UNIT -I : Basics of Information Technology

CHAPTER - 1 : INTRODUCTION TO INTERNET

TOPIC-1
Internet

Quick Review

- **Internet :** Internet is a global system of interconnected computer networks that use the standard Internet Protocol Suite (TCP/IP) to serve several billion users worldwide. It is a network of networks that consists of millions of private,public, academic, business and government networks of local to global scope that are linked by a broad array of electronic, wireless and optical networking technologies. The Internet carries an extensive range of information resources and services, such as interlinked hypertext document of the world wide web (www).
- **TCP/IP :** TCP/IP is actually a collection of protocols or rules, that govern the way data travels from one machine to another across networks. The Internet is based on TCP/IP. TCP/IP has two major components : TCP and IP. TCP/IP stands for Transmission Control Protocol / Internet Protocol.
- **ISP :** Any organization that provides access to the Internet is called ISP (Internet Service Provider). Internet Service Providers worldwide offer various options and packages to the general public for Internet access. In India, Videsh Sanchar Nigam Limited (VSNL), Mantra Online, Satyam Online, MTNL, etc. are the leading ISPs.
- **IP :** The protocol which provides a basis for the Internet. The Internet Protocol allows data to travel in packets that can be routed across different networks before being reassembled at their final destination.
- **Numeric IP Address :** Each host computer on the Internet has a unique number, called its IP address. IP addresses are in the format xxx.xxx.xxx.xxx, where each xxx is a number from 0 to 255. IP addresses identify the host computers, so that packets of information (data) reach the correct computer. You may have to type IP addresses when you configure your computer for connection to the Internet.
- **ISDN :** A new generation of digital telecommunication lines. ISDN (Integrated Services Digital Network) lines include two bearer channels which can handle upto 64 kbps each, for combined capacity of 128 kbps.
- **Search Engines :** Search engines are a bottom-up approach for finding your way around the Web. You give a search engine, a list of keywords or phrase (called a query) and it returns to you a list of Web pages that contain those words or phrases. Some search engines search only the titles of Web pages, while others search every word. Each search engine has its own way of deciding which of the Web pages on its list is most likely to be one that you are looking for. Some of the most common search engines are : Google, Bing, Yahoo, Ask, Aol search, WebCrawler, Mywebsearch, Infospace, Info.com etc.

TOPIC-2
World Wide Web

Quick Review

- **WWW :** The World Wide Web is a collection of millions of files stored in thousands of computers (called Web servers) all over the world. WWW is the newest Internet service, has accelerated the growth of the Internet by giving it an easy to use point and click graphical interface. Users are attracted to the WWW because it is interactive, and easy to use. It combines graphics, text, sound and animation, making it a rich communication medium.
- **Web Page :** A Web page is an HTML document that is stored on a Web server and that has a URL, so that it can be accessed via the Web. A Web page is a single unit of information, often called a document that is available via the WWW. A Web page can be longer than one computer screen and can use more than one piece of paper when it is printed out. A Web page is created using HTML. It consists of standardized codes or "tags", that are used to define the structure of information on the Web page.
- **Website :** A Website is a collection of Web pages belonging to a particular person or an organization. Typically,the URLs of these pages share a common prefix, which is the address of the home page on the site.
- **Home Page :** A home page is the front door or first page of a Website and is designed to help viewers to find whatever is of interest to them on that site.

- **Personal Home Page :** A personal home page is the front door of a Website that an individual puts on the Web to introduce himself or herself, to share interests with others and to keep distant friends and acquaintances up-to-date in the course of life.
- **Business Home Page :** A business home page is the front door to a business in Website. Like the front door of an office building, it should be attractive, easy to find and provide enough information to get people quickly to the parts of the Web site that they want to visit. For example, church, town, club, government office, school, etc.
- **Remote Server :** Computer that is not attached to a user's keyboard but over which he/she has some degree of control, whether it is in the same room, another part of building or another part of the world. It is also called remote computer or remote host.
- **Web Server :** A Web server is simply a computer with an Internet connection that runs formats (such as multimedia files). The server computer should have a relatively high-speed connection on the Internet and be powerful enough to deal with a number of simultaneous connections from the Internet. A Web server, also known as an HTTP server, responds to the request from a Web browser by returning HTML, images, applets or other data.
- **Web Browser :** A Web browser is a program that your computer runs to communicate with Web servers on the Internet, which enables it to download and display the Web pages that you request.
- **HTML :** Set of tags and rules used for developing hypertext documents or webpage. It is the predominant markup language for a web page. A markup language is a set of markup tags and HTML uses markup tags to describe webpage.

TOPIC-3
Addresses on Internet

Quick Review

- **Weblog, blog :** A shared online journal where people can post diary entries about their personal experiences and hobbies.
- **URL :** Uniform Resource Locator is an address on the World Wide Web. The URL provides an addressing scheme which allows the browser to request just about any document or Web page, located anywhere on the Internet. URLs consist of letters, numbers and punctuations. The basic structure of URL is hierarchical and the hierarchy moves from left to right.

  A URL looks like this : http://www.vsnl.net.in/index.html.
- **Absolute URL :** An absolute URL specifies the protocol, host, path and name of a resource. When a Web browser references an absolute URL, it stores the protocol, host and path information in order to support another type of URL. *For example,* http://www.sourcestream.com/test/.
- **Relative URL :** A relative URL is not fully qualified, but rather it inherits the protocol, host and path information from its parent document (the document that links to it). Otherwise, relative URLs are used for accessing files when the full Internet address is unnecessary. For example, link. htm.
- **HTTP :** HTTP is the short form of HyperText Transfer Protocol. The protocol that provides the foundation for communication between Internet browser and the Web is called HTTP, *i.e.,* the protocol used to transfer over the WWW. The WWW encompasses the universe of information that is available via HTTP. HTTP enables user to retrieve a wide variety of resources, such as text, graphics, sound, animation and other hypertext documents and allows hypertext access to other Internet protocols.
- **e-Mail Address :** It is a network address. A complete e-mail address is made up of two parts : the user name and the host name. The first part identifies the user's name to whom mail is to be sent and the second part represents the fully qualified domain name of the server or host on which the user has an account. These two parts are separated by a "@" symbol. *For example,* gbsahoo@yahoo.com
- **Web Address :** It is an Internet address, which denotes the place where the account of a person can be found.

  For example, the Web address format is like :

  http://host.domain.first-leveldomain/path/filename.ext

  (i) Username : Same as Login name. A unique name which is assigned to each user on a given host computer.

  (ii) Host or Domain Name : A computer on the Internet containing and providing access to various resources and services.

TOPIC-4
Services Available on Internet

Quick Review

- **FTP :** FTP is a part of the TCP/IP protocol suite. File Transfer Protocol (FTP) is the name of a special set of protocols used by computers connected over the Internet to transfer files. FTP is a powerful tool which allows files to be transferred from "Computer A" to "Computer B", or vice-versa. Files that are available for FTP are stored on computers called FTP servers. An FTP client program is an interface that allows the user to locate the file(s) to be transferred and initiate the transfer protocols.
- **Weblog, blog :** A shared online journal where people can post diary entries about their personal experiences and hobbies.
- **Search Engines :** Search engines are a bottom-up approach for finding your way around the Web. You give a search engine, a list of keywords or phrase (called a query) and it returns to you a list of Web pages that contain those words or phrases. Some search engines search only the titles of Web pages, while others search every word. Each search engine has its own way of deciding which of the Web pages on its list is most likely to be one that you are looking for. Some of the most common search engines are : Google, Yahoo, Bing, etc.
- **Net Surfing :** Internet browsing or 'net surfing' is the process of visiting the different websites on the Internet hosted by the various companies, organizations, educational institutions, magazines and individuals.
- **Email :** E-mail stands for electronic mail where letters are sent and received electronically between two remote devices. The user must have an email address to send and receive e-mails. It has the following elements:
- **Cc :** This is a list of e-mail or 'Carbon copy' addresses to whom a copy of the message is to be delivered. Multiple E-mail addresses in 'Cc' fields are separated by a comma.
- **Bcc :** This is same as 'Cc' except that, this is a 'Blind Carbon Copy'. In this list of recipients is not visible to the person who receives this message.
- **Web Address :** It is an Internet address, which denotes the place where the account of a person can be found. For example, the Web address format is like :
  http://host.domain.first-leveldomain/path/filename.ext
  (i) Username : Same as Login name. A unique name which is assigned to each user on a given host computer.
  (ii) Host or Domain Name : A computer on the Internet containing and providing access to various resources and services.
- **Information retrieval :** It is the science of searching for documents, and information within the documents, and for metadata about documents, as well as searching the relational database and the world wide web.

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CHAPTER - 2 : WEB SERVICES

TOPIC-1
Information Exchange on Web

Quick Review

- **Chat :** Chat means real time communication between two or more than two users over the Internet.
- **E-mail :** E-mail is a popular way of communication on the internet by which you can send mail to any part of the world within few seconds and without spending huge amount of money. E-mail is a ''store and forward'' service and it is conceptually similar to the regular postal mail service that we are all used to. This is primary application over the internet.
- **Video conferencing :** Video conferencing means that two or more people hear and see each other and share other applications.
- **Sign up :** A process of enrolling oneself in a website to get authorization and authentication privileges for that website.

