

16. MULTIMEDIA AND WEB TECHNOLOGY (Code No. 067) (2016-17)

Learning Outcomes:

- Ability to develop proficiency in webpage development and website management
- Ability to develop proficiency in creating dynamic web interface
- Ability to write server and client sides scripts and manage websites
- Ability to design a web page using Image, Audio and Video editing tools
- Ability to understand the basic concepts of open source software

Class XI (Theory)

Duration: 3 hours

Total Marks: 70

Unit No.	Unit Name	Periods			
		Theory	Practical	Total	Marks
1.	Introduction to Computer Systems	22	8	30	15
2.	Web Development	50	40	90	25
3.	Web Scripting	40	35	75	20
4.	Multimedia and Authoring Tools	30	15	45	10
		142	98	240	70

Unit 1: Introduction to Computer System

Hardware Concepts:

Computer Organization (basic concepts): CPU, Memory (Primary and Secondary), I/O devices;

Input devices: Keyboard, Keyboard layout (QWERTY and INSCRIPT), Mouse, Light pen, Touch Screen, Graphics Tablet, Microphone, OCR, Scanner, Smart Card reader, Barcode reader, Biometric sensor, Web Camera;

Output Devices: Monitor/Visual Display Unit (VDU), LCD screen, Television, Printer (Dot Matrix Printer, Desk jet/ Inkjet/ Bubble jet Printer, Laser Printer), Plotter, Speaker;

Secondary Storage Devices: Fixed and Removable Storage - Hard Disk Drive, CD/DVD Drive, Pen Drive, Blue Ray Disk, Flash Drive, Memory cards;

Memory Concepts: Units: Bit, Byte, Kilo Byte ($2^{10}=1024$ Byte), Mega Byte, Giga Byte, Tera Byte, Peta Byte;

Primary Memory: Cache, RAM, ROM;

Software Concepts: Types of Software: System Software, Utility Software and Application Software;

System Software: Operating System, Language Processors - Compiler, Interpreter and Assembler;

Operating System: Need for operating system, functions of operating system (processor management, memory management, file management and device management);

Commonly used operating systems: UNIX, LINUX, Windows, Solaris, BOSS (Bharat Operating System Solutions), Mobile OS -Symbian, Android, iOS;

Note: Students/Teachers can also perform similar operation on any operating system like Linux, Bharti OOS, Windows. It is advised that the teacher while using any one operating system, give a demonstration of equivalent features for the other operating system.

GUI Components: General features, Elements of desktop - taskbar, icon, start button, shortcuts, folder, recycle bin, my computer;

Start Menu: Program, documents, settings, find/search, help, run, shutdown/logoff;

Program Menu: Accessories - calculator, text editor, image editor, entertainment (such as sound recorder, media player);

Control Panel: Add new hardware; add new software, printer installation, date/time settings, mouse and regional settings, customization of taskbar, start menu, display properties (wallpaper, font settings, color settings, screen savers);

Utility Software: Anti virus, file management tools, compression tools and disk management tools (disk cleanup, disk defragmenter, backup); font converters especially for Indian Languages;

Application software:

General Purpose Application software: Office Tools - word processor, presentation tool, spreadsheet package, database management system;

Specific Purpose Application software: Domain specific tools - school management system, inventory management system, purchasing system, human resource management system, payroll system, financial accounting, hotel management, reservation system and weather forecasting system etc.;

Unit 2: Web Development

www, Hyper Text Transfer Protocol(HTTP), File Transfer Protocol(FTP), TCP/IP, PPP, Domain names, URL, IP Address, Website, Web browser, Web Server, Web Hosting;

HTML

Introduction: Content creation: creating HTML document using a text editor, saving HTML document, editing a HTML document, viewing HTML documents in a web browser, switching between text editor and web browser windows to view changes;

Browsers: Mozilla firefox, google chrome, internet explorer, netscape navigator, safari, opera;

Web Page Authoring Using HTML:

Basic Concepts: Concept of tags and attributes, difference between container tag and empty tag, Physical and logical tags;

