Department of Computer Science and Engineering

Industry certified Value Added Course
on
"Client Server Architecture"
14.02.2025, 15.02.2025 and 19.02.2025 to 22.02.2025

45 HOURS

Objectives

- Understand basic networking concepts and protocols.
- Gain knowledge of client-server communication.
- Build a simple webpage using HTML, CSS, and JavaScript.
- Develop responsive web pages using Bootstrap.
- Develop secure form handling techniques in PHP.
- Perform CRUD operations with MySQL

Unit 1: Introduction to Basic Protocols & Web Development   9

overview of computer networks- different types LAN, WAN, and MAN. network topologies - star, bus, ring, mesh, essential network devices like routers, switches, hubs, and modems. The OSI and TCP/IP models - basic network protocols, HTTP and HTTPS file transfer protocols - TCP/IP and UDP - DNS -Client-server architecture -web, database, and application servers. API integration principles- web servers- front-end technologies-fundamentals of HTML5- forms, tables- CSS3 concepts like selectors, the box model, grid system, animations, transitions- JavaScript (ES6) -variables, data types, operators, functions, event handling, and DOM manipulation

UNIT 2: Bootstrap Framework   9

Bootstrap framework- introduction to Bootstrap, -purpose, advantages, and role in simplifying UI development. - Bootstrap grid system, container classes,responsive breakpoints. -various layout design techniques- Bootstrap components-navigation bars. dynamic and responsive navigation menus with dropdowns and toggles- Cards - flexible content container, buttons-

different styles, colors, and states. Tables - contextual classes, striped rows, and hover effects. Form controls-validation techniques, -responsive form layouts.- Modals. dynamic image sliders -badges, progress bars, tooltips.

UNIT 3 : Introduction to PHP   **9**

fundamentals of PHP- basic syntax, variables, and control structures like if-else statements, switch cases, and loops. PHP functions, arrays, and string manipulations- object-oriented programming concepts such as classes, objects, and inheritance. dynamic PHP scripts.

UNIT 4 : Form Processing and Session Handling in PHP   **9**

forms in PHP, managing user sessions-form handling, role of HTML forms -GET and POST methods.form validation techniques- using regular expressions for pattern matching-Error handling mechanisms -Data sanitization and security practices -built-in PHP functions -SQL injection and Cross-Site Scripting (XSS) attacks. Cookies and session management. -creating and retrieving cookies, setting expiration times, and deleting cookies- PHP session handling

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UNIT 5: MVC Architecture in PHP ,Reports Generation, Bulk Data Upload & Payment Gateway   **9**

Model-View-Controller (MVC) architecture and its implementation in PHP- database-driven applications using PHP and MySQL, -CRUD (Create, Read, Update, Delete) operations. database connection handling, executing queries, and integrating the MVC design pattern - generating reports in various formats-send automated emails using PHP Mailer- integrating payment gateways.

COURSE OUTCOMES (COs):

On successful completion of this course, the students will be able to:

CO	Course Outcome	Knowledge Level
CO1	Build a front end of web application using HTML,CSS and JS	K3
CO2	Build professional, visually appealing, and mobile-friendly web applications efficiently.	K3
CO3	Build dynamic PHP scripts and perform data processing tasks.	K3
CO4	Develop a complete web-based project using PHP & MySQL.	K3
CO5	Develop dynamic web applications with form processing, authentication, and payment integration.	K3

PROGRAMME SPECIFIC OUTCOMES (PSOs):

PSO1: Professional Skills: The ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics, and networking for efficient design of computer-based systems of varying complexity.

PSO2: Problem - Solving Skills: The ability to apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success.

CO - PO MAPPING:

Course Name	CO. No.	POs												PSOs	
		1	2	3	4	5	6	7	8	9	10	11	12	1	2
Client Server Architecture	CO1	H	H	H	M	M	L	-	-	L	L	M	L	H	M
	CO2	H	H	H	M	M	L	-	-	L	L	M	L	H	M
	CO3	H	H	H	M	M	L	-	-	L	L	M	L	H	M
	CO4	H	H	H	M	M	L	-	-	L	L	M	L	H	M
	CO5	H	H	H	M	M	L	-	-	L	L	M	L	H	M

H - High, M - Moderate, L - Low

Trainer	Course Coordinator	VAC Coordinators	HOD-CSE
Mr.R.Ramesh kumar	**Mr .R.Kumaravel**	**Mrs.S.Athilakshmi**	**Dr.A.Meenakshi Prof .&**
Senior Developer	AP-CSE	AP-CSE	HOD-CSE
Mr.S.Hari Raghav	Mr.D.Raj	Mrs.S.ArchanaDevi	
Senior Developer			
Notasco Technologies PVT.	**AP-CSE**	**AP-CSE**	
LTD.,			
Bangalore			