TOPIC-2
E-Services on Web

Quick Review

- **e-Learning :** e-Learning constitutes an ''electronically - based'' tutorial. More simply, learning online or through CD/DVD type course work rather than in a traditional classroom.
- **e-Banking :** e-banking or internet banking is a service feature offered by most banks these days to its customers. Using this feature a customer can access his account from the comfort of his home using a computer and internet connection.
- **SSL :** Secure Sockets Layer is used in e-banking.
- **e-shopping :** It is a way to let the consumer to buy the goods without going outside.
- **e-Reservation :** It is Internet Booking Engine (IBE) and Central Reservation System (CRS) designed for direct online/off-line and payment, intended for accommodation objects of all types and sizes.
- **Social network :** A social network is anything on which we can send, post and read online.
- **e-groups :** e-group is an e-mail list management website. The site allows users to create their own mailing lists and allows others to sign up for membership on the list. The website provides archives of the message as well as list management functionality. Each group also had a shared calendar, file space, group chat and a simple database.
- **e-booking:** E-booking is Internet Booking Engine and Central Reservation System designed for direct online booking and payments.
- **I-ticket :** Ticket which has been booked on website and printed on standard stationery e. g. Indian railway.
- **e-ticket :** Ticket which has been booked on website and printed on personal stationery of customer.
- **User profiles :** Data about user which is stored in websites.
- **Tatkal ticket :** A ticket booked against tatkal quota, by paying extra payment of premium charges as per the railway rules.
- **Transaction :** A process of payment over Internet.

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UNIT -II : INFORMATION PROCESSING TOOLS

CHAPTER - 3 : OFFICE TOOLS

TOPIC-1
Database Introduction

Quick Review

- **Microsoft Office :** Microsoft office is a suite of products that aims at making easy integration of data between different applications such as Word Processor, Spreadsheet, Presentation Graphics and Database Manager.
- **MS-Access :** Microsoft Access is a Relational Database Management System (RDBMS) that you can use to store and manipulate large amount of information.
- **Database :** Database is the collection of logically related data, which is stored in a predictable manner.
- **DBMS :** The Database Management System is an integrated set of programs, which help us to manipulate database. The manipulation of database means creation, addition, insertion, modification and deletion of records into a database.
- **RDBMS :** A Relational Database is a database, which consists of tables of related information that are linked together based on a key field. In RDBMS, the data is organized in the form of tables (*i.e.*, rows and columns). These tables are called relations. Each row in a table represents a relationship among a set of values.
- **Field :** A field is a category of information. It contains set of characters, which have a proper meaning.
- **Record :** A record is a collection of data items, which represents a complete unit of information.

- **File :** A file is a collection of logically related records.
- **Primary Key :** One or more fields (columns) whose value or values uniquely identify each records in a table is called primary key.

TOPIC-2
Data Type and Views

Quick Review

- **Data Type Column :** The data type column contains the types of data field stores, such as text, currency, date, etc.
- **Field Name Column :** The field name column of a design grid contains the names of fields in your table.
- **Field Properties Area :** The field properties area contains information about the field, like the maximum number of characters it can store in MS-Access.
- **Field Size :** The Field Size is used to set the maximum size for data stored in a field set to Text, Number or Auto Number data type.
- **Text :** Text field can contain alphanumeric characters (A-Z and 0-9) plus special characters such as !, @ and %. Text fields have a maximum length of 0 to 255 characters.
- **Memo :** Memo field also contains alphanumeric characters, though memo fields can store much more data than text fields *i.e.,* up to 64,000 characters.
- **Number :** Number fields stores numbers. The range of numeric values, they can store depends on which value you select from the Field Size property's drop-down menu.
- **Date/Time :** Date/Time field stores calendar date. You can display the date and time together or either one separately, in a variety of formats.
- **Currency :** Currency fields are designed to hold monetary data, though you can also set a currency field to hold percentages or numbers written in scientific notation.
- **Auto Number :** This data type starts with a number for the first record and increases the number by a set amount in subsequent records.
- **Yes/No :** Yes/No fields allow user to make a choice between Yes or No, True or False, or 1 or 0.
- **OLE Object :** OLE (Object Linking and Embedding) technology allows you to include Non-Access objects like picture, video and sound files in your tables.
- **Hyperlink :** Hyperlink fields contain addresses for information that, when clicked display the object associated with the address.
- **Lookup Wizard :** Lookup fields can take the form of text boxes, list boxes and combo boxes.
- **Byte :** Stores numbers from 0 to 255 (no fractions).
- **Decimal :** Stores numbers upto 12 bytes data.
- **Integer :** Stores upto 1 byte data.
- **Long Integer :** Stores upto 4 bytes data.
- **Single :** Stores upto 4 bytes data.
- **Double :** Stores upto 8 bytes data.
- **Table :** The basic structure of a relational database, which contains data in an organized manner, is called table.
- **Form :** A form is an interface in user specified layout that lets users view, enter or change data directly in the table.
- **Datasheet :** When data from a table is displayed in columns and rows, this form of display is known as datasheet.
- **Design View :** The layout where you can modify or edit your opened table is known as design view.
- **Freezing :** The method to fix width of a column so that more columns can be viewed on the screen.

TOPIC-3
Data Validation and Relationships

Quick Review

- **Input Mask :** An input mask is a tool that specifies the format of data entered into a field. An input mask controls the value of a record and sets it in a specific format. They are familiar to format property, but instead display the format on the datasheet before the data is entered.

- **Queries :** Queries are tools built from fields in your tables or in other existing queries that you could use to ask questions about the content of your database.
- **Zero Length :** It means the user can enter a zero length string in a field.
- **Data Redundancy :** Duplication of data.
- **Data Inconsistency :** Multiple mismatching copies of same data.
- **Report :** A format, presentable printed document that lists data in a formatted manner.
- **Data Validation :** Process of making sure the correctness of data.
- **Field Level Validation :** Validation techniques that validates data in a field.
- **Record Level Validation :** Validation techniques that validate values of more than one fields with respect to one another.
- **Field Size :** Text fields : The maximum number of characters (up to 255) that can be entered in the field.The default setting is 50.
- **Number / Currency fields :** Stores the number as a Byte, Integer, Long Integer, Single, Double, or Replication ID. The default setting is Long Integer.
- **Format :** How the data in the field will be displayed on the screen.
- **Decimal places :** The number of decimal places in Number and Currency fields.
- **Caption :** A label for the field that will appear on forms. If you don't enter a caption, Access will use the field name as the caption.
- **Default :** A value that Access enters automatically in the field for new records.
- **Validation rule :** An expression that limits the values that can be entered in the field.
- **Validation Text :** The error message that appears when an incorrect or restricted value is entered in a field with a validation rule.
- **Required :** Specify whether or not a value must be entered in the field. The default is No.
- **Allow zero Length :** Specifies whether or not the field allows zero-length text strings (" "). Text strings are (a string containing no characters). Zero-length text strings are useful if you enter data in a field, but no data exists. For example, if a Social Security field requires data, but you don't know the social security number, you would enter a zero-length text string in the field. To enter a zero-length text string type " " in the cell. The cell will appear empty. The default is No.
- **Indexed :** Specified whether or not you want to index the field to speed up searches and sorts performed on the field. The default is No.

Available Number of Field Sizes :

Heading	Number Range	Decimal Places	Storage Size
Byte	0 to 255	None	1 byte
Integer	– 32,768 to 32, 767	None	2 bytes
Long Integer	-2.1×10^{38} to 2.1×10^{38}	None	4 bytes
Single	-3.4×10^{38} to 1.8×10^{38}	7	4 bytes
Double	-1.8×10^{308} to 1.8×10^{308}	15	8 bytes
Replication ID	N/A	N/A	16 bytes

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CHAPTER - 4 : INFORMATION REPRESENTATION METHODS - HTML

TOPIC-1
Web Browser

Quick Review

- **Web page :** A web page is a document or resource of information that is suitable for the World Wide Web and can be accessed through a web browser and displayed on a monitor or mobile.
- **Web browser :** A web browser is a software application for retrieving, presenting, and traversing information resources on the World Wide Web. An information resource is identified by a Uniform Resource locator (URL).

- **Mozilla Firefox :** Mozilla Firefox is a free and open source web browser descended from the Mozilla Application Suite and managed by Mozilla Corporation.
- **Opera :** Opera is a web browser and Internet suite developed by Opera Software. Opera is offered free of charge for personal computers and mobile phones. The browser handles common Internet-related tasks.
- **Safari :** Safari is a graphical web browser developed by Apple and included as part of the Mac OS X operating system. First released as a public beta on January 7, 2003.
- **Netscape Navigator :** Netscape Navigator and Netscape are the names for the proprietary web browser popular in the 1990s, which is the flagship product of the Netscape Communications. Corporation and the dominant web browser in terms of usage share.
- **Google Chrome :** Google Chrome is a web browser developed by Google that uses the WebKit layout engine and application framework. It was first released as a beta version for Microsoft Windows on 2 September 2008.

TOPIC-2
Web Page Design – Guidelines and GUI Standards

Quick Review

GUI standards for a web page design

- **Label :** A label consists of read-only text or graphics. It identifies a component and communicates the status of a process. You can use a label with a component or you can use it to describe a group of components.
  - The labels used should be brief and meaningful.
  - The Label control name should be prefixed by lbl. *For example,* lblHelpMessage.
  - The first letter of the label name should be in upper case.
- **Text Box :** A text field is a rectangular box that displays a single line of text. The TextBox control name should be prefixed by txt. *For example,* txtLastName.
- **List Box :** A list box is used to display a set of items. You can use a list to present users with a set of choices. You need to prefix the ListBox control name with 1st, *For example,* 1st PolicyNames. A list box has the following capabilities.
  - **Single items :** Only a single item can be chosen from a list of items by clicking on it.
  - **Multiple items :** It enables users to select a range of items. The range of items can be continuous or they may be disjointed.
- **Combo Box :** A combo box is a box with a drop-down arrow on which users click to display a list of choices. You need to prefix the name of the Combo Box control with cmb. *For example,* cmb Languages.
- **Check Box :** A Check Box control represents a setting or value with an on and off option. A check mark within the check box indicates that the option is selected. You can select more than one check box. The name for the check box should be prefixed with chk. The check box text should be displayed to the right of the check box graphic. *For example,* chkWriteOnly.
- **Progress Bar :** A progress bar gives visual feedback about the status or progress of a task. The name of the progress bar control should be prefixed by prg. *For example*, prgLoadForm.
- **Tool Bar :** A tool bar contains buttons that provide quick access to the most frequently used commands in an application. The name of the toolbar control should be prefixed by tlb, for example, tlbOptions.
- **Tree View :** The Tree View control is used to display information in a hierarchical tree. The name of the Tree View control should be prefixed by tvw for example, tvw Organization.
- **Tab Strip :** The tab strip control can define multiple pages for same area of window. The name of the Tab Strip control should be prefixed by tsr. *For example,* tsrActions.
- **Image Combo Control :** This is an extended combo box with images as items. The name of the Image Combo control should be prefixed by imc. *For example*, imcImages.
- **User Control :** They are custom, reusable controls. The name of the User control should be prefixed by usrctrl, *For example,* usrctrlLoad.
- **Timer Control :** The name of the Timer control should be prefixed by tmrctrlAlarm.
- **Option Button :** The name of the Option Button control should be prefixed by opt. *For example,* optStatus.
- **Cool Bar :** The CoolBar control is a container control, which helps you to add sliding toolbars to a Visual Basic application. The name of the CoolBar control should be prefixed by cbr. *For example,* cbrGroup.
- **Image List :** The Image List control contains a collection of images that can be used by other controls. The name of the Image List control should be prefixed by iml, *For example* imlClients.