Structural Tags of HTML: <HTML>, <HEAD>, <TITLE>, <BODY>;

Attributes of <BODY> (BGCOLOR, BACKGROUND, LINK, ALINK, VLINK, TEXT);

Inserting Breaks: Line break
, section break <HR>, Attributes of <HR> (WIDTH, ALIGN, SIZE, NOSHADE, COLOR);

Creating Paragraphs: <P>, Attributes of <P> (ALIGN);

Formatting Tags of HTML: <SMALL>, <BIG>, , <I>, <U>, , <BLOCKQUOTE>, <PRE>, <SUB>, <SUP>, <STRIKE>, <ADDRESS>, Adding Comments in HTML (<!-- -->), Heading tag (<H1> to <H6>), Attributes of Heading tag (ALIGN), tag, <BASEFONT>, Attributes of and <BASEFONT> (SIZE, COLOR, FACE);

Creating Lists: Ordered Lists: , , Attributes of (TYPE, START, VALUE); Unordered Lists : , , Attributes of (TYPE- disc, circle, square); Definition List : <DL>, <DT>, <DD>;

Creating Links: Internal linking using <A NAME> and <A HREF>, external linking using <A HREF>, e-Mail linking using <A HREF>;

Concept of URL: Absolute URL and Relative URL;

Inserting Images: Inserting inline images using , Attributes of (SRC, ALIGN, WIDTH, HEIGHT, ALT, BORDER);

Adding Music and Movie: Adding music using <A HREF>, <EMBED> and <AUDIO>, Attributes of <EMBED> (SRC, ALIGN, WIDTH, HEIGHT, LOOP, AUTOSTART, HIDDEN), Attributes of <AUDIO> (autoplay, controls, loop, muted, preload, src);

Adding movie using <A HREF>, <EMBED> and <VIDEO>, Attributes of <EMBED> (SRC, ALIGN, WIDTH, HEIGHT, LOOP, AUTOSTART, HIDDEN), Attributes of <VIDEO> (autoplay, controls, loop, muted, preload, height, width, src);

Creating Tables: Creating Table using <TABLE>, Attributes of <TABLE> (BORDER, BGCOLOR, BACKGROUND, ALIGN, CELLSPACING, CELLPADDING, WIDTH, HEIGHT, BORDERCOLOR);

Creating rows and columns in a table using <TH>, <TR>, <TD>, Attributes of <TH>, <TR>, <TD> (ALIGN, VALIGN, COLSPAN, ROWSPAN);

Adding headings for a table using <CAPTION>, Attribute of <CAPTION> (ALIGN);\

Creating Frames: Dividing the window into two or more frames using <FRAME> and <FRAMESET>, Use of percentage dimensions and relative dimensions while dividing the window, use of <NOFRAMES></NOFRAMES>;

Attributes of <FRAMESET> (ROWS, COLS, BORDER, FRAMEBORDER);

Attributes of <FRAME> (SRC, NAME, FRAMEBORDER, HEIGHT, WIDTH, MARGINHEIGHT, MARGINWIDTH, SCROLLING, NORESIZE);

Creating Forms: Forms for data collection which can be - written to a file, submitted to a database or emailed to someone;

Creating Forms using <FORM>, Attributes of <FORM> (NAME, ACTION, METHOD);

Creating Form Interface elements - text box, password box, file selection box, hidden box, checkbox, radio button, button, submit button, reset button using the <INPUT>, Attributes of <INPUT> applicable with different interface elements (NAME, SIZE, VALUE, ALIGN, MAXLENGTH, CHECKED, TYPE);

Multiline input using <TEXTAREA>, Attributes of <TEXTAREA> (NAME, ROWS, COLS, WRAP);

Dropdown list or scrolling list using <SELECT> and <OPTION>, Attributes of <SELECT> (NAME, SIZE, MULTIPLE /SINGLE);

Document Object Model: Concept and Importance of Document Object Model, Static Vs Dynamic HTML documents;

Cascading Style Sheets:

Introduction to Cascading Style Sheet (CSS): Creating inline, embedded and external cascading style sheets using <STYLE>, <DIV>, and <LINK>; Attribute of <DIV> and (STYLE); Attributes of <LINK> (REL, TYPE, HREF);

Font Properties: FONT-FAMILY, FONT-STYLE, FONT-SIZE, FONT-VARIANT, FONT-WEIGHT and COLOR;

Text Properties: COLOR, WORD-SPACING, LETTER-SPACING, TEXT-DECORATION, VERTICAL-ALIGN, TEXT-TYPE, TEXT-ALIGN, TEXT-INDENT, LINE-HEIGHT;

Background Properties: BACKGROUND-COLOR, BACKGROUND-IMAGE, BACKGROUND-REPEAT

Margin Properties: MARGINS (all values);

Padding Properties: PADDING (all values);

Border Properties: BORDER (all values);

Positioning: Absolute and Relative;

Additional Features: Assigning classes;

XML-eXtensible Markup Language: Introduction, features, advantages;

Structure of XML: Logical structure, Physical structure;

XML Markup: Element Markup (example: <foot>Hello</foot>), Attribute Markup (example: <!element.name property= "value">) ;

Naming Rules: Naming rules for elements, attributes and descriptors;

Components in XML: Tags, Elements, Root element, Attributes, Entities;

Comments in XML;

Developing DTD: Element Declaration in a DTD: <!ELEMENT elementname (content-type)>;

Entity Declarations, Declaring Empty Elements, Container Elements, Unrestricted Elements, Attribute Declarations;

Element Content Model;

Element Occurrence Indicators: ? , * , +

Character Content: PCDATA (Parseable Character data) <! ELEMENT text(#PCDATA)>;

Well Formed XML Documents, Valid XML Documents;

Document Type Declaration (DTD) - Internal and External DTD;

Validating an XML document using a DTD;

Developing a DTD, Developing a DTD from XML Code, either automatically or manually;

Viewing XML in a web browser; Viewing XML using the XML Data Source Object;

Unit 3: Web Scripting

JavaScript: Introduction to client side scripting using Java Script, Using Java Script in HTML page with <SCRIPT> tag, external Java Script;

JavaScript Variables: Declaring variable, assigning values to variables, Java Script literals; Data types in Java Script - String, Number, Boolean, Object, Function, Null; Type casting in Java Script;

JavaScript Operators:

Arithmetic Operators: +, -, *, /, %, ++, -- ;

Assignment Operators : =, +=, -=, *=, /=, %= ;

Comparison Operators: <, >, <=, >=, !=, == ;

Logical Operators: &&, ||, !;

String Operator: + (for concatenation);

Bitwise Operators : &, |, ~, ^, <<, >> ;

Unary + operator; typeof operator;

Conditional operator : (?:)

JavaScript Popup Boxes: Alert, Confirm and Prompt box

Comments in JavaScript: Single line and multiline;

Control Structures in JavaScript:

Conditional statements: If, Else, Else If.., switch case; break and default statement;

Loops: For, While, Do While loops; continue statement;

JavaScript Functions: Define a function, execute a function, return statement, function using arguments, Scope of variables;

Objects in JavaScript: Window object, document object, location object, form object, working with control objects(Button, reset and submit objects, checkbox objects, and radio objects, select objects, password, text, textarea object), date object, Creating Dynamic Interface with HTML form controls and JavaScript;

Array object in Java Script: length property, join(), sort(), for in loop;

Responding to events: onLoad, onUnload, onFocus, onBlur, onChange, onMouseOver, Timing Events - setTimeout() and clearTimeout();

Unit 4: Multimedia and Authoring Tools

Concept of Multimedia:

Picture/Graphics, Audio, Video;

Digital Images and Digital Image representation, animation, morphing;

Image Formats: TIFF, BMP, JPG/JPEG, GIF, PDF, PSD, PIC;

Applications: Poster Design, Still pictures, colored layout, Designing of books, magazines brochures(children's literature, narrative text handling, scripts in Indian Languages, picture books, comics, illustrations with photographs, scientific illustrations, conceptual illustrations, handling of assignment for the market);

