



Department of Information Technology		LP: IT18014
B.E/B.Tech/M.E/M.Tech : B.Tech	Regulation: 2018	Rev. No: 00
Sub. Code / Sub. Name : IT18014 - WEB PROGRAMMING		Date: 2.03.2022
Unit 1		

**Unit Syllabus:**

**UNIT I INTRODUCTION TO WORLD WIDE WEB**

9

Introduction to WWW and WWW architecture, internet protocols, overview of HTTP, Generation of dynamic web pages, Java Fundamentals - Data types- Class - Object - I/O Streams - File handling concepts

**Objective:** To create simple web pages and to learn about client side validation.

Session No *	Topics to be covered	Ref	Teaching Aids
1	Introduction to WWW – Evolution of Internet and World Wide Web, WWW architecture – three-tier architecture.	1-ch1;(10-11,16-17)	BB/LCD
2	Internet Protocols – Packet Switching, TCP/IP, HTML	1-ch1;(11-12) 1-ch2;(38-69)	BB/LCD
3	Overview of HTTP - HTTPS, Hyperlinks, URIs, URLs, Parts of a URL, HTTP Headers, HTTP get and post requests, Client-Side Caching.	1-ch1;(12-16)	BB/LCD
4	Client-Side Scripting vs Server-Side Scripting, Generation of dynamic web pages	1-ch1;(17-18), 1-ch6;(185-199)	BB/LCD
5	Data types, Variables, Operators, Strings	2-ch3;(40-63)	BB/LCD
6	Arrays – for-each, initializers, multidimensional arrays, ragged arrays.	2-ch3;(90-104)	BB/LCD
7	I/O streams and File handling concepts	2-ch3;(63-71)	BB/LCD
8	Objects and Classes – Introduction to OOP, Using Predefined Classes, Defining Own Classes, Static Fields and Methods, Method Parameters, Object Construction.	2-ch4;(106-152)	BB/LCD
9	JQuery - develop advanced dynamic web applications – syntax, selectors, events.	R4	BB/LCD

**Content beyond syllabus covered (if any):**  
Introduction to JQuery to develop advanced dynamic web applications.

\* Session duration: 50 minutes



Sub. Code / Sub. Name: IT18014 - WEB PROGRAMMING

Unit : II

**Unit Syllabus:**

**UNIT II FEATURES OF JAVA**

8

Interfaces - Packages - Threads - Exception handling - Applets - Swing Framework - Reflection - JDBC

**Objective:** To understand concepts of object oriented programming and To develop GUI based applications using Applet and Swing.

Session No *	Topics to be covered	Ref	Teaching Aids
10	Inheritance – SuperClass, SubClass, Hierarchies, Polymorphism, Dynamic Binding, Final classes, Abstract classes, Protected Access	2 –ch5;(172-192)	BB/LCD
11	Packages – Define, Import package and Scope of package. Interfaces – Properties, abstract classes.	2 –ch4;(153-159) 2 –ch6;(242-249)	BB/LCD
12	Exception Handling – Classification, Checked Exception, Throw an Exception, Exception Classes, Catching, Rethrow, Finally Clause.	2- ch11;(552-565)	BB/LCD
13	Multithreading – What are Threads? Interrupting Threads, Thread states.	2- ch14;(716-733)	BB/LCD
14	Reflection – Class, Primer on Catching Exceptions, Using Reflection to Analyze the Capabilities of Classes, to Analyze Objects at Runtime, to Write Generic Array Code	2-ch5;(217-234)	BB/LCD
15	Applets – Simple Applet, Applet HTML tag and attributes, object Tag	2-ch10;(516-527)	BB/LCD
16	Applets - Use of Parameters, Accessing Image and Audio Files, Applet Context	2-ch10;(528-539)	BB/LCD
17	Swing Framework – Graphics Programming, User Interface Componenets with Swing, JDBC	2-ch7;(281-322) 2-ch9;(361-491) R1- ch17;(497-498)	BB/LCD
<b>Content beyond syllabus covered (if any):</b>			

\* Session duration: 50 mins

Sub. Code / Sub. Name: IT18014 - WEB PROGRAMMING

Unit : III

**Unit Syllabus :**

**UNIT III PROGRAMMING FOR USER INTERFACE**

9

JavaScript Fundamentals - Evolution of AJAX - AJAX Framework - Web applications with AJAX - AJAX with PHP - AJAX with Databases – Angular JS.

**Objective:** To create asynchronous dynamic web pages.

Session No *	Topics to be covered	Ref	Teaching Aids
18	JavaScript Fundamentals – Functions, Arrays, Objects	1-ch9,10,11, (278-349)	BB/LCD
19	JavaScript - DOM, Event Handling	1-ch12,13;(350-440)	BB/LCD
20	Evolution of Ajax - Traditional web applications, Ajax web applications, RIAs with Ajax, History of Ajax	1-ch16;(572-577)	BB/LCD
21	AJAX Framework – Asynchronous Requests, Exception Handling, Callback Functions	1-ch16;(577-581)	BB/LCD
22	AJAX - XMLHttpRequest Object Event, Properties and Methods, Using XML and the DOM.	1-ch16;(582-587)	BB/LCD
23	Web applications with AJAX – building an Ajax enabled address book application	1- ch16;(587-599)	BB/LCD
24	AJAX with PHP – interactive web application development - example	R4	BB/LCD
25	AJAX with Databases – Server side page creation	R4	BB/LCD
26	Angular JS – Introduction – Events – Forms – Validation – Introduction to ReactJS.	R4	BB/LCD
<b>Content beyond syllabus covered (if any): Introduction to ReactJS</b>			