- **Menu :** An application uses many Menu controls. Each menu name should be prefixed by mnu. Moreover, the name could also include each level of nesting, with the final menu option at the end of the name string. *For example,* mnuFile, mnuFileOpen.
- **Hierarchical Flex Grid Control :** The name of the Hierarchical FlexGrid control should be prefixed by hfxg. *For example,* hfxgVolume.
- **Command Buttons :** The Command Button is a control with a rectangular border that contains text. The text typically consists of a single word that represents the action associated with that button. The name of the command button should be prefixed by cmd, for example, cmdOK.
  - The text on the button should be centered.
  - The recommended text for a command button is OK, Cancel, Accept, Reject, Abort, Retry and Ignore.
- **Status Bar :** Status Bar is a control that is typically displayed at the bottom of an application window and displays information about the current state of the application. The name of the statusbar control be prefixed by sbr. *For example,* sbrProjectProgress.

  WEB SITE DESIGN STANDARDS
- **Titles on Title Bars :** Titles on the title bars should be consistent.
- **Colors and Fonts :**
  - Do not use more than five colors throughout the Web pages.
  - The fonts used for the section headers should be bold.
  - Try to use the same set of fonts throughout different screens.
  - Color can be used to draw attention to important or changing text. The general rule for colour is to use two levels of intensity on a screen.
  - Avoid all upper case section headers, because words formed with capital letters are rectangles that offer few distinctive shapes to the reader's eye.
- **Hyperlinks :**
  - Hyperlinks should be used consistently to link to different pages.
  - Hyperlinks should be of the same color.
- **Images :**
  - A GIF image should be used if an image is a line drawing.
  - A JPEG image should be used if an image is a photograph.
  - The images that are used as the background of a Web page should be of light texture.
- **Bullets :** The use of round bullets is recommended.
- **Tables :**
  - A table should fit the page width.
  - It is preferable that borders be avoided.
- **Frames :**
  - Frames should not be resizable.
  - A frame that displays content can have a vertical scrollbar. Frames that display a table of contents or a banner should not have a horizontal scroll bar.
  - All the linked Web pages should open in the main frame.

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CHAPTER - 5 : HTML FUNDAMENTALS

TOPIC-1
Basic Elements

Quick Review

- **HTML (HyperText Markup Language) :** The mark-up and scripting language is used to create web documents. HTML commands specify the layout of a document as it appears on a Web client. HTML is a set of standardized codes or tags that have been derived from the SGML (Standard Generalized Markup Language) standard.
- **HTML Document :** A text-based document containing the HTML commands that tells the web browsers how to create the web document on the user's screen. An HTML document is also called a source document.

- **HTML Levels :** There are four official levels or versions of HTML conformance. Each encompasses a set of tags and higher levels including tags from all those below it.
  Level 0 : The minimum tags which constitute an HTML document. Level 0 tags are usually rendered consistently from browser to browser.
  Level 1 : Level 0 tags plus tags for highlighting (also called logical tags) and images.
  Level 2 : Level 0 and Level 1 tags plus form tags.
  Level 3 : Previous levels plus support for client-side image maps and scripts and table markup elements.
- **Web Publishing :** Once the HTML document file is created and saved with an extension .html or .htm and when the file is uploaded to a web server, it is called web publishing.
- **Document Tag :** The first HTML tags you are going to look on every html file is the document tag. They define the different parts of the document.
- **HTML Tags :** The commands, which are written for page display, are enclosed within < and > on either side of the tag's command are called HTML tag. These are the first and last tags in a document that should always be the HTML tags. These are the tags that tell a Web browser where the HTML in your document begins and ends. The absolute most basic of all possible Web documents is :
  <HTML>
  .....
  .....
  .....
  </HTML>

- **Container Tags :** In HTML tags that include both an ON and an OFF tag are called container tags. These tags wrap around text in the document.
  Container tags always have the following form :
  <TAG> Text being formatted or defined </TAG>
- **Empty Tags :** The tags which does not have a closing tag. These tags have only an on tag. There are no off tags. *For example,* < BR> and < HR>.
- **HEAD Tag :** The HEAD tag is used to define the document header. The <HEAD> tag contains information about the document, including its title, scripts, style, etc. The HEAD contains general information, or meta information, about the document. It is the first thing in any document, lying above the BODY and just after the <HTML> tag starting the document. The contents of the HEAD are not displayed as part of the document text. The displayed materials is found within the BODY. *For example,*

```
<HTML>
<HEAD>
<TITLE> Hello World Page </TITLE>
</HEAD>
Hello World !
</HTML>
```

- **TITLE Tag :** The TITLE tag is used to display the title bar message with the web browsers like Internet Explorer or Netscape Navigator. That is the title of a document is specified by the TITLE element, which should be placed in the document HEAD. Each document can have only one title, which should identify the document content in a general way. *For example,*

```
<TITLE> Class – X </TITLE>, <TITLE> Test Review 2015 </TITLE>
```

- **BODY Tag :** This tag contains the contents of your document including background color, text color, link color and page margins. Also, various mark-up elements are allowed within the body to indicate headings, paragraphs, lists, hypertext links, images, and so on. The following shows typical use of HEAD and BODY elements, using this document as an example :

```
<HTML>
<HEAD>
<TITLE> BODY element in HTML </TITLE>
</HEAD>
<BODY>
BODY Element in HTML
</BODY>
</HTML>
```

- **BACKGROUND :** This allows you to specify an image file to use as a background (a bit like a watermark)behind the displayed text and graphics. The following example, tiles the window background with the designed GIF image.

```
<BODY BACKGROUND = "backgrnd.gif.">
See the Background
</BODY>
```

- **BGCOLOR :** The BGCOLOR attribute is used to set the color of the background. There are 16 widely used colors in HTML. These colors are specified in the RGB values where RR, GG and BB are the hexadecimal color codes for the Red, Green and Blue levels, ranging from 0 to 255 that is, 00 to FF. The color "000000" is black, while "FFFFFF" is white. *For example,*

```
<HTML>
<HEAD>
<TITLE> Black and White Are My Favourite Colors </TITLE>
</HEAD>
<BODY BGCOLOR = "BLACK" TEXT = "WHITE">
HELLO WORLD !
</BODY>
</HTML>
```

The above example will display a document with white text and black background color.

- **LINK :** The LINK attribute of <BODY> tag is used to specify the color of the link which has not been visited yet by the current user. The default value of this attribute is blue.
- **ALINK :** The ALINK attribute of <BODY> tag is used to specify the color of the active link which has just been clicked by the current user. The default value of this attribute is red.
- **VLINK :** The VLINK attribute of <BODY> tag is used to specify the color of the link which has already been visited by the current user. The default value of this attribute is purple.
- **LEFT MARGIN :** The LEFT MARGIN attribute of <BODY> tag is used to specify the distance between the left side of the document and the left edge of the browser window. For example,

```
<HTML>
<HEAD>
<TITLE> LEFT MARGIN Attributes </TITLE>
</HEAD>
<BODY LEFT MARGIN = "40">
Welcome to HTML Programming
</BODY>
</HTML>
```

- **TOP MARGIN :** The TOP MARGIN attribute of <BODY> tag is used to specify the distance between the top of the document and the top of the browser window. For example,

```
<HTML>
<HEAD>
<TITLE> TOP MARGIN Attributes </TITLE>
</HEAD>
<BODY BACKGROUND = "backgrnd.gif" LEFTMARGIN = "40" TOPMARGIN = "30" >
Welcome to HTML Programming
</BODY>
</HTML>
```

- **Tag :** A coded HTML command.
- **Attribute :** Special word, carrying meaning, used inside the HTML tags.
- **Container Element :** An HTML element requiring a starting as well as an ending tag.
- **Empty Element :** An HTML element requiring just a starting tag and not any ending tag.

TOPIC-2
Advanced Elements

Quick Review

- **FONT Element :** The FONT element can allow you to change the size, color and typeface of text on an HTML page. There are three ways to use the <FONT> tag, depending on the attribute that you use.