Image Scanning with the help of scanner: Setting up resolution, size, file formats of images, bitonal, grey scale and color options, preview the image;

Graphic Tools: Image Editing Software (Photoshop / Coreldraw/GIMP);

Basic Concepts of Image Creation: Introduction;

Interface elements of the tool: menus, toolbox, color control icons, mode control icons, window controls icons;

Creating new images, saving images and opening existing images;

Image Handling: Cropping, adjusting image size, adjusting the size of the work canvas, rotating selections, scaling an object;

Operations on Layers: Adding new layers, dragging and pasting selected objects on to layers, dragging layers between files, viewing, hiding, editing, moving, copying, duplicating, deleting, merging layers, preserving layers, using adjustment layers;

Channels and Masks: Channel palette: showing and hiding channels, splitting channels in to separate images, merging channels, creating a quick mask, editing masks using quick mask mode;

Painting and Editing: Brushes palette: brush shape, creating and deleting brushes, creating custom brushes, setting brush options, saving, loading and appending brushes;

Options palette: opacity, pressure, exposure, paint fade-out rate, making, adjusting, moving, copying, extending, reducing, pasting and deleting selections using selection tools, softening the edges of a selection, hiding a selection border;

Sound: Recording sound using Sound Recorder (Capture), sound capture through sound editing software (ex: Sound Forge), sound editing (noise correction, effect enhancement);

Importing audio files from external devices and saving them;

Sound Quality: CD Quality, Radio Quality, Telephone Quality;

Voice Recording Software: e.g. Audacity, Speech recorder, orex (Mono & Stereo);

Sound File Format: AIFF (Audio Input File Format from Apple Mac), MIDI, WAV, MP3, ASF (Streaming format from Microsoft);

Importing audio files from external devices and saving them;

Class XI (Practical)

Duration: 3 hours

Total Marks: 30

1. Hands on Experience

15

- A topic based website is to be developed by each student using various commands covered in HTML and JavaScript.
- Web pages should be designed with following features:
 - HTML Basic Tag (<HTML>/<HEAD>/<TITLE>/<BODY>//<I>/<U>/
/<HR>)
 - Anchor/Image insertion/Linking
 - Tables/Frame/Form
 - CSS
 - Buttons/Combo Box/Check Box/Text Box using JavaScript
 - XML Markup / Declarations / Element Content Model

Note : During the lab sessions, it is advised to explore hardware components available in the Computer Lab.

2. Practical File

05

The practical file should be made on some domain specific area (with supported documents and printouts) such as

- Make a web page on topics such as 'Making India', 'Swachh Bharat', 'Crime against Poor Community', 'How can I serve my country' or on any topic of your choice and view it in the browser
- Link few more pages to the developed page, containing related information as per your topic. (Use HTML tags to make a Static web page)
- Use inline styling to change appearance of contents on the web page.
- Use Style sheets (embedding or linking) to change the appearance of all the pages developed in the above case.
- Enhance the above web site by providing data in table format and add images edited using the Image Editing Tool learnt.
- At this step of web page development add dynamic features such as adding time and current date to the web page using JavaScript.
- Collect user information through form (for feedback etc.). Display selected user details using message box (e.g. saying "Thank you for visiting the website").

Note: During the lab sessions, it is advised to explore various hardware components available in the Computer Lab.

3. Project

05

Knowledge domain: HTML, DHTML, CSS, Java Script, and Image editing software

Suggested topics:

1. Website of a student containing personal information about student such as email address, photograph, likes, dislikes, hobbies, class, school name, achievements, favorite restaurant , favorite tourist places, ultimate aim of life, message to mankind, role model.
2. Website of a School providing information of the school containing Moto of school, photograph of school, brief description of school, name of the principal, facilities and infrastructure, sports, faculty and departments information, results and achievements of students.
3. e-shopping website providing information about types of items, brief description about each item with pictures, price list, online ordering and billing.
4. Website of “Tourism in a State” to provide the information about various tourist places, various modes of journey available, types of hotels available, online booking etc.
5. Your blog in an Indian language.

