

Full Stack Web Development

(HTML, CSS, JavaScript & PHP/Modern JavaScript & Node JS with My SQL SYLLABUS)

Course Overview

Full stack development is the process of designing, creating, and deploying a complete web application from start to finish. It involves working with various technologies and tools, including front-end web development, back-end web development, and database development.

Duration: 6 Month

Job Prospects

The full stack developer has become extremely popular, appealing to those who desire a career in the rapidly growing technology sector. It is a job role that requires candidates to be extremely versatile and possess great IT skills.

Job Profiles

- Web Developer
- Desktop Application Development.
- Web Development Careers
- Computer Programming

Course Content

Introduction to Web Designing

- What is Web Designing
- Feature of Web Designing Tools

HTML

- What is Markup Language
- Basic Structure of HTML
- Difference Between HTML and XHTML
- Head Section and Elements of Head Section
- Meta Tags
- CSS Tags
- Script Tag
- Table Tag
- Div Tag
- Header Tags
- Paragraph, Span, Pre-Tags
- Anchor Links and Named Anchors
- Image Tag
- Object Tag
- Iframe Tag
- Forms
- Form Tag
- Attributes of Form
- POST and GET Method
- Field set and Legend
- Text input, Text area
- Checkbox and Radio Button

- File Upload and Hidden Fields
- Submit, Image, Normal, Reset Button

CSS

- Introduction to Cascading Style Sheets
- Types of CSS
- CSS Selectors
- Universal Selector
- ID Selector
- Tag Selector
- Class Selector
- Sub Selector
- Child Combinatory Selector
- Adjacent Sibling Selector
- Attribute Selector
- Group selector
- First-line and First-letter selector
- Before and After Selector
- CSS Properties
- Type Properties
- Background Properties
- Block Properties
- Box Properties
- List Properties
- Border Properties
- Positioning Properties
- Realtime Implementation
- Conversation of Table to CSS Layout
- CSS Menu Design (Horizontal, Vertical)
- Form Designing
- Custom Fonts
- Text-Shadow Property
- Text-Stroke Property
- Rounded Corners
- Box Shadows
- CSS Gradients
- CSS Multiple backgrounds
- Opacity Property
- Transition effect
- Transform effect
- Animation effects
- CSS Media Queries

Java Script

- Introduction to Client-Side Scripting
- Introduction to Java Script
- JavaScript Types
- Variables in JS

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- Operators in JS
- Conditions Statements
- Java Script Loops
- JS Popup Boxes
- JS Events
- JS Arrays
- Working with Arrays
- JS Objects
- JS Functions
- Using Java Script in Real-time
- Validation of Forms
- Related Examples

JQuery

- jQuery and jQuery UI
- Introduction to jQuery
- jQuery Features
- Installing jQuery
- jQuery Syntax
- jQuery Ready Function
- jQuery Selectors
- jQuery Actions
- jQuery plugins
- jQuery Validation plugin
- jQuery Slideshow
- jQuery Dropdown
- jQuery UI
- Working with jQueryUI
- jQuery Accordions
- jQuery Tabs
- jQuery Tooltips
- jQuery Autocomplete

Bootstrap

- Introduction to Responsive Design
- Mobile first design concepts
- Common device dimensions
- View-port tag
- Using css media queries
- Menu conversion script
- Basic Custom Layout
- Introduction to Bootstrap
- Installation of Bootstrap
- Grid System
- Forms
- Buttons
- Icons Integration
- Using CSS3 in Practical Layout

Introduction to PHP

- Web Architecture
- Overview of PHP Platform
- Origins of PHP in the open-source community
- Why we use PHP?
- Some of PHP's strengths:
- Some of PHP's main competitors are PERL, Microsoft ASP.NET, Java Server Page
- Availability across multiple platforms
- Installing as a module for Apache Web Server

PHP language building blocks

- Comparing PHP with other Web scripting languages or technology
- Installation of PHP
- PHP delimiters
- Variable initialization with PHP
- PHP Data types
- PHP Constants
- PHP Operators

Conditional Statements

- If else
- If else if else
- Nested If
- Switch Case
- Jump Statements (Break, Continue, Exit)

Looping (Iteration)

- For loop
- While loop
- Do while loop
- Nested Loop

Introducing ARRAY

- How to use an important programming construct: arrays
- Numerically Indexed arrays
- Non-Numerically Indexed arrays (Associative Array)
- Multidimensional arrays
- Array sorting

Manipulation user input

- Presenting the user with input options via different HTML form elements
- Retrieving form data with \$_POST, \$_GET and \$_REQUEST arrays
- Preserving Data in Form inputs

Reusing Code and Functions

- Introducing Functions
- Defining functions
- Using parameters
- Understanding scope
- Returning values
- Call By Value & Call By reference
- Using Require() and include()
- Array, String, Math, Date functions

File Uploading & Downloading

- File uploading Concepts
- Multiple File Upload
- Downloading file from server using header.

String Manipulation and Regular Expression

- Formatting, Joining, splitting, comparing strings
- Introducing Regular Expression

State Management

- Session, Cookie, Query String
- Understanding Basic Session Functionality
- Starting a Session
- Registering Session variables
- Using Session Variables
- Destroying the variables and Session
- What is a Cookie?
- Setting Cookies with PHP
- Using Cookies with Sessions
- Deleting Cookies
- Implementing Query String
- Hidden Fields

OR

Modern JavaScript

- Let and const keywords
- Concept of scope – Local and Global Scopes
- Functions in JavaScript
 - Function expression and arrow functions
 - Promise (resolve and reject) with then()
 - Object destructuring, this and bind()
 - Array and function(map, filter, reduce)
 - Modules
 - Imports and Exports
- Array Traversal, push(), pop(), shift(), unshift(), splice()

Node JS

- Introduction Node JS
- Setup Development Environment
- Node JS modules
 - Functions, Buffer, Module
 - Modules Type
 - Module Export and import
- Node Package Manager
 - NPM, Installing Package Locally
 - Installing Package Globally
- Creating Web Server
 - Handling HTTP Request
 - Sending HTTP Response
- File System
 - FS.read and write file
 - Opening file, deleting file
 - Writing files asynchronously
- Events Handling
 - Event Emitter
 - Inheriting Events
- Express JS
 - Configuring routes
 - Serving Static Resources
 - Working with middleware

- EJS
 - Serving Dynamic Resources
 - EJS with views
- Database Connectivity
 - Connectivity with Express (CURD)
 - Connectivity with EJS (CURD)
- Project Development with Node JS

MySQL Database

- Introduction to DBMS and MySQL
- Web Database Design & Architecture.
- Creating a MySQL Database
- Creating Database Tables
- Column Data Types
- Implementing Insert/Delete/Update and select Query
- Aggregate Functions
- Having and Group by Clause
- Joining Table
- Implementing Keys & Constraint.
- Dropping Tables and Databases

Database Connection

- MySQL database connectivity

Advance PHP Techniques

- PDF Generation
- Excel or CSV Generation
- Implementing Pagination
- Exception Handling