- **SIZE Attribute :** Like word processor, the FONT tag uses SIZE attribute to specify the relative or absolute sizes of text. You can specify the font size relative to the current size (using + or –) or as an absolute size from 1 to 7. The SIZE of attribute is represented as :

```
<FONT SIZE = VALUE>
```

For example,

```
<HTML>
<HEAD>
<TITLE> SIZE attribute of FONT tag </TITLE>
</HEAD>
<BODY><P> This is <FONT SIZE = + 2 > resized </FONT> text. <BR>
This is <FONT SIZE = – 2 > resized </FONT> text. <BR>
This is <FONT SIZE = 7 > resized </FONT> text. </P></BODY>
</HTML>
```

- **FACE Attribute :** Using the FACE attribute, you can try to specify the typeface to be used in displaying a block of text. The FACE of attribute is represented as :

```
<FONT FACE = "FONT NAME">
```

For example,

```
<HTML>
<HEAD>
<TITLE> FACE attribute of font tag </TITLE>
</HEAD>
<BODY><P> This is <FONT face = "arial, helvetica"> different font </FONT> text. <BR>
This is <FONT FACE = "times, helvetica"> different font</FONT> text. <BR>
This is <FONT FACE = "zapf,times">different font</FONT> text. <BR>
This is <FONT SIZE = 7 FACE = "ARIAL">resized</FONT> text.
</P></BODY>
</HTML>
```

- **COLOR Attribute :** The COLOR attribute lets you to specify the color of a block of text (using the color names or RGB values that we learned). For example, COLOR = "red" or COLOR = "#ff0000" requests red text font. There are several supported color names, but to be safe it is best to use RGB color codes, as in
COLOR = "#RRGGBB".
- **BASEFONT Element :** The BASEFONT element is simply a <BASEFONT> tag, which is placed somewhere after your document's <BODY> tag. The basefont element establishes a default font size (and optionally a default font face or font color) for your entire page. The <BASEFONT> element should only occur once in the document and has all other attributes of <FONT> tag like SIZE, FACE and COLOR.
- **Comment Tag :** Comment lines are indicated by the special beginning tag <! - - and ending tag - - > placed at the beginning and end of every line to be treated as a comment. Comments do not nest, and the doubledash sequence "- -" may not appear inside a comment except as part of the closing - - > tag. You must also make sure that there are no spaces in the start-of-comment string. For example,
<! - - This is commented out - - > or one can use <COMMENT> tag along with leading tag *i.e.*, < COMMENT>
- **Paragraph Tag :** The **P** element marks a block of text as a paragraph — the tag <**P**> marks the beginning of the paragraph, while the tag </**P**> marks the end of a paragraph. In order to give the appearance of paragraphs, then, you have to use the paragraph container tag. The paragraph tag uses the following format:
<**P**>Here is the text for our paragraph. It does not matter how long it is, how many spaces are between the words or when we decide to hit the return key. It will create a new paragraph only when we end the tag and begin with another one. </**P**>.
- **BR Tag :** The <BR> tag is used to move the text following the tag to the next line. It inserts a line break on the webpage.
- **HR Tag :** The <HR> tag is used to create a Horizontal Rule or Line in an HTML Page.
- **CENTER Tag :** The <CENTER>tag is used to center the content between the current left and right margins.
The CENTER element is represented as :

```
<CENTER> ..... </CENTER>
```

For example,

```
<CENTER>
Here is some centered text .........
<P> Here is another centered paragraph. </P>
<P> And yet another. </P>
</CENTER>
```

- **IMAGE Tag :** The <img>tag is used to insert an image on the web page by making use of its src attribute. Other attributes like height and width are used in context of image to set its dimensions on the web page. The *alt* attribute is used to display the text as an alternative, if image is not displayed in browser.
  <img src="path of the image" alt=" image is about" height=100 width=200>
- **Definition Lists :** Lists showing definition terms and definition descriptions.
- **External Linking :** Linking to another Web page.
- **Internal Linking :** Linking to a section inside same Web page.
- **HTML Hyperlinks (Links) :** A hyperlink (or link) is a word, group of words, or image that you can click onto jump to a new document or a new section within the current document.
  Links are specified in HTML using the < a > tag (Anchor tag).
  The < a > tag can be used in two ways :
  To create a link to another documents, by using the href (hyper reference) attribute.
  To create a bookmark inside a document, by using the name attribute.
  e.g., Link text
- **HTML Headings :** HTML headings are defined with the < h1 > to < h6 > tags in decreasing font size order.
  Example : <h1> This is a heading </h1>
  <h2> This is a heading </h2>
  <h3> This is a heading </h3>
  .....
- **HTML Text Formatting Tags :**
  <B> Defines bold text
  <I> Defines italic text
  <U> Defines underline text
- **Unorderd Lists :** An unordered list starts with the <ul> tag. Each list item with the <li> tag. The list items are marked with bullets (typically small black circles). Indented lists having a bullet symbol in front of every list item.
- **Ordered Lists :** An ordered list starts with the <ol> tag. Each list item start with the < li> tag. Indented lists having numbers or letters in front of every list item.
  The list items are marked with numbers.

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CHAPTER - 6 : HTML & XML

TOPIC-1
HTML

Quick Review

- HTML stands for **H**yper **T**ext **M**arkup **L**anguage which is used for describing web pages.
- HTML is not a programming language, it is a **markup language** consisting of a set of **markup tags** to describe web pages.
- HTML markup tags are usually called HTML tags which are keywords surrounded by **angle brackets** like <html>
- HTML tags normally **come in pairs** like and .
- The first tag in a pair is the **start tag or opening tag,** the second tag is the **end tag or closing tag.**
- HTML documents (also **called web pages) contain HTML tags** and plain text
- The purpose of a web browser (like Internet Explorer or Firefox) is to read HTML documents and display them as web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page.
- **IMAGE Tag :** This tag is used to insert images in webpages. The <*img*> tag is empty, which means that it contains attributes only, and has no closing tag.
- **SRC attribute :** 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. *For example*,

```
<img src= "url">
```

- **ALT attribute :** 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).The value of the alt attribute is an author-defined text. For example,

```
<img src= "boat.gif" alt= "Big Boat">
```

- **SIZE attribute :** The size attributes define the width and height of the image. These attributes are optional but strongly recommended as they help the browser in arranging the page more quickly. For example,

```
<img src= "image.jpg" width= "200" height= "150">
```

- **ALIGN attribute :** This attribute is used to position the image according to the value assigned. The alignment options available are left, right, top, middle, bottom, absmiddle, absbottom, baseline and texttop. For example,

```
<img src= "image.jpg"align= "left">
```

- **SUB Tag :** The <sub> tag defines subscript text. Subscript text appears half a character below the baseline. Subscript text is used for chemical formulas, like H_2O. For example

```
H<sub>2</sub>O
```

- **SUP Tag :** The <sup> tag defines superscript text. Superscript text appears half a character above the baseline. Superscript text can be used for mathematical formulas like $(a^2 – b^2)$.

```
(a<sup>2</sup> - b<sup>2</sup>)
```

- **TABLE tag :** The <table> tag creates a table on your webpage using HTML.A simple HTML table consists of the table element and one or more **tr**, **th**, and **td** elements. The **tr** element defines a table row, the **th** element defines a table header, and the **td** element defines a table cell. For example, a simple HTML table like this, containing two columns and two rows can be created as :

Month	Savings
January	$100
February	$80

```
<table border= "1">
<tr>
<th>Month</th>
<th>Savings</th>
</tr>
<tr>
<td>January</td>
<td>$100</td>
</tr>
<td>February</td>
<td>$80</td>
</tr>
</table>
```

- **BORDER attribute :** It is used to display a table with borders. If this attribute is not used, the webpage shows a table without border lines between the cells of the table.
- **BACKGROUND attribute :** This attribute allows you to specify an image file to use as a background behind the entire table or a particular cell as the case may be. For example,

```
When it is used inside TABLE tag, <table border = "1" background = "url">
When it is used inside TD tag, <td background = "url">
```

  Note that while specifying the url or path of the image file to be used, **forward slash** (/) should be used instead of **backward slash** (\).

- **BGCOLOR Attribute :** This attribute specifies a background color of a table. For example, green color can be set as background color of the table as:

```
<table border= "1" bgcolor= "#00FF00">
```

- **WIDTH Attribute :** This attribute is used to specify the width (in pixels) of the table. For example, a table with a width of 400 pixels can be created as:

```
<table border= "1" width= "400">
```

- **CELLSPACING Attribute :** This attribute specifies the space between cells of a table. *For example*, a space of 10 pixels between the cells can be defined as:

```
<table border= "1" cellspacing= "10">
```

- **CELLPADDING Attribute :** This attribute controls the amount of space between the contents of the cell (text, images, etc.) from the cell wall (border). For example, a space of 5 pixels between the border and the contents of the cells can be defined as:

```
<table border= "1" cellpadding = "5">
```

- **ROWSPAN Attribute :** This attribute is used to allow a single cell to span over height of two or more rows in the table. *For example*, a table like this can be created as:

Month	Savings	Savings for holiday!
January	$100	$50
February	$80	

```
<table border= "1">
<tr>
<th>Month</th>
<th>Savings</th>
<th>Savings for holiday!</th>
</tr>
<tr>
<td>January</td>
<td>$100</td>
<td rowspan= "2">$50</td>
</tr>
<tr>
<td>February</td>
<td>$80</td>
</tr>
</table>
```

- **COLSPAN Attribute :** This attribute is used to allow a single cell to span over width of two or more columns in the table. For example, a table like this can be created as :

Month	Savings	Savings for holiday!
January	$100	
February	$80	$50

```
<table border= "1">
<tr>
<th>Month</th>
<th>Savings</th>
<th>Savings for holiday!</th>
</tr>
<tr>
<td>January</td>
<td colspan= "2">$100</td>
</tr>
<tr>
<td>February</td>
<td>$80</td>
<td>$50</td>
</tr>
</table>
```

- **Hyperlink :** A hyperlink is a phrase or an image which when clicked is used to jump to a different section of the same document or to a different document.
- **Internal Link between web pages :** An internal link is a hyperlink that goes to other webpages within a same website.
- **External Link between web pages** – An external link is a hyperlink that goes to URL of another website.
- **Linking** is important to divide the content of the webpage into different sections. It establishes relationship between different sections of the same webpage as well as between different webpages and websites. It also reduces the quantity of text to be put on a single webpage. Linking helps in reducing the duplication of text which is related to different sections / webpages of the website.
- **ANCHOR Element :** It is used to define hyperlinks between a source section / document and a destination section / document. The source is the phrase or image that has been used as a hyperlink. The destination is the URL of the section / document / webpage to which the source points to. For example,

```
<a name = "identifier"></a>
<a href = "#identifier"> words go here </a>
```

where, **a** anchor tag element

name This is the name attribute. The name anchor tag is used to identify or give a name. In this situation the value of the name anchor tag attribute is the identifier.

identifier This anchor tag is used to identify a location on the web page.

href This attribute of Anchor tag controls the location of the requested web page and tells the browser where to look for the next page.

