

Course package: Full Stack Developer
(Web Designing and MEAN Stack)
Centre for Electronic Governance
(Established by Govt. of Rajasthan)

Syllabus

Time: 90 Days

Fee: Rs. 12000/-

(i) HTML 5 AND CSS3

- HTML5-Introduction and Semantic
- HTML5-Form
- HTML5-Canvas
- **HTML5-SVG**
- HTML5-Audio and Video
- HTML5-Drag and Drop
- HTML5-Web Storage
- HTML5-Geo Location
- HTML5-Application Cache
- HTML5-Web Worker
- HTML5-Server Sent Events
- CSS3-Introduction and Selectors
- CSS3-Borders
- CSS3-Backgrounds
- CSS3-Text Fonts
- CSS3-Transformation
- CSS3-Transitions
- CSS3-Animations
- CSS3-Multi Column Layout
- CSS3-Media Queries

(ii) Java Script & JQuery

- JavaScript-Introduction and First Program
- JavaScript-Language Basics
- JavaScript-Built In Functions
- JavaScript-Forms
- JavaScript-HTML Document Object Model
- JavaScript-Cookies
- JavaScript-Working with Classes and Objects
- jQuery-Introduction

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- jQuery-Selectors
- jQuery-Traversal
- jQuery-Manipulators
- jQuery-Effects
- jQuery-JqueryEvents
- jQuery-AJAX

(iii) Bootstrap 4

- Bootstrap - Design CSS
- Bootstrap - Components
- Bootstrap - Plug-Ins
- Bootstrap Text / Typography
- Bootstrap Table
- Bootstrap Jumbotron And Page Header
- Bootstrap Wells
- Bootstrap Alerts
- Bootstrap Buttons
- Bootstrap Glyphicons
- Bootstrap Badges and Labels
- Bootstraps Progress Bars
- Bootstrap Pagination
- Bootstrap Pager
- Bootstrap List Groups
- Bootstrap Panels
- Bootstrap Dropdowns
- Basic Collapsible
- Bootstrap Tabs and Pills
- Bootstrap Navigation Bar
- Bootstrap Forms
- Bootstrap Carousel Plugin
- Bootstrap - Customization
- Bootstrap - Live Example1
- Bootstrap - Live Example2

(IV) NodeJS and ExpressJS

- Introduction and Foundation
- Node Projects
- Working with shrink-wrap to lock the node

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- modules versions
- Working with asynchronous programming
- Building a HTTP Server with Node.JS using HTTP APIs
- File System
- Buffers, Streams, and Events
- Multi-Processing in NodeJS
- ExpressJS
- Express JS with MongoDB and Sqlite
- Socket.io, The Front-end, and A Chat App
- Introduction to Task Managers with unit testing

(V) TypeScript and Angular 7

- TypeScript
- Issues with Plain JavaScript
- Introduction to TypeScript
- Advantages of TypeScript
- Getting Started with TypeScript
- Setting VS Code for TypeScript
- TypeScript Fundamentals
- TypeScript Data Types
- Numbers
- Strings
- Loops
- Functions
- Functions
- Arrow Function
- Default and Optional Parameters
- Function overloading
- Classes, Access Modifiers, and Constructors
- Classes
- Access Modifiers
- Constructor
- Constructor Overloading
- Static Members
- Inheritance and Interfaces
- TypeScript Inheritance
- Introduction to Interface

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- Using Interfaces
- Generics and Modules
- Generics
- Creating Modules
- Importing Modules
- Module 2
- Introduction to Angular
- Understanding Angular
- Advantage of Angular
- Angular1 vs. Angular
- Browsers Support
- Get Started with Angular
- Setting up an Angular App
- Running an Angular App
- Understanding Angular folder structure
- Angular Initialization Process
- Introduction to Component
- Creating a Component
- Bootstrapping the Component
- Databinding
- Understanding Data Binding
- Attribute Binding
- Two-way Data Binding
- Event Binding etc.
- Choosing Appropriate Data Binding
- Data Passing technique for components to components
- Angular CLI
- Introduction to CLI
- Creating new project-ng new and ng init
- Building Project-ng build and ng serve
- Ng CLI options
- Ng CLI for creating
- components, services, directives, and Pipe etc.
- Module 3
- Directives and Pipes
- Built-in Directives-ngIf, ngFor, ngSwitch etc.
- Creating Custom Directives
- Angular Pipes

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- Creating Custom Pipes
- Bootstrap
- Bootstrap Fundamentals
- Bootstrap Grid System
- Bootstrap Components
- Bootstrap JavaScript
- Routing
- Understanding Routing
- Defining Routes
- Nested Routes
- Attaching Routes to Actions
- Defining Templates
- Pass parameters in routes.
- children routes.
- Module 4
- Advanced Components and Directives
- Components Life Cycle Hooks
- Nested Components
- Data sharing between nested components
- Custom directives
- Host binders and host listener
- @ViewChild & @ViewChildren
- Inheritance
- Introduction to Angular5 Inheritance
- Components Inheritance
- Angular Forms and Controls
- Introduction to Angular Forms
- Types of Angular Forms-Template Driven and Model Driven
- Template Driven vs. Model Driven
- the different paradigm of angular forms
- Template Driven Form
- Creating Template driven Form
- Angular form input controls
- Angular form validation
- Angular form and controls properties
- Model Driven Form
- Creating Model Driven Form
- Angular form input controls
- Angular form validation
- Angular form and controls properties

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- Module 5
- SPA
- Introduction to SPA
- SPA vs. MPA
- Most Popular SPA
- Advantages of SPA
- Custom modules
- Services
- Understanding Angular5 Services
- Custom services creation and usage at the component level.
- Implementation of observable and subscribers.
- data sharing using Behaviour Subject.
- Use of rxjs operators.
- Lazy Loading
- Database Operations with REST Service
- Introduction to REST
- REST Service CRUD Operations.
- Introduction and implementation of the firebase.
- Http services-get,post,put,delete etc.
- dependency injections
- forks join and merge map
- Auth Gurad canactivate authentication
- Angular Testing
- What is Unit Testing?
- Benefits of testing.
- Implementation of unit testing.

(VI) MongoDB

- Course Introduction
- Introduction to NoSQL databases
- MongoDB A Database for the Modern Web
- CRUD Operations in MongoDB
- Indexing and Aggregation
- Replication and Sharding
- Developing Node JS Application with MongoDB