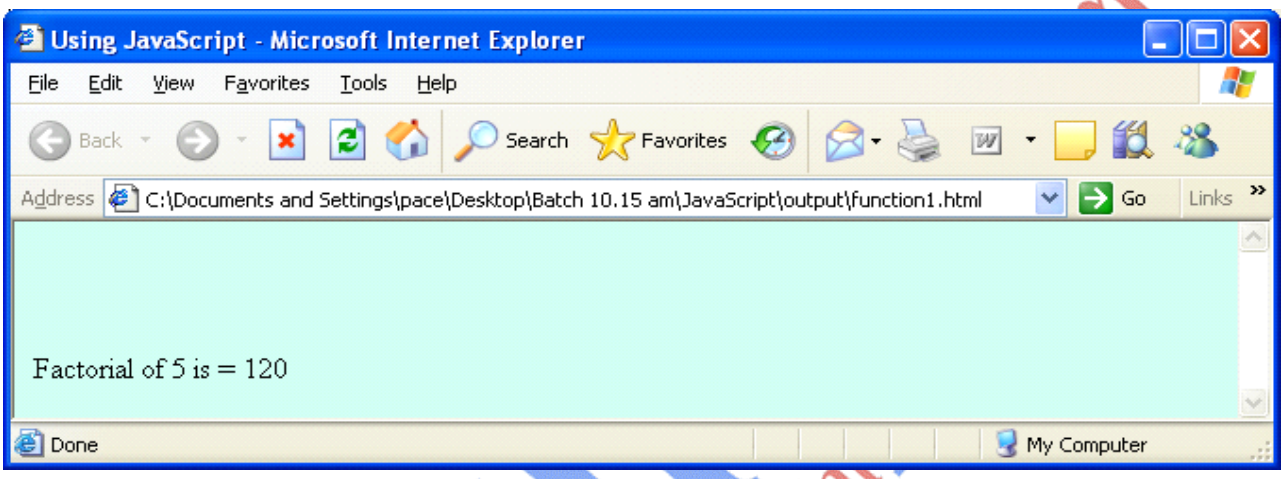


(ii) When the function will not return a value

```
<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 :

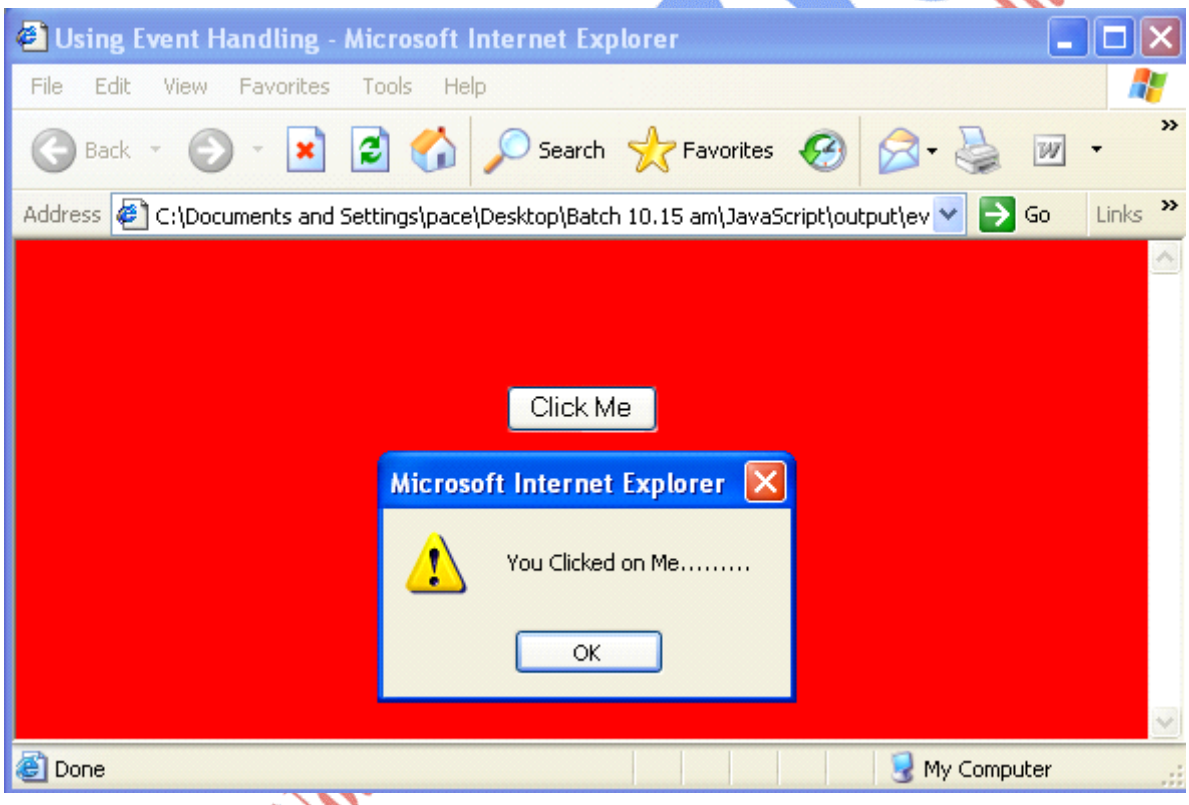
Q25 Design the JavaScript code to create the button and when the user click on it a message is displayed.

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 :