TOPIC-2
XML

Quick Review

- XML stands for extensible Markup Language designed to transport and store data.
- XML is a markup language much like HTML but designed to carry data, not to display data.
- XML tags are not predefined. You must define your own tags.
- XML is a W3C Recommendation (on February 10, 1998) designed to be self-descriptive May be it is a little hard to understand, but XML does not DO anything. XML was created to structure,store, and transport information.
- The XML document does not DO anything. It is just information wrapped in tags. Someone must write a piece of software to send, receive or display it.
- XML is not a replacement for HTML but is a complement to HTML.
- XML is a software and hardware independent tool for carrying information.
- With XML, data can be stored in separate XML files. This way you can concentrate on using HTML for layout and display, and be sure that changes in the underlying data will not require any changes to the HTML.With a few lines of JavaScript code, you can read an external XML file and update the data content of your web page.
- XML data is stored in plain text format. This provides a software- and hardware-independent way of storing data making it easy to be shared by different applications.
- Exchanging data as XML greatly reduces this complexity, since the data can be read by different incompatible applications.
- **XML Simplifies Platform Changes :** Upgrading to new systems (hardware or software platforms), is always time consuming. Large amounts of data must be converted and incompatible data is often lost.XML data is stored in text format. This makes it easier to expand or upgrade to new operating systems,new applications, or new browsers, without losing data.
- **XML Makes Your Data More Available :** With XML, your data can be available to all kinds of "reading machines" (Handheld computers, voicemachines, news feeds, etc), and make it more available for blind people, or people with other disabilities.
- XML documents form a tree structure that starts at "the root" and branches to "the leaves".XML documents use a self-describing and simple syntax. For example,

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<note>
<to>Tove</to>
<from>Jani</from>
<heading>Reminder</heading>
<body>Don't forget me this weekend!</body>
</note>
```

  The first line is the XML declaration. It defines the XML version (1.0) and the encoding used (ISO-8859-1 = Latin-1/ West European character set).
  The next line describes the **root element** of the document (like saying: "this document is a note") <note>.
  The next 4 lines describe 4 **child elements** of the root (to, from, heading, and body).
  And finally the last line defines the end of the root element </note>
  This example shows that the XML document contains a note to Tove from Jani.
- XML documents must contain a **root element**. This element is "the parent" of all other elements. The elements in an XML document form a document tree. The tree starts at the root and branches to the lowest level of the tree. All elements can have sub elements (child elements):The terms parent, child, and sibling are used to describe the relationships between elements. Parent elements have children. Children on the same level are called siblings (brothers or sisters).
- All elements can have text content and attributes (just like in HTML).

- **XML Syntax Rules**
  - **All XML Elements Must Have a Closing Tag** except the declaration which is not a part of the XML document itself, and thus, has no closing tag.
  - **XML Tags are Case Sensitive :** The tag <Letter> is different from the tag <letter>.

  Note : "Opening and closing tags" are often referred to as "Start and end tags". Use whatever you prefer. It is exactly the same thing.
  - XML Elements Must be Properly Nested

  This text is bold and italic

  In this case, since the element is opened inside the element, it must be closed inside the element.
  - XML Documents Must Have a Root Element
  - XML Attribute Values Must always be Quoted
- Some characters have a special meaning in XML. There are 5 predefined entity references in XML:

Entity	Reference	Used for
<	<	less than
>	>	greater than
&	&	ampersand
'	'	apostrophe
"	"	quotation mark

  The characters "<" and "&" are strictly illegal in XML.
- The syntax for writing comments in XML is similar to that of HTML.

  <!— This is a comment — >
- With XML, the white-space in a document is not truncated.
- XML Stores New Line as LF
- An XML document contains XML Elements, that is everything from (including) the element's start tag to (including) the element's end tag. An element can contain other elements, simple text or a mixture of both. Elements can also have attributes.

```
<bookstore>
<book category="CHILDREN">
<title>Harry Potter</title>
<author>J K. Rowling</author>
<year>2005</year>
<price>29.99</price>
</book>
</bookstore>
```

  In the example above, <bookstore> and <book> have **element contents**, because they contain other elements. <author> has **text content** because it contains text and element <book> has an **attribute** (category="CHILDREN").
- XML elements must follow these naming rules:
  Names can contain letters, numbers, and other characters
  Names cannot start with a number or punctuation character
  Names cannot start with the letters xml (or XML, or Xml, etc)
  Names cannot contain spaces
  Any name can be used, no words are reserved.
  Names with an underscore separator are nice: <first_name>, <last_name>.
  Names should be short and simple, like this: <book_title> not like this: <the_title_of_the_book>.
  Avoid "-", "." and ":" characters.
  Non-English letters like éòá are perfectly legal in XML.
- XML elements can be extended to carry more information without breaking applications. This means some more tags can be inserted in the existing document to add some extra information.
- XML elements can have attributes, just like HTML. Attributes provide additional information about an element. Attributes often provide information that is not a part of the data. In the example below, the file type is irrelevant to the data, but can be important to the software that wants to manipulate the element:

<file type="gif">computer.gif</file>

- **XML** attribute values must always be quoted. Either single or double quotes can be used.
  For example : <person sex="female"> OR <person sex='female'>
  If the attribute value itself contains double quotes you can use single quotes, like in this example:

  <gangster name='George "Shotgun" Ziegler'>

  or you can use character entities:

  <gangster name="George "Shotgun" Ziegler">

- There are no rules about when to use attributes or when to use elements. Attributes are handy in HTML. In XML, use elements instead.
- Some of the problems with using attributes are :
  attributes cannot contain multiple values (elements can)
  attributes cannot contain tree structures (elements can)
  attributes are not easily expandable (for future changes)
  attributes are difficult to read and maintain.
  Use elements for data. Use attributes for information that is not relevant to the data.
  Don't end up like this:
  <note day="10" month="01" year="2008"
  to="Tove" from="Jani" heading="Reminder"
  body="Don't forget me this weekend!">
  </note>
- **XML Attributes for Metadata :** Sometimes ID references are assigned to elements. These IDs can be used to identify XML elements. The id attributes can be used for identifying the different notes. It is not a part of the note itself. This means that metadata (data about data) should be stored as attributes, and the data itself should be stored as elements.
- **XML Validation -** XML with correct syntax is "Well Formed" XML. XML validated against a DTD is "Valid" XML. A "Valid" XML document is a "Well Formed" XML document, which also conforms to the rules of a Document Type Definition (DTD):

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE note SYSTEM "Note.dtd">
<note>
<to>Tove</to>
<from>Jani</from>
<heading>Reminder</heading>
<body>Don't forget me this weekend!</body>
</note>
```

  The DOCTYPE declaration in the example above, is a reference to an external DTD file. The content of the file is shown in the paragraph below.
- **XML Schema :** W3C supports an XML-based alternative to DTD, called XML Schema:

```
<xs:element name="note">
<xs:complexType>
<xs:sequence>
<xs:element name="to" type="xs:string"/>
<xs:element name="from" type="xs:string"/>
<xs:element name="heading" type="xs:string"/>
<xs:element name="body" type="xs:string"/>
</xs:sequence>
</xs:complexType>
</xs:element>
```

- Errors in XML documents will stop your XML applications. The W3C XML specification states that a program should stop processing an XML document if it finds an error. The reason is that XML software should be small, fast, and compatible. HTML browsers will display documents with errors (like missing end tags). HTML browsers are big and incompatible because they have a lot of unnecessary code to deal with (and display) HTML errors. With XML, errors are not allowed.
- Raw XML files can be viewed in all major browsers. Don't expect XML files to be displayed as HTML pages. The XML document will be displayed with color-coded root and child elements. A plus (+) or minus sign (-) to the left of the elements can be clicked to expand or collapse the element structure. To view the raw XML source (without the + and - signs), select "View Page Source" or "View Source" from the browser menu.
- In Chrome, Opera, and Safari, only the element text will be displayed. To view the raw XML, you must right click the page and select "View Source"
- If an erroneous XML file is opened, the browser will report the error.
- Without any information about how to display the data, most browsers will just display the XML document as it is.XML documents do not carry information about how to display the data. Since XML tags are "invented" by the author of the XML document, browsers do not know if a tag like <table> describes an HTML table or a dining table.
- An XML parser converts an XML document into an XML DOM object - which can then be manipulated with a JavaScript. All modern browsers have a built-in XML parser.
- **Parse an XML Document -** The following code fragment parses an XML document into an XML DOM object:

```
if (window.XMLHttpRequest)
```

```
{// code for IE7+, Firefox, Chrome, Opera, Safari
xmlhttp=new XMLHttpRequest();
}
else
{// code for IE6, IE5
xmlhttp=new ActiveXObject("Microsoft.XMLHTTP");
}
xmlhttp.open("GET","books.xml",false);
xmlhttp.send();
xmlDoc=xmlhttp.responseXML;
```

