

## JSP AND SERVLET PROGRAMMING

Semester	Subject Code	Category	Lecture Hrs		Theory Hrs		Practical		Credits
			Per week	Per Sem	Per week	Per Sem	Per week	Per Sem	
II	21CPCS 2A	CORE - IV	6	90	6	90	0	0	4

### **COURSE OBJECTIVE**

- This paper helps us to develop the projects in Web Application using JSP and Servlets.

### **COURSE OUTCOME**

successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	Basic details of Java Script, Functions and Objects.	K2
CO2	Develop JDBC Connections and RMI Architecture.	K3
CO3	Design and implement JSP Programs.	K3
CO4	Implement Servlet programs and attributes in web applications.	K3
CO5	Identify Web application framework using Structs.	K4

*Knowledge Level – K1-Remember, K2- Understand, K3-Apply, K4-Analyze*

### **MAPPING WITH PROGRAMME OUTCOME**

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	M	M	M
CO2	S	S	S	M	S	M
CO3	S	S	S	M	S	S
CO4	S	S	S	S	S	S
CO5	S	M	S	M	S	S

*S-Strong, M-Medium and L-Low*

**UNIT-I JAVA SCRIPT** **18 Hours**

Introduction to JavaScript - Operator - Conditional Structure & Looping – Structure - Dialog Boxes – Arrays- User Define Function - Built-in Functions: String Functions, Math Functions, Date Functions – Array: Join, reverse, pop, push, shift, sort- User Define Object, Document Object, History Object, Navigator Object, Form Object & Elements- Events.

**UNIT-II DATA BASE PROGRAMMING WITH JDBC** **18 Hours**

Introduction and Need for JDBC - Database Drivers -JDBC APIs for database Connectivity (Java. sql Package) Connection - Statement -Prepared statement - Callable statement - Result set -Other JDBC APIs -Database Meta Data - Result Set Meta Data-Distributed Computing Using RMI: Introduction to RMI - RMI Architecture - Stubs and Skeleton.

**UNIT-III JSP PROGRAMMING** **19 Hours**

JSP development, Basic JSP Lifecycle, JSP Elements, Directive Elements, Page Directive, Include directive, Scripting elements, Declaration, Scriptlets, Expressions, Action elements, Standard action, <jsp : param> ,<jsp : include> ,<jsp : forward> ,<jsp : plugin> ,Comments and template data ,Scope of JSP variables, Page, Request, Session, Application Using implicit ,objects ,The request object ,The response object ,The out object ,The session object ,The config object ,The exception object ,The application object ,Handling Errors and Exception -Dealing with exception in the page & directive, Dealing with exception in the Deployment Descriptor ,Adding exception handling in JSP, pages, Including and forwarding from -JSP ,pages ,Include Action ,Forward Action.

**UNIT-IV SERVLET PROGRAMMING** **19 Hours**

Introduction to Servlets, Servlets Implementation, The servlet interface, The Generic Servlet class, The single thread Model interface, The Http Servlet class, Service(), doGet(), doPost(), doDelete() ,doOption(), doPut(), doTrace(), Servlet Exceptions, The Servlet Exception class- The unavailable Exception class ,Servlet Lifecycle ,Servlet Request and Response ,The Http Servlet Request interface, GetAttribute(), setAttribute(), getAttributeNames(), getparameters(), getParameterNames(), getParameterValues(), getRemoteHost(), getRemoteAddr(), getCookies(), getHeaders(), getQueryString(), getSession(), The Http servlet Response Interface, getWriter(), getContentType() ,addCookie(), encodeURL(), sendRedirect(), setHeader( ), setStatus(), Session Tracking Approaches, URL Rewriting, Hidden Form Fields Cookies, Session API, Session Tracking with Servlet API, The Http Session interface, GetAttribute(), GetAttributeNAMES() ,GetCreationTime(), GetId(), GetlastAccessedTime(), IsNew(), RemoveAttribute(), SetAttribute() ,SetMaxInactiveinterval(), Invalidate(), Servlet Collaboration, Request Dispatching with Request, Dispatcher interface Forward(), Include(), Servlet Context, The servlet Context interface, getContext(), getRequestDispatcher(), getServerInfo(), getInitParameter(), getInitParameterNames(), getAttribute(), removeAttribute( ).

**UNIT-V INTRODUCTION TO STRUCTS** **16 Hours**

A Web Application Framework - struts-config.xml; Understanding MVC architecture; ActionServlet, ActionForm, ActionMapping, Actionclasses.

JSP Expression Language: EL Introduction, EL Implicit Objects, EL Operators, EL Functions. JSP Standard Tag Library:JSTL Introduction, core tags, xml tags, sql tags, fmt tags, Core tags, <c : out>, <c : set> ,<c : if>, SQL tags, <sql : query>,<sql : update>, Fmt tags, <fmt : formatNumber>,<fmt : formatDate>.

**Practical For Classes :**

- 1.Individual project development was done.

**Distribution of Marks: Theory 70% and Problem 30%**

**TEXTBOOKS**

S. NO	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1	Horstman and Cornell	Core Java Volume-I	Pearson Education	2010
2	Horstman and Cornell	Core Java Volume-II	Pearson Education	2013
3	Pekowsky	Java Server Pages	Pearson Education	2013

**REFERENCEBOOKS**

S. NO	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1	Dustin R.Callway	Inside Servlets	Pearson Education	2011
2	James Goodwill	Developing Java Servlets	Techmedia Education	2014
3	Sebesta	Programming world wide web.	Pearson Education	2015
4	Murach	Java JDK5	Murach Education	2011

**WEB RESOURCES**

1. <https://www.class-central.com/course/nptel-computer-organization-and-architecture-a-pedagogical-aspect-9824>
2. <https://www.class-central.com/course/nptel-computer-organization-and-architecture-a-pedagogical-aspect-9824>
3. <https://www.mooc-list.com/tags/parallel-programming>

**TEACHING METHODOLOGY**

- Class room teaching & Group discussions
- Seminars & Smart Class room
- Chart/Assignment & Simulation Model

**SYLLABUS DESIGNERS**

- Mrs.G.SANGEETHA LAKSHMI, Assistant professor & HOD, Dept of Computer Science & Applications
- Mrs. B.ARULMOZHI Assistant professor, Dept of Computer Science & Applications