Note:

- For developing the website collect real information from various sources.
- It is advised to break up the above-mentioned case studies into smaller modules as per coverage of the course.
- Teachers can provide alternative case studies of similar kind.
- Project development can be done in groups and can be accessed by other groups and teacher. The teacher can use the average marks as the final marks.
- Project will be accessed on the following rubrics: Originality, Innovation, Aesthetics, Techniques.

5. Viva Voce

05

During the final practical examination, oral questions will be asked from the syllabus covered in class XI and the project developed by the student(s).

Class XII (Theory)

Duration: 3 hours

Total Marks: 70

Unit No.	Unit Name	Periods			
		Theory	Practical	Total	Marks
1	INTRODUCTION TO DATABASE MANAGEMENT	20	15	35	05
2	NETWORKING AND OPEN STANDARDS	25	05	30	10
3	WEBPAGE DEVELOPMENT	60	45	105	40
4	MULTIMEDIA AND AUTHORING TOOLS	40	30	70	15
	Total			240	70

Unit 1: Introduction to Database Management

Introduction to database concepts and its need;

Database Terminology: Data, Record/Tuple, Table, Database;

Concept of Keys: Candidate key, Primary key, Alternate key, and Foreign key;

Database Tool: Using any tool creating and saving table, defining primary key, inserting and deleting column, renaming column, inserting records, deleting records, modifying records, table relationships;

Unit 2: Networking And Open Standards

Computer Networking: Evolution of Networking: ARPANET, WWW, Internet;

Network Topologies: Bus, Star, Tree;

Types of Network: PAN, LAN, WAN, MAN;

Wired Technologies: Twisted pair cable, coaxial cable, optical fiber;

Wireless Technologies: Bluetooth, infrared, radio link, microwave link, radio link and satellite link;

Network devices: Hub, switch, repeater, gateway - and their functions;

Identifying computers and users over a network: Basic concept of domain name, MAC (Media Access Control) and IP Address, domain name resolution;

Wireless/Mobile Communication: GSM, CDMA, GPRS, WLL, 3G, 4G;

Internet Applications: sms, voice mail, email, chat and video conferencing;

Network Security Concepts: Cyber law, firewall, cookies, hackers and crackers;

Open Source Concepts: Proprietary and open source software(OSS), common FOSS/FLOSS examples

(e.g. GNU/Linux, Firefox, OpenOffice, Linux, Mozilla web browser, Apache server, MySQL, Postgres, Pango, Tomcat, PHP, Python);

Indian Language Computing: character encoding, UNICODE, different types of fonts (open type vs true type, static vs dynamic), Entering Indian Language Text - phonetic and key map based;

[Note: Teacher can introduce the students to these websites www.sourceforge.net, www.openrdf.org, www.opensource.org, www.linux.com, www.linuxindia.net, www.gnu.org.]

Unit 3: Web Page Development

Review of HTML/DHTML, JavaScript covered in Class XI;

Installation and Managing WEB-Server: Internet Information Server (IIS));

PHP: Concept of PHP, features of PHP, other equivalent tools - JSP, PHP

Including PHP in web page;

Data types: integer, double, string, boolean, null, array, object, resources;

Variables: Using variables in PHP; Explicit and Implicit declaration of variables;

Constants: Using constants in PHP, constant() function;;

Output data to Screen: echo and print statements

Operators:

Arithmetic: +, - (Unary and Binary), *, /, %, **

Assignment Operators =, +=, -=, *=, /=, %=

String Operator(concatenation) ., .=

Comparison: <, >, <=, >=, !=, ==, ===, !==

Incrementing/Decrementing Operators: ++, --

Logical: AND, OR, !, &&, ||;

Array Operators : union(+), equality =, identity ===, inequality <>, !=, non identity !==

Operator precedence;

Functions

String Manipulation Functions: strtoupper(), strtolower(), strlen(), ltrim(), substr(), rtrim(), trim(), stripslashes(), strrev(), strcmp(), strcasecmp(), stripslashes()

Time & Date Functions: Date(), getdate(), gettimeofday(), Mktime(), strtotime(), cal_days_in_month()