❑❑

UNIT -III : SOCIETAL IMPACTS OF IT

CHAPTER - 7 : INFORMATION SECURITY & BENEFITS OF ICT

TOPIC-1
Data : Threats and Security

Quick Review

- **Virus :** A computer virus is a small program written to alter the way a computer operates, without the permission or knowledge of the user. A virus must meet two criteria:
  - It must execute itself. It often places its own code in the path of execution of another program.
  - It must replicate itself. For example, it may replace other executable files with a copy of the virus infected file. Viruses can infect desktop computers and network servers alike.
- **Worm :** Worms are programs that replicate themselves from system to system without the use of a host file. This is in contrast to viruses, which requires the spreading of an infected host file. Although worms generally exist inside of other files, often Word or Excel documents, there is a difference between how worms and viruses use the host file. Usually the worm will release a document that already has the "worm" macro inside the document. The entire document will travel from computer to computer, so the entire document should be considered the worm W32. Mydoom.AX@mm is an example of a worm.
- **Trojan horses :** Trojan horses00000000000000000000000 are impostors—files that claim to be something desirable but, in fact, are malicious. A very important distinction between Trojan horse programs and true viruses is that they do not replicate themselves. Trojan horses contain malicious code that when triggered cause loss, or even theft, of data. For a Trojan horse to spread, you must invite these programs onto your computers; for example, by opening an email attachment or downloading and running a file from the Internet. Trojan.Vundo is a Trojan horse.
- **Anti-virus :** Antivirus (or anti-virus) software is used to prevent, detect, and remove malware, including computer viruses, worms, and trojan horses. Such programs may also prevent and remove adware, spyware, and other forms of malware.
- **Spyware :** Spyware is a type of malware that can be installed on computers and collects little bits of information at a time about users without their knowledge. The presence of spyware is typically hidden from the user, and can be difficult to detect. Typically, spyware is secretly installed on the user's personal computer. Sometimes, however, spywares such as key-loggers are installed by the owner of a shared, corporate, or public computer on purpose in order to secretly monitor other users.
- **Malware :** Malware, short for *malicious software*, is software designed to infiltrate a computer system without the owner's informed consent. The expression is a general term used by computer professionals to mean a variety of forms of hostile, intrusive, or annoying software or program code.
- **Spam :** Unwanted or unsolicited commercial e-mail message from someone you do not know or with whom you do not have an established business relationship. Spam is the electronic equivalent of junk mail. Internet etiquette demands that marketers refrain from sending e-mail to consumers who have not indicated an interest in communicating with them.

- **Backup :** A **backup** or the process of **backing up** refers to making copies of data so that these additional copies may be used to *restore* the original after a data loss event. Backups are useful primarily for two purposes. The first is to restore a state following a disaster. The second is to restore small numbers of files after they have been accidentally deleted or corrupted.
- **Data recovery : Data recovery** is the process of salvaging data from damaged, failed, corrupted, or inaccessible secondary storage media when it cannot be accessed normally. Often the data are being salvaged from storage media such as hard disk drives, storage tapes, CDs, DVDs, RAID, and other electronics. Recovery may be required due to physical damage to the storage device or logical damage to the file system that prevents it from being mounted by the host operating system.
- **Online backup :** Using the Web to store copies of data for backup. There are numerous providers on the Internet that charge for storage, and fees are typically based on capacity. Online backup services provide offsite backup, which is essential for disaster recovery. In a database, an online backup, more often called a hot backup or dynamic backup.
- **Offline backup :** Offline backup is a way to store files from a network so that they will be accessible even when the user is not connected to the network they are stored on.
- **Hacker :** An expert computer programmer who enjoys figuring out the inner workings of computer systems or Networks. Some have a reputation for using their expertise to illegally break into secure programs in computers hooked up to the Internet or other networks. This sense, however, has now been taken over by the term cracker,and hacker is again a title to be proudly claimed.
- **Cracker :** A cracker is an expert computer programmer who breaks into a computer system or a network of systems; by passing the passwords and the licensing process; or willfully breaches security of the computer or the network. Cracking is always done with a malicious intention.

TOPIC-2
Customer Security in e-commerce

Quick Review

Customer Security : Basic Principles

- Most e-commerce merchants leave the mechanics to their hosting company or IT staff, but it helps to understand the basic principles. Any system has to meet four requirements :
  - **privacy :** information must be kept from unauthorized parties.
  - **integrity :** message must not be altered or tampered with.
  - **authentication :** sender and recipient must prove their identities to each other.
  - **non-repudiation :** proof is needed that the message was indeed received.
- **Hash function :** A **hash function** is any well-defined procedure or mathematical function that converts a large, possibly variable-sized amount of data into a small datum, usually a single integer that may serve as an index to an array. The values returned by a hash function are called **hash values**, **hash codes**, **hash sums**, **checksums** or simply **hash**.
- **RSA :** In cryptography, **RSA** is an algorithm for public-key cryptography. It is the first algorithm known to be suitable for signing as well as encryption, and was one of the first great advances in public key cryptography.RSA is widely used in electronic commerce protocols.
- **B2B : Business-to-business** (**B2B**) describes commerce transactions between businesses, such as between a manufacturer and a wholesaler, or between a wholesaler and a retailer.
- **C2C : Consumer-to-consumer (C2C) electronic commerce** involves the electronically-facilitated transactions between consumers through some third party. A common example is the online auction, in which a consumer posts an item for sale and other consumers bid to purchase it.
- **EDI : Electronic data interchange (EDI)** is the structured transmission of data between organizations by electronic means. It is used to transfer electronic documents or business data from one computer system to another computer system, *i.e.* from one trading partner to another trading partner without human intervention.
- **Firewall :** A **firewall** is a part of a computer system or network that is designed to block unauthorized access while permitting authorized communications.
- **Encryption : Encryption** is the process of transforming information (referred to as plain text) using an algorithm(called cipher) to make it unreadable to anyone except those possessing special knowledge.

UNIT -IV : IT APPLICATIONS

CHAPTER - 8 : DOMAINS

TOPIC-1
Business Computing

Quick Review

- **Database :** It is created to store the personal records or information. The information in this type of databases can be used for various purposes like retrieving, updating, report generation, etc.
- **DBMS :** Data Base Management System is used to manage the data on information.
- **Microsoft Access :** It is a data management software which is used to create, store and manage different types of details, like student result, employee payroll table etc.
- **Inventory Control Processing :** It refers to the management of Inventories. In other words, Inventory control refers to managing transactions in such a way so that decisions regarding the inventory management can easily be taken. For instance, in a departmental store, many items are kept and sold. When these items are sold out, the store orders for more quality so as to meet the customer's demands.
- **Student Result System :** It refers to storing and managing student details as well as marks details. The structure of these tables has been created in design view in MS Access.
- **Employee payroll management :** A software used for computation of monthly salary.
- **Stock Inventory :** Records of Purchase and issue items.
- **ERP :** Enterprise Resource Planning is a software used for various purposes like computation of salary, inventory records etc.
- **Vehicle Parking Record :** It refers to storing and managing details of vehicles parked during each day and the parking charges collected from each of the vehicle drivers.

TOPIC-2
Web Page Design

Quick Review

- **Web Page :** A web page is a document or resource of information that is suitable for the World Wide Web and can be accessed through a web browser and displayed on a monitor or mobile.
- **Website :** A collection of related web pages which are grouped and connected together in different ways.
- **HTML :** The scripting language is used to create Web documents. HTML commands specify the layout of a document as it appears on a Web client.
- A website is designed by creating individual webpages and establishing links between these webpages. The webpages are designed using HTML (HyperText Markup Language).
- Some example websites which you may know includes a school's website, a website on wildlife, a website on news channel, a website on a company, or a personalized website etc.
- **Home Page :** A first page or an introductory page of a website. It is the main page which gives detailed information on that particular website and has links to its other related webpages.
- **MySchool :** The webpage of a school website may include a brief introduction about school, a picture of the school, and links to other related webpages.
- **My Family :** The webpage of my family may include an introduction to the family type and its members, followed by a brief introduction to each family member with a family photograph.

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CHAPTER - 9 : WEBSITE DESIGNING

TOPIC-1
Blog Introduction

Quick Review

- ***Blog* :** A type of online diary that someone makes available to other people on the Internet. (A very popular way to communicate one's personal details without any social interaction.)
- Blogs are probably the easiest way to have a website. With blog software, it literally takes minutes to have a professional looking site up and running.

  Some advantages of having a blog are :
- **Blogs are easy to maintain :** Blog software allows you to post data online from any where. With just an internet connection you can log in and update your website from your web-based control panel. Your blog's software automatically arranges the posts in reverse chronological order starting from the latest.
- **Blogs are easy to create :** You don't need expensive or complicated web editors or web design software to create a blog. Blog vendors offer you a variety of templates. You only need to get designed an attractive logo that makes your site unique.
- **Blogs are search-engine-friendly :** Blogs assign each post an individual URL address. If you make post on a specific topic and choose the keywords to best describe the post, they will stand a good chance of ranking well with the search engines. Also, since blogs tend to be updated regularly, search engines will crawl them often, adding your newposts to their index.
- **Blogs allow you to interact with your customer base:** The best websites allow your customers to interact with you and give feedback. Blogs offer the option of enabling a "comments" field after your posts where readers can give you feedback. In this way, you will have at your disposal an effective and inexpensive way to get to know your customers better.
- **Many blog hosts are free:** There are several services that offer blog hosting for free. The most well-known of them is Blogger, a free blog service owned by Google. The downside to all these great advantages is that they have encouraged the creation of a huge number of me-too and low quality blogs that don't add value and hardly get any traffic.
- **The advantages of blogs from organisational perspective are:**
  - The consumer and citizen are potentially better informed and this can only be good for the long-term health of our societies and economies.
  - Blogs have potential to help the organization develop stronger relationships and brand loyalty with its customers, as they interact with the 'human face' of the organization through blogs.
  - Blogs, in an intranet environment, can be an excellent way of sharing knowledge within the organization.
  - Blogs can be a positive way of getting feedback, and keeping your finger on the pulse, as readers react to certain pieces, suggest story ideas, etc.
  - Blogs can build the profile of the writer, show casing the organization as having talent and expertise.
- **The disadvantages of blogs from organisational perspective are :**
  - Most people don't have very much to say that interesting, and/or are unable to write down their ideas in a compelling and clear manner.
  - I have often found that the people who have most time to write have least to say, and the people who have most to say don't have enough time to write it. Thus, the real expertise within the organization lays hidden, as you get drowned in trivia.
  - Like practically everything else on the Web, blogs are easy to start and hard to maintain. Writing coherently is one of the most difficult and time-consuming tasks for a human being to undertake. So, far from blogs being a cheap strategy, they are a very expensive one, in that they eat up time. As a result, many blogs are not updated, thus damaging rather than enhancing the reputation of the organization.
  - Organizations are not democracies. The Web makes many organizations look like disorganizations,with multiple tones and opinions.

