

MEAN Stack

Duration: 2 Months(8 Weeks or Weekends)

Prerequisites

- Knowledge of Basic Web Designing

Mongo DB

1. Design Goals, Architecture and Installation

- What is need for Non RDBMS
- Benefits of using Document based databases

2. CRUD Operations

- Understanding of CRUD Operations
- Functional usage of CRUD
- Read / Write Operations with CRUD

3. Schema Design and Data Modelling

- Schema Design and
- Data Modelling in MongoDB®
- Various Data Structure and
- Tools to Manage Data Model in MongoDB

NodeJS and ExpressJS

1. Introduction to Node JS

- Introduction
- Foundation
- Introduction to the Node JS framework
- Installing NodeJS
- Using NodeJS to execute scripts
- The Node Package Manager
- The package.json configuration file
- Global vs local package installation
- Automating tasks with Gulp
- The HTTP protocol
- Building an HTTP server
- Rendering a response
- Using Representational State Transfer
- Express Framework
- Connecting to Mongo databases
- Performing CRUD operations
- The NodeJS framework
- Installing NodeJS
- Using NodeJS to execute scripts

2. NodeJS Projects

- The Node Package Manager
- NodeJS Creating a project
- The package.json configuration file
- Global vs local package installation
- Automating tasks with Gulp.

3. HTTP

- The HTTP protocol
- Building an HTTP server
- Rendering a response
- Processing query strings
- NodeJS using Representational State Transfer
- Configuring