\* Session duration: 50 mins

Sub. Code / Sub. Name: IT18014 - WEB PROGRAMMING

Unit : IV

**Unit Syllabus:**

**UNIT IV SERVER SIDE PROGRAMMING**

9

Servlet Overview - Life cycle of a Servlet - Handling HTTP request and response – Using Cookies - Session tracking - JDBC - Java Beans - Advantages - Enterprise Java Beans - EJB Architecture- Type of Beans - EJB Transactions

**Objective:** To create dynamic web pages using server side scripting.

Session No *	Topics to be covered	Ref	Teach Aid
27	Servlet Overview – Advantages, Basic Structure, Simple Servlet.	R1- ch1;(5-9) R1- ch2;(21-31)	BB/LC
28	Servlet Life Cycle – init, service, doGet, doPost, doXxx and destroy methods.	R1 –ch2;(34-39)	BB/LC
29	Handling HTTP request – getParameter, getParameterValues, getParameterNames, Handling both GET and POST request.	R1- ch3;(64-74)	BB/LC
30.	Generating Server Response – HTTP response Headers.	R1- ch7;(143-167)	BB/LC
31	Using Cookies – Benefits, Problems, Servlet Cookie API, Examples, Session Tracking – Need for, API, Examples.	R1- ch8;(176-197) R1- ch9;(198-227)	BB/LC
32	JDBC – Steps in using JDBC, Example, Prepared Statements	R1- ch17;(498-516,530-534)	BB/LC
33	Java Beans – advantages, accessing and setting bean properties	R1- ch14;(399-406)	BB/LC
34	Enterprise Java Beans – EJB Architecture – Types of Beans	R6 – ch13;(543-556) R3-ch22;(736-739)	BB/LC
35	EJB Transactions – properties, model, distributed, bean-managed transaction.	R6 – ch13;(581-590)	BB/LC
<b>Content beyond syllabus covered (if any):</b>			

\* Session duration: 50 mins

**Unit Syllabus :****UNIT V APPLICATION DEVELOPMENT ENVIRONMENT****10**

Overview of MVC architecture - Java Server Faces: Features - Components - Tags - Struts: Working principle of Struts - Building model components - View components - Controller components - Forms with Struts - Presentation tags - Developing Web applications - Hibernate: Configuration Settings - Mapping persistent classes - Working with persistent objects - Concurrency - Transactions - Caching - Queries for retrieval of objects - Spring: Framework- Controllers - Developing simple applications

**Objective:** To develop simple web application using various MVC Frameworks.

Session No *	Topics to be covered	Ref	Teaching Aids
36	Overview of MVC architecture, JSF – Features, Architecture, Elements	R6-ch2;(47-51) R6-ch11;(423-440)	BB/LCD
37	JSF – Components – Tags – HTML, Core.	R6 – ch11;(441-471)	BB/LCD
38	Struts – Working principle of Struts – Building model components	R5 – ch10;(441-481)	BB/LCD
39	Struts – view components, controller components	R5 – ch10;(482-537)	BB/LCD
40	Forms with Struts – Presentation tags – Developing Web Applications	R5-ch12;(593-643)	BB/LCD
41	Hibernate : Configuration Settings – Mapping persistent classes – Working with persistent objects	R6-ch15;(681-699)	BB/LCD
42	Concurrency – Transactions – Caching – Queries for retrieval of objects	R6-ch15;(700-717)	BB/LCD
43	Spring Framework – Features, Architecture	R6-ch21;(1007-1013)	BB/LCD
44	Spring Framework – Controllers, Transactions, tag library	R6-ch21;(1014-1029)	BB/LCD
45	Spring Framework – MVC Framework, Implementation, Developing simple applications	R6-ch21;(1030-1038)	BB/LCD
<b>Content beyond syllabus covered (if any):</b>			

- Session duration: 50 mins



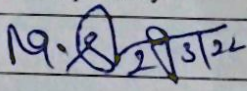
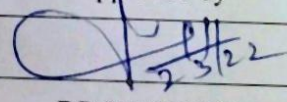
Sub Code / Sub Name: IT18014 - WEB PROGRAMMING

**TEXT BOOKS:**

1. Deitel, Deitel, Goldberg. "Internet & World Wide Web How To Program". Fifth edition, Pearson Education, 2012.
2. Cay S. Horstmann, —Core Java Volume I—FundamentalsI, 10th Edition, Prentice Hall, 2015.

**REFERENCES:**

1. Marty Hall and Larry Brown, "Core Servlets And Javasever Pages Volume 1: Core Technologies", Second Edition, Pearson education.
2. Bryan Basham, Kathy Siegra, Bert Bates. "Head First Servlets & JSP", Second Edition, O'reily.
3. Uttam K Roy, "Web Technologies", Oxford University Press, 2011.
4. <https://w3schools.com>
5. Marty Hall and Larry Brown, "Core Servlets And Javasever Pages Volume 2: Advanced Technologies", Second Edition, Prentice Hall.
6. Kogent Learning Solutions Inc., " Java Server Programming Java EE7 (J2EE 1.7): Black Book", Dream Tech Press, 2014

	Prepared by	Approved by
Signature		
Name	M.SUGACINI	DR.V.VIDHYA
Designation	ASSISTANT PROFESSOR	HOD/ INT
Date	2.03.2022	2.03.2022
Remarks *:		
Remarks *:		

\* If the same lesson plan is followed in the subsequent semester/year it should be mentioned and signed by the Faculty and the HOD.