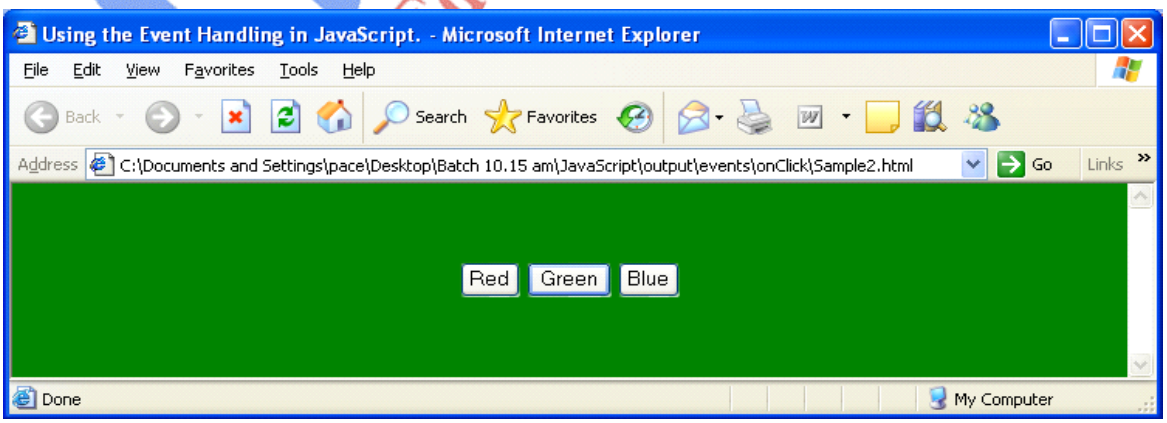
Q26 Design the JavaScript code for creating the application which contains, three buttons,
Red, Green and Blue to change the background color accordingly.

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>
```

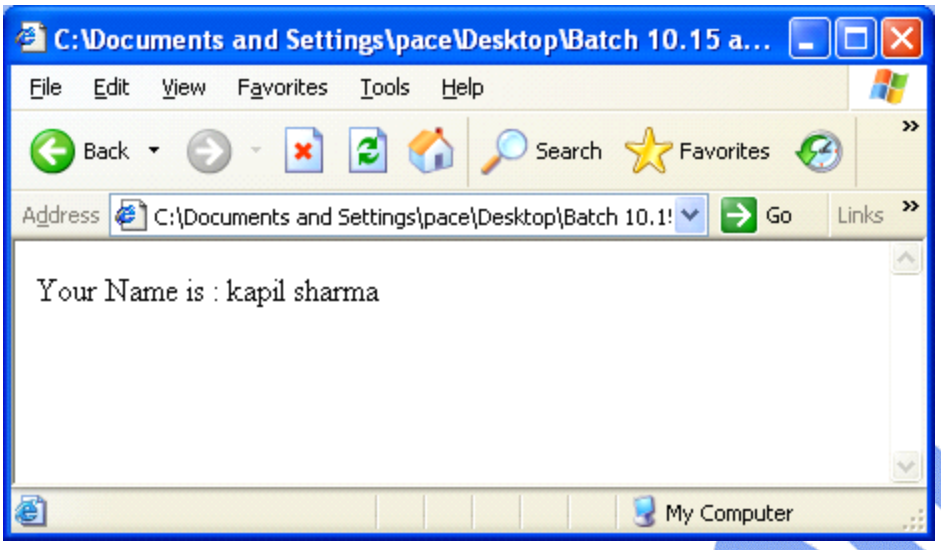
output :



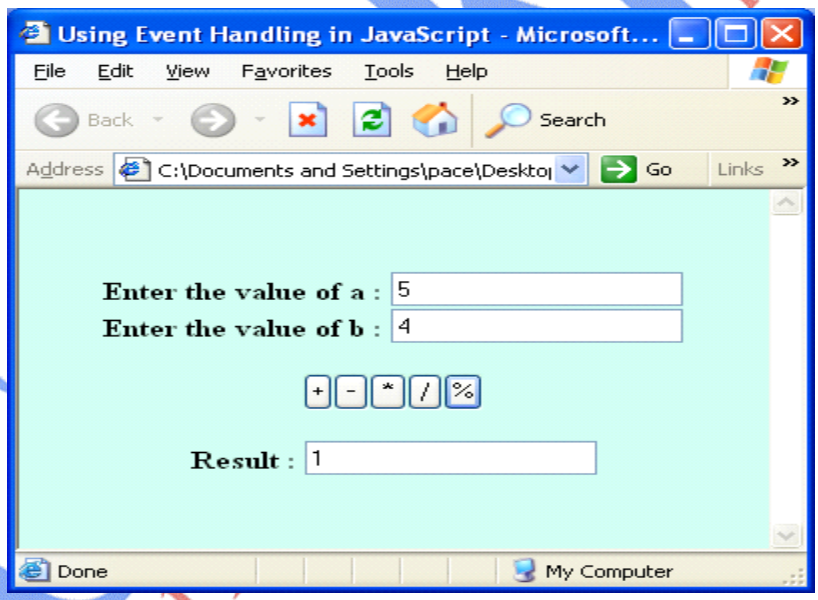
Q27 Design the application to access the value of the text box

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>
```

Q: 28 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>
```

Q: 29 What is jQuery & how to use jQuery?

Ans: **jQuery** is a lightweight, "write less, do more", JavaScript library.

- The purpose of jQuery is to make it much easier to use JavaScript on your website.
- jQuery takes a lot of common tasks that require many lines of JavaScript code to accomplish, and wraps them into methods that you can call with a single line of code.
- jQuery is not a language, but it is a well written JavaScript code. As quoted on official jQuery website, "it is a fast and concise JavaScript Library that simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web development."
- jQuery also simplifies a lot of the complicated things from JavaScript, like AJAX calls and DOM manipulation.
- In order to work with jQuery, you should be aware of the basics of JavaScript, HTML and CSS.
- It was released in January 2006 at BarCamp NYC by John Resig.

The jQuery library contains the following features:

- HTML/DOM manipulation
- CSS manipulation
- HTML event methods
- Effects and animations
- AJAX
- Utilitie

  It is free, open source software Dual-licensed under the MIT License and the GNU General Public License. Microsoft has integrated jQuery officially into its

IDE Visual Studio 2010 and jQuery intellisense is available in Visual Studio 2010 now.

Syntax of JQuery :

The jQuery syntax is tailor made for **selecting** HTML elements and performing some **action** on the element(s).

Basic syntax is: **$(*selector*).*action*()**

- A $ sign to define/access jQuery
- A (*selector*) to "query (or find)" HTML elements
- A jQuery *action*() to be performed on the element(s)

For Example :

$(this).hide() - hides the current element.

$("p").hide() - hides all <p> elements.

There are two ways to use jQuery.

- **Local Installation −** You can download jQuery library on your local machine and include it in your HTML code.
- **CDN Based Version −** You can include jQuery library into your HTML code directly from Content Delivery Network (CDN).
- **Local Installation :**
  - Go to the https://jquery.com/download/ to download the latest version available.
  - Now put downloaded **jquery-2.1.3.min.js** file in a directory of your website, e.g. /jquery.

Example :

```
<html>
<head>
<title>The jQuery Example</title>
<script type="text/javascript"  src="/jquery/jquery-2.1.3.min.js"></script>

<script type="text/javascript">
  $(document).ready(function(){
    document.write("Hello, World!");
  });
```

```
  </script>
 </head>

 <body>

  <h1>Hello</h1>

 </body>
</html>
```

- **CDN Version :**

  The best way to use jQuery is to use a CDN. Both Microsoft and Google offer jQuery on their CDNs.

  There are several advantages to doing this.