Arrays: Declaration and use of indexed arrays(1 dimensional); sort(), rsort() inbuilt functions;

Conditional statements: if else, if...elseif....else, switch

Loops: While, Do While , For, For each;

Unconditional exit from loop /switch Break;

User Defined Functions: Passing parameters/arguments; Pass by value, pass by reference,return value,default value

Global Variables - Superglobals

`$GLOBALS, $_SERVER, $_REQUEST, $_POST, $_GET, $_FILES, $_ENV, $_COOKIE, $_SESSION`

PHP Forms: Form Handling, Form Validation, Form URL/E-mail

Text Files: Opening a file, Reading a file, Writing a file, Closing a file

Other Features: PHP File Upload, Cookies, Sessions(start, modify and destroy), Error Handling

Working on Database: Connecting with Databases: opening and closing database

Inserting, retrieving, modifying/updation of records from tables in databases

Unit 4: Multimedia and Authoring Tools

Movie File Formats: AVI, MPEG, SWF, MOV, DAT;

Embedding: Audio/Video on the web page;

Multimedia Authoring Using Macromedia Flash: Making of simple movie, setting properties, frame rate, dimensions, and background color;

Movie Frames: Concept of frame, frame buffer, and frame rate, creating a key frame;

Inserting text into the frame, inserting graphical elements into the frame, converting text/graphics to symbol, inserting symbol into the frame, setting symbol property (graphics/button/movie), inserting blank key frame, selecting all/specific frames of a layer, copying/pasting selected frames;

Scene: Concept of scene, duplicate scene, add scene, delete scene, and navigating between scenes;

Layers: Concept of layer, layer properties, layer name, show/hide/lock layers, viewing layer as outline, adding/deleting a layer;

Types of Layer - normal/guide/mask;

Special Effects: Motion Tweening, Shape Tweening, Inserting Sound Layer;

Testing a Scene and Movie;

Import/Export (Movie/Sound and other multimedia objects);

Publishing: Publishing a movie, changing publish settings, producing swf(flash movie), html page, gif image, jpeg image (*.jpg), png image, windows projector (*.exe), macintosh projector (*.hqx), quick time (*.mov), real player (*.smil);

Testing with Publish Preview;

Multimedia Application: Education (use of CAL tool), entertainment, edutainment, virtual reality, digital libraries, information kiosks, video on demand, video phone, video conferencing and telemedicine.

Class XII (Practical)

Duration: 3 Hours

Total Marks: 30

1. Hands on Experience

15

A website based on a particular topic has to be developed by each student using various commands covered in HTML and PHP with at least 4 web pages.

Web page should be designed with following features.

- HTML basic tags (html/head/title/body/B/I/U/BR/HR)
- Functions
- Conditional and control statements
- Form Handling, Form Validation, E-mail Validation
- Image editing using Photo Shop /Corel draw/GIMP
- Merging layers /Moving and copying layers
- Use of multimedia authoring (like Macromedia Flash)

2. Practical File

05

The practical file should be made on a domain specific area (with supported documents and printouts):

- Make a simple web page containing almost all the tags of HTML and view that web page on the browser.
- Develop a home page for income tax department (simple and textual) and store it in the directory used for web services on the web-server.
- Enhance the home page by providing links to other sample pages (e.g. Income Tax Zone).
- Income Tax Detail form for an individual, Income Tax Notification, Income Tax News etc.).
- Embed Time and Date on the home page.
- Further enhance the website by providing User Registration Page. Collect the user details and Display a new web page showing "Thanks For Registration". Also write appropriate functions to validate form inputs.
- Give a login facility to the user with anonymous name and maintain the session till the user logs out.
- For user log in attempts, maintain a visitor count.
- Change the login module of the web page and now connect it to the IncomeTax User database on the server. This is to be done to store the registration detail and facilitate login to the user.
- The login page is to be made in a way that it should also provide facility to change password, if user forget password.

- Store some of the created or edited sound files on the web-server and provide links to play it.
- Change the appearance of the web page using pictures at appropriate places (e.g. logo of income tax department, photograph of income tax building etc.)
- Visit websites (State Govt./ Local language newspaper) and get 5 different printouts in local language.

