PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY

(Autonomous)

Kanuru, Vijayawada-520007

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (AI & ML)

III B. Tech – I Semester CSE (AI & ML)

Full Stack Web Development-I

Course Code	20AM3552	Year	III	Semester	I
Course Category	PCC Lab	Branch	CSE (AI & ML)	Course Type	Practical
Credits	1.5	L-T-P	0-0-3	Prerequisites	Java Programming
Continuous Internal Evaluation	15	Semester End Examination	35	Total Marks	50

Course Outcomes		
Upon successful completion of the course, the student will be able to		
CO1	Demonstrate experimental procedures through oral communication and submit comprehensive documentation reports.	L2
CO2	Apply Full Stack Web Development (JavaScript, JSP, Servlets, MySQL) technologies for developing Web Applications.	L3
CO3	Analyze different Full Stack Web Development technologies by implementing them in different Web Applications.	L4
CO4	Design and evaluate a Web Application to analyze the outputs of different web-based applications.	L5

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:High, 2: Moderate, 1:Low)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2									2				
CO2	3				3							2		
CO3		3										2		
CO4				3								2		

Syllabus		
Expt No.	**Contents**	**Mapped CO**
1	Explore different Tools: Visual Studio Code, Sublime Text, Eclipse, GIT.	CO1
2	**HTML** (Hypertext Markup Language) and **CSS** (Cascading Style Sheets) Create a personal website or portfolio using HTML and CSS. Incorporate different HTML elements (headings, paragraphs, lists, links, images, and forms) and style them using CSS properties (layout, typography, colors, and backgrounds).	CO1 to CO4
3	**JavaScript** Enhance the personal website or portfolio created in Experiment-2 by adding interactive features using JavaScript. Implement event handling, form validation, image sliders, and dynamic content updates.	CO1 to CO4
4	**Client-side validations using JavaScript** Develop a registration form with client-side validations using JavaScript. Validate user inputs for fields like username, email, password, and confirm password. Provide appropriate error messages and visual feedback.	CO1 to CO4
5	**Servlets** Develop a simple web application using Java Servlets. Create a servlet that handles HTTP requests and generates dynamic web pages. Implement basic functionality like displaying a form and processing form data.	CO1 to CO4
6	**Servlets with SQL CRUD operations** Extend the web application from Experiment-5 by adding database connectivity. Store and retrieve data from a database (e.g., MySQL or PostgreSQL) using JDBC (Java Database Connectivity). Implement CRUD (Create, Read, Update, Delete) operations.	CO1 to CO4
7	**JSP** Develop a web application using Java Server Pages (JSP) and Servlets. Create JSP pages for user interfaces and use servlets for handling business logic and processing data.	CO1 to CO4
8	**JSP with SQL CRUD operations** Extend the web application from Experiment-7 by implementing CRUD (Create, Read, Update, Delete) operations on a database (MySQL or PostgreSQL) using JSP and Servlets.	CO1 to CO4
9	**Logging with JSP** Extend the web application from Experiment-8 by implementing Logging (Log4j or Commons Logging) to implemented CRUD operations.	CO1 to CO4
10	**Capstone Project:** with JavaScript, JSP, Servlets, and Database Develop a full-stack web application that integrates React for the front-end, Java Servlets for the back-end, and a database (MySQL or PostgreSQL) for data storage. The application should have CRUD functionality and user authentication.	CO1 to CO4

Learning Resources

Text Books

1. Programming the World Wide Web, Robert W. Sebesta, Eighth Edition, 2020, Pearson.
2. Internet and World Wide Web: How to Program, Paul J. Deitel, Abbey Deitel and Harvey M. Deitel, Fifth Edition, 2018, Pearson.

Reference Books

1. Web Technologies (A Computer Science Perspective), Jeffrey C. Jackson,2015, Pearson.
2. Web Technologies, Uttam K. Roy, Second Edition, 2010, Oxford University.
3. Web Technology, Gopalan N.P. and Akilandeswari J, 2011, Prentice Hall of India.

e- Resources & other digital material

1. HTML: https://youtu.be/qz0aGYrrlhU?si=98BWExuKhNWIk8B1

2. HTML & CSS: https://youtu.be/HGTJBPNC-Gw?si=AhX8k3blJm0KLcZN

3. Bootstrap: https://youtu.be/qz0aGYrrlhU?si=MfkwLRF5YmJn-mGm

4. JavaScript: https://youtu.be/W6NZfCO5SIk?si=FywE4uTaDDgCrFyf

5. Bootstrap: https://getbootstrap.com/docs/4.0/getting-started/introduction/