  - The first is that a CDN is spread out over the Internet. When someone comes to your web site and requests the jQuery library, it will be provided to them by the closest hosting site. This will help speed up the download of the library to their local machine. Which brings us to another point, the jQuery library is cached on the user's machine to help with speed.
  - The second reason is that if the user has been to another web site that had this CDN reference, the user will already have the jQuery file on their system. This will speed up the loading of your web page since they will not need to download the file again.

- When you are looking at the different libraries for jQuery, you will notice there are two. One of them has a ".min" in the file name. This is a "minified" version of the file. It is smaller and will load faster. The non-minified version is easier to read, but since there is a lot of white space, it makes the file larger. It is used to help with debugging.

  So whenever possible, always use the CDN and the minified version. This will help speed up your web site.

  Next we need to create a reference to the jQuery library. This is done by adding a line in between the opening (<head>) and closing (</head>) HTML header tags. We will use the Microsoft CDN.

  ```
  <head>
  ```

```
        <script type="text/javascript"
    src="https://ajax.microsoft.com/ajax/jQuery/jquery-1.4.2.min.js"></script>
    </head>
```

Example :

```
    <html>
        <head>
            <script type="text/javascript"
src="https://ajax.microsoft.com/ajax/jQuery/jquery-1.4.2.min.js"></script>
            <script type="text/javascript">
                $(document).ready(function()
                {
                    $("a").click(function(event)
                    {
                        alert("You clicked me!");
                    }};
                });
            </script>
        </head>
        <body>
            <a href="#">Click Me</a>
        </body>
    </html>
```

Q: 30 What is Ajax?

Ans: AJAX stands for Asynchronous JavaScript and XML.AJAX is the most important technologies for the development of highly interactive web application .Ajax helps you in making your web application more interactive by retrieving small amount of data from web server and then showing it on your application. You can do all these things without refreshing your page.

For Example: In a user registration form, this can be frosting thing for the use, as whole page is reloaded only to check the available of the user name. Ajax will help in making your application more interactive. With the help of Ajax your can tune your application to check the availability of the user name

without refreshing the whole page.

Ajax is not a single technology, but it is a combination of May technologies. These technologies are supported b modern web browsers. Following are techniques used in the Ajax Applications.

- **Java Script**
  Java Script is used to make a request to the web server. Once the response is returned by the web server, more Java Script can be used to update the current page. DHTML and CSS are used to show the output to the user. Java Script is used very heavily to provide the dynamic behavior to the application.
- **Asynchronous Call the server :**
  Most of the Ajax application used the XXML Http Request object to send the request to the web server. These calls are Asynchronous and there is no need to wait for the response to come back. User can do the normal work without any problem.
- **XML :**
  XML may be used to receive the data returned from the web server. Java Script can be used to process the XML Data returned from the web server easily.

Benefits of Ajax

Ajax is new very promising technology, which has become extremely popular these days. Here the benefits of using Ajax.

- Ajax can be used for creating rich, web based application that looks and works like a desktop applications.
- Ajax is easy to learn. Ajax is base on Java Script and existing technology like XML, CSS and DHTML, etc. So, its very easy to learn Ajax.

  Ajax can be used to develop web applications that can update the page data AJAX is not a new technology in a new way. These include HTML, DOM, XML, XSLT, XML Http Request and Java Script. The acronym AJAX stands for synchronous Java Script and XML, AJAX is base on open standards supported by many browser ends platform. AJAX is a new paradigm for building web application.

AJAX application eliminate the start stop start stop nature of traditional web pages hence follow web application to look and behave like the desktop ones, of course to a limited extent . AJAX follows pages to request small bits of information's from the server instead of entire pages. This governmental updating of pages eliminates the page refresh problem and slow response that have plagued web applications since their inception.

AJAX has received tremendous industry recognition and support. The major

software web portals have adopted large number of Ajax toolkits and libraries are available for free. AJAX does have its limitation but most of them can as well as on mobile devices.

Ajax Web application Development

Ajax is web application development technique which encompasses different technologies which make it more interesting and fun.

It has the following technologies:

1. Java Script

2. XML

3. CSS

4. W3CDOM

Since it embraces so many technologies that why it is neither easy nor tough. In AJAX stands for "Asynchronous" that means sending data from the browser and response send back from the server are not sequential. When user make request then the server can do its own work or it may fulfill other requests. Similarly when server is busy in responding user my make further requests that mean request or response is synchronous or depending on each other.