(Note: Student can also improve the case study from class XI and enhance it further with database and multimedia support. Also they can create a website on a new topic).

3. Project based on case study

05

Case Studies are to be divided into following parts:

Case study Part 1(collection, editing and creation of website resources):

Create an electronic movie with various pictures, audio clipping, movie clippings, and factual text related to school / organization ;

- Embedding video and audio in web pages.
- An introduction to interactive walk-through.
- Embedding walk-through into web pages.

Case Study Part 2(development of web content with resources):

Case studies covered in class XI with database support with Login, Online Registration, Booking and/or ordering facility.

Sample Case Study

(Note: Other similar type of case studies can also be used for the project work)

Mr. Verma is the CEO of *copsisoft drinks (I) Ltd.* His company is having a wide network of distributors for *copsibranded* soft drinks. With the increase in sales and distribution network, it is required to adopt a new technological intervention in the existing system. He wants that the company should have a global presence over the widely popular medium, called world wide web. Assume that you are appointed as the senior person of the development team. You are required to collect the company information and its current requirement. For your easiness we had collected the details of the company which are as follows:

The company Information:

Name of the Company: *copsisoft drinks (I) Ltd.*

Zone: East, West, North and South

Distributors: All over the world.

Mr. Verma said that the web site should be able to reflect company in terms of :

- Home Page
- Product & Promotion Page
- Distributor Login Page / Password Recovery Page
- Distributor Specific Details Page
- Registration Page for Distributor-ship
- Company News and Flashes
- Company Profile

Technical Details:

- Web site Introduction is to be made in movie making software.
- A proper database is to be maintained for the distributor information.

Note:

- For developing the above sites/movies collect the actual information from various sources.
- It is advised to break up the above-mentioned case studies into smaller modules as per coverage of the course.
- Teachers can provide alternative case studies also of similar kind.

4. Viva Voce**05**

During the final practical examination, oral questions will be asked from the syllabus covered and the project developed by the student(s).

KNOW MORE BEYOND SYLLABUS.....

Teacher may also motivate students to search and give group presentations on topics of emerging ICT such as web services, cloud computing, SDK Android.

References:**Suggested Reference Books****Computer Fundamentals**

1. Rajaraman, FUNDAMENTALS OF COMPUTERS, Prentice Hall of India.
2. Peter Norton, INTRODUCTION TO COMPUTER, Tata McGraw Hill

Web Development

1. HTML COMPLETE, Sybex BPB
2. Maccoy, MASTERING WEB DESIGNING, BPB
3. Ray, Mastering HTML 4 Premium Edition, BPB
4. Farrar, HTML Example Book, BPB
5. Ramalho, Learn Advanced HTML with DHTML, BPB
6. Navarro, Effective Web Designing, BPB

Web Scripting

1. PHP ADO AND XML COMPLETE, Sybex BPB
2. Bayross, Practical PHP, BPB
3. Russell, MASTERING ACTIVE SERVER PAGES, BPB

Multimedia and Authoring Tools

1. Bouton, INSIDE ADOBE PHOTOSHOP 6, BPB
2. Sinclair, MULTIMEDIA ON THE PC, BPB

3. Gokul S, MULTIMEDIA MAGIC, BPB
4. Altman, MASTERING CORELDRAW 9, BPB
5. Kea thing, INSIDE FLASH 5, BPB

Relational Database Management System and SQL

1. LerryUlman, MYSQL Database, Pearson Education, 2008

Networking and Open Standards

1. A.S. Tanenbaum, COMPUTER NETWORK 4TH EDITION, Prentice Hall of India P. Ltd.
2. Williams Stalling, DATA COMMUNICATION AND NETWORKS 5TH EDITION, Prentice Hall of India P. Ltd.
3. Hancock, NETWORK CONCEPT AND ARCHITECTURES, BPB Publications.

Web References:

1. Open Source Concepts: www.opensource.org
2. Web Designing and Development: www.w3schools.com