TOPIC-2
Developing Websites

Quick Review

➢ Steps for creating School Web Pages

1. **Explore :** Before you jump into the development of a page, it's a good idea to explore some schools websites who have already been through the process and find out strengths and weaknesses of each school site?
2. **Plan :** Planning is an essential part of web page development. Start with a planning committee that involves administrators, teachers, library media specialists, technology people, parents, community members, and students. The first task of the committee is to identify the purpose of the website.

   Develop a set of policies and procedures related to the website. Identify roles and responsibilities such as webmaster, content coordinator, writer, and editor. Develop content provider guidelines. Develop a policy for the use of student names, photographs, and projects. Also, discuss copyright issues and ways of handling dated pages and link rot. Consider legal issues such as acceptable use. What disclaimers should be posted for users?
3. **Design :** Identify the content for the website. Who decides on the content? Does every document need to be online? Is it available elsewhere? Could we link to it? How will information be used? Why will people revisit for more information?

   Sometimes it's hard to think of all the things that might be included in a school web site. Below is a list of things to consider.

School Information

- **Contact Information :** Name, Address, City, County, State/Province, email, web address
- **School Background :** History, Mission, Song, Logo
- **Virtual School Tour :** Directions, Map, Photos, Classrooms, Videos, Live Cams
- **School Accomplishments :** Awards, Achievements, Grants, Special Thanks
- **School Announcements :** Events, Schedules, Calendars, Timelines
- **News and Information :** Minutes, Newspaper, E-magazines, Announcements
- **School Policies & Procedures :** Mission, Philosophy, Handbook, Curriculum Guides, Policies, Programs

People Information

- **Staff/Administration :** Principal Welcome, Directory (name, position, contacts)
- **Teacher Pages :** Directory (name, position, contact)
- **Class or Grade Level Pages :** Classroom, projects, assignments, themes, field trips
- **Student Pages :** Project posting, sharing, links to personal pages (offsite)
- **Support Departments :** Content Area Departments, Library/Media, Technology, Health Services, Bus Routes, Art & Music, Sports, Clubs, After School Programs, Special Programs (Special Ed, TAG, ESL)
- **Parents/Volunteers :** Directory, PTO/PTA, Activities, Opportunities, Events, Needs

Curriculum Connections

- **Student Resources :** Assignments, Course Information, Projects, Popular Links
- **Teacher Resources :** Lesson Plans, Professional Development, Popular Links
- **Parent Resources :** Parenting Resources, Popular Links
- **Curriculum Materials :** Online Curriculum Materials: lessons, activities, homework

Community Information and Outreach

- **Local Information :** Weather, Geography, Culture, events, Attractions, Library
- **Local Resources :** Natural and Historical Resources, Business & Nonprofit Contacts
- **Business Connections :** School Supporters, Grants, Free Advertising
- **Call For Participation :** Volunteers, Wish List, Funding Needs

4. **Create :** Develop the structure for your website. Careful organization is essential. Use a software package such as Inspiration to help visualize the website's folders and pages. Think about how directories and files will be named. Establish levels of control. Create HTML documents or use web development tools, others can submit projects in a word processing format or on a piece of paper.

   Make our website interactive. For example, you might include email contacts, forms, discussion forums and blogs, guest books, interactive quizzes and other elements.
5. **Revise :** Once the pages have been posted, your job is not done. It's time to do field testing on different computer platforms and web browsers. Also, try the website with different audiences. Ask them to look for simplicity,navigation, ease of use, accuracy, technical quality, and effective links. Revise your website to meet diverse needs.

➢ **Steps to Create a Travel & Tourism Website**

1. Find a website host and a domain name. Some travel sites offer a free membership if you register and additional features if you upgrade to a paid plan. Alternately, you can start an independent website by contacting a website host. For example : godaddy.com, cluestech.com, hostgator.in.

2. Design outline for your site , if you plan to upload photographs and videos as you travel. Select a simple back ground that does not detract from your content. Consider using a complementary theme. For example,if you will be posting photos from an island vacation, choose a background that features a beach and palm trees.
3. Get creative with your photos. The last thing viewers want to see is you, repeatedly, waving at the camera from in front of the most recent tourist attraction you visited. Instead, consider using the panorama feature on your camera to allow them to scroll for a 180-degree to view of the scenery.
4. Capture some action in your videos to make them interesting. Instead of filming the sky, the surf, the beach and then the sky again, wait until Aunt Mary decides to parasail and get it on tape. Now use your graphics program to cut out all but the most intriguing parts so website visitors won't get bored.
5. Separate different aspects of your travels by giving them different pages on your site. Keep each page simple but unique, with only the shots and text that apply to the photos you post. Now add a simple caption for every photo, and resist uploading different angles of the same shot. The viewer only needs to see one photo of the sandcastle you constructed.
6. Locate Internet cafes on your travels, and update your website as you go. Family and friends at home will be waiting excitedly for updates from the newest leg of your journey, hence try to upload new information as often as you can.
7. Include some interesting short stories about the places you visited and the people you met. Keep your text brief, and cover only the most interesting and exciting events.

➢ **Instructions to Build a Free Travel & Tourism Website**

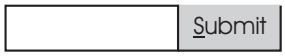
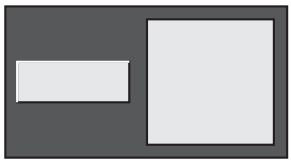
1. Buy your domain name and sign up with a no-charge web hosting company like Synthasite or Webs. Domain name refers to the words someone types into the address bar on his browser. Choose something that's easy for your customers to remember, like your company name. Some domain name registration websites which you can prefer: godaddy.com, cluestech.com, hostgator.in.
2. Create a home page that provides the information your customers or readers need. Include your company history. Explain your qualifications as a travel expert. Include your photo and all your contact information.
3. Use lots of pictures of travel destinations, but resize them so that they don't make your pages load slowly.
4. Mention any special services you offer, such as group travel or discounts. Since most travel agents have access to the same tools, explain why you're the best choice.
5. Link to airline, cruise and hotel websites if you don't do the actual booking. Make sure these links open in another page so that your visitors don't leave your website.
6. Write a blog about current trends in travel. Include travel tips that only an insider would know. Update your blog every few days. Relate personal travel anecdotes that are amusing or useful to your visitors.
7. Post the State Department's travel warnings. These can be found at the State Department website.
8. Make your site keyword heavy by using words that will bring your site into the top rankings in search engines. Keywords are the words a person looking for a travel website would type into a search engine. Sprinkle these words throughout your site.

HTML Tags C[1]hart use in website designing

Tag	Name	Code Example	Browser View
<! - - >	comment	<! - - This can be viewed in the **HTML** part of a document - ->	Nothing will show (Tip)
<a>	anchor	<**a href**="http://www.domain.com/"> Visit Our Site</**a**>	Visit Our Site (Tip)
<b>	bold	<**b**>Example</**b**>	**Example**
<big>	big (text)	<**big**>Example</**big**>	Example (Tip)
<body>	body of HTML document	<**body**>The content of your **HTML** page</**body**>	Contents of your web page (Tip)
 	line break	The contents of your page<**br**>The contents of your page	The contents of your web page The contents of your web page
	center	<**center**>This will center your contents </**center**>	This will center your contents

1

<dd>	definition description	<dl> <dt>Definition Term</dt> **<dd>Definition of the term</dd>** <dt>Definition Term</dt> **<dd>Definition of the term</dd>** </dl>	Definition Term Definition of the term Definition Term Definition of the term
<dl>	definition list	**<dl>** <dt>Definition Term</dt> <dd>Definition of the term</dd> <dt>Definition Term</dt> <dd>Definition of the term</dd> **</dl>**	Definition Term Definition of the term Definition Term Definition of the term
<dt>	definition term	<dl> **<dt>Definition Term</dt>** <dd>Definition of the term</dd> **<dt>Definition Term</dt>** <dd>Definition of the term</dd> </dl>	Definition Term Definition of the term Definition Term Definition of the term
	emphasis	This is an <**em**>Example of using the emphasis tag	This is an Example of using the emphasis tag
<embed>	embed object	<**embed** src="yourfile.mid" width="100%" height="60" align="center">	(Tip)
<embed>	embed object	<**embed** src="yourfile.mid" autostart="true" hidden="false" loop="false"> <noembed><bgsound src="yourfile.mid" loop="1"></noembed>	Music will begin playing when your page is loaded and will only play one time. A control panel will be displayed to enable your visitors to stop the music.
<font>	font	<**font** face="Times New Roman" <Example</**font**>	Example (Tip)
<font>	font	<**font** face="Times New Roman" size="4">Example</**font**>	Example (Tip)
<font>	font	<**font** face="Times New Roman" size="+3" color="#ff0000">Example</**font**>	Example (Tip)
<font>	form	<**form** action="mailto:you@yourdomain.com"> Name: <input name="Name" value="" size="10"> Email: <input name="Email" value="" size="10"> <input type="submit"> **</form>**	Name: [ ] (Tip) Email: [ ] Submit Query
<h1> <h2> <h3> <h4> <h5> <h6>	heading 1 heading 2 heading 3 heading 4 heading 5 heading 6	** **Heading 1 Example** ** ** **Heading 2 Example** ** ** **Heading 3 Example** ** ** **Heading 4 Example** ** ** **Heading 5 Example** ** ** **Heading 6 Example** **	heading 1 heading 2 heading 3 heading 4 heading 5 heading 6
<head>	heading of HTML document	<**head**>Contains elements describing the document</**head**>	Nothing will show
<hr>	horizontal rule	**<hr />**	Contents of your web page (Tip) --- Contents of your web page
<hr>	horizontal rule	<**hr** width="50%" size="3" />	Contents of your web page --- Contents of your web page

<hr>	horizontal rule	<**hr** width="50%" size="3" noshade />	Contents of your web page Contents of your web page
<hr> (Internet Explorer)	horizontal rule	<**hr** width="75%" color="#ff0000" size="4" />	Contents of your web page Contents of your web page
<hr> (Internet Explorer)	horizontal rule	<**hr** width="25%" color="#6699ff" size="6" />	Contents of your web page Contents of your web page
<html>	hypertext markup language	**<html>** <head> <meta> <title>Title of your web page</title> </head> <body>**HTML web page** contents </body> **</html>**	Contents of your web page
	italic	****Example	Example
<img> <input>	image input field	<**img** src="Earth.gif" width="41" height="41" border="0" alt="text describing the image" /> Example 1: <**input** type="text" size="10" maxlength="30"> <**input** type="Submit" value="Submit">	 (Tip) Example 1 : (Tip) 
<input> (Internet Explorer)	input field	Example 2: <**input** type="text" style="color: #ffffff; font-family: Verdana; font-weight: bold; font-size: 12px; background-color: #72a4d2;" size="10" maxlength="30"> <**input** type="Submit" value="Submit">	Example 2 : (Tip) 
<input>	input field	Example 3: <table border="0" cellspacing="0" cellpadding="2"><tr><td bgcolor="#8463ff"><input type="text" size="10" maxlength="30"></td><td bgcolor="#8463ff" valign="Middle"> <input type="image" name="submit" src="yourimage.gif"></td></tr> </table>	Example 3: (Tip) 
<input>	input field	Example 4: Enter Your Comments: <textarea wrap="virtual" name="Comments" rows=3 cols=20 maxlength=100></textarea> <**input** type="Submit" value="Submit"> <**input** type="Reset" value="Clear">	Example 4: (Tip) 

<input>	input field	Example 5: Select an option: <select> <option >option 1</option> <option selected>option 2</option> <option>option 3</option> <option>option 4</option> <option>option 5</option> <option>option 6</option> </select> <**input** type="Submit" value="Submit">	Example 5: (Tip) Select an option: option 2 Submit
<input>	input field	Example 6: Select an option: <**input** type="radio" name="option"> Option 1 <**input** type="radio" name="option" checked> Option 2 <**input** type="radio" name="option"> Option 3 Select an option: <**input** type="checkbox" name="selection"> Selection 1 <**input** type="checkbox" name="selection" checked> Selection 2 <**input** type="checkbox" name="selection"> Selection 3 <**input** type="Submit" value="Submit">	Select an option : ○ option 1 ◉ option 2 ○ option 3 Select an option : ☐ Selection 1 ☑ Selection 2 ☐ Selection 3 Submit
	list item	Example 1: <menu> <**li** type="disc">List item 1</**li**> <**li** type="circle">List item 2</**li**> <**li** type="square">List item 3</**li**> </MENU> Example 2: <ol type="i"> <**li**>List item 1</**li**> <**li**>List item 2</**li**> <**li**>List item 3</**li**> <**li**>List item 4</**li**> 	Example 1: (Tip) ● List item 1 ❒ List item 2 ● List item 3 Example 2: i. List item 1 ii. List item 2 iii. List item 3 iv. List item 4
<link>	link	<head> <link rel="stylesheet" type="text/css" href="style.css" /> </head>	
<marquee> (Internet Explorer)	Horizontal scrolling text	<marquee bgcolor="#cccccc" loop="-1" scrollamount="2" width="100%">Example Marquee</**marquee**>	(Tip)
<menu>	menu	**<menu>** <li type="disc">List item 1 <li type="circle">List item 2 <li type="square">List item 3 **</menu>**	● List item 1 ❒ List item 2 ● List item 3

<meta>	meta	<**meta** name="Description" content="Description of your site"> <**meta** name="keywords" content="keywords describing your site">	Nothing will show (Tip)
<meta>	meta	<**meta** HTTP-EQUIV="Refresh" CONTENT="4;URL=http://www yourdomain.com/">	Nothing will show (Tip)
<meta>	meta	<**meta** http-equiv="Pragma" content="no-cache">	Nothing will show (Tip)
<meta>	meta	<**meta** name="rating" content="General">	Nothing will show (Tip)
<meta>	meta	<**meta** name="robots" content="all">	Nothing will show (Tip)
<meta>	meta	<**meta** name="robots" content="noindex,follow">	Nothing will show (Tip)
	ordered list	**Numbered** ** ** - List item 1 - List item 2 - List item 3 - List item 4 ** ** **Numbered Special Start** **<ol start="5">** - List item 1 - List item 2 - List item 3 - List item 4 ** ** **Lowercase Letters** **<ol type="a">** - List item 1 - List item 2 - List item 3 - List item 4 - List item 3 - List item 4 ** **	Numbered 1. List item 1 2. List item 2 3. List item 3 4. List item 4 Numbered Special Start 5. List item 1 6. List item 2 7. List item 3 8. List item 4 Lowercase Letters a. List item 1 b. List item 2 c. List item 3 d. List item 4
		Capital Letters **<ol type="A">** - List item 1 - List item 2 - List item 3 - List item 4 ** **	Capital Letters A. List item 1 B. List item 2 C. List item 3 D. List item 4
		Capital Letters Special Start **<ol type="A" start="3">** - List item 1 - List item 2 - List item 3 - List item 4 ** **	Capital Letters Special Start C. List item 1 D. List item 2 E. List item 3 F. List item 4
		Lowercase Roman Numerals **<ol type="i">** - List item 1 - List item 2 - List item 3 - List item 4 ** **	Lowercase Roman Numerals i. List item 1 ii. List item 2 iii. List item 3 iv. List item 4

		Capital Roman Numerals **<ol type="I">** - List item 1 - List item 2 - List item 3 - List item 4 ** **	Capital Roman Numerals I. List item 1 II. List item 2 III. List item 3 IV. List item 4
		Capital Roman Numerals Special Start **<ol type="I" start="7">** - List item 1 - List item 2 - List item 3 - List item 4 ** **	Capital Roman Numerals Special Start VII. List item 1 VIII. List item 2 IX. List item 3 X. List item 4
<option>	listbox option	<form method=post action="/cgibin/example.cgi"> Select an option: <select> <**option**>option 1</**option**> <**option selected**>option 2</**option**> <**option**>option 3</**option**> <**option**>option 4</**option**> <**option**>option 5</**option**> <**option**>option 6</**option**> </select> </form>	Select an option: (Tip) option 2
<p>	paragraph	This is an example displaying the use of the paragraph tag. <p> This will create a line break and a space between lines. Attributes: Example 1: **<p align="left">** This is an example displaying the use of the paragraph tag. Example 2: 	This is an example displaying the use of the paragraph tag. This will create a line break and a space between lines. Attributes: Example 1: This is an example displaying the use of the paragraph tag. Example 2: This is an example displaying the use of the paragraph tag. Example 3: This is an example displaying the use of the paragraph tag.
		<p align="right"> This is an example displaying the use of the paragraph tag. Example 3: **<p align="center">** This is an example displaying the use of the paragraph tag.	
<small>	small (text)	<**small**>Example</**small**>	Example (Tip)

<strike>	deleted text	<**strike**>Example</**strike**>	Example
	strong emphasis	<**strong**>Example</**strong**>	Example
<table>	table	Example 1: <**table border**="4" cellpadding="2" cellspacing="2" width="100%"> <tr> <td>Column 1</td> <td>Column 2</td> </tr> </**table**> Example 2: (Internet Explorer) <**table border**="2" bordercolor="#336699" cellpadding="2" cellspacing="2" width="100%"> <tr> <td>Column 1</td> <td>Column 2</td> </tr> **</table>** Example 3: <**table cellpadding**="2" cellspacing="2" width="100%"> <tr> <td bgcolor="#cccccc">Column 1</td> <td bgcolor="#cccccc">Column 2</td> </tr> <tr><td>Row 2</td> <td>Row 2</td> </tr> **</table>**	Example 1: (Tip) Column 1 Column 2 Example 2: (Tip) Column 1 Column 2 Example 3 : (Tip) Column 1 Column 2 **Row 2 Row 2**
<td>	table data	<table border="2" cellpadding="2" cellspacing="2" width="100%"> <tr> **<td>Column 1</td>** **<td>Column 2</td>** </tr> </table>	Column 1 Column 2

<th>	table header	 <table> <tr> **<th>Column 1</th>** **<th>Column 2</th>** **<th>Column 3</th>** </tr> <tr> <td>Row 2</td> <td>Row 2</td> <td>Row 2</td> </tr> <tr> <td>Row 3</td> <td>Row 3</td> <td>Row 3</td> </tr> <tr> <td>Row 4</td> <td>Row 4</td> <td>Row 4</td> </tr> </table> 	Column-1 Column-2 Column-3 Row 2 Row 2 Row 2 Row 3 Row 3 Row 3 Row 4 Row 4 Row 4
<title>	document tile	<**title**>Title of your **HTML page</title>**	Title of your web page will be viewable in the title bar. (Tip)
<tr>	table row	<table border="2" cellpadding="2" cellspacing="2" width="100%"> <**tr**> <td>Column 1</td> <td>Column 2</td> </**tr**> </table>	
<tt>	teletype	<**tt**>Example</**tt**>	Example
<u>	underline	<u>Example</u>	<u>Example</u>
	unordered list	Example 1: - List item 1 - List item 2 Example 2: **<ul type="disc">** - List item 1 - List item 2 **<ul type="circle">** - List item 3 - List item 4 ** ** ** **	Example 1: • List item 1 • List item 2 Example 2: • List item 1 • List item 2 • List item 3 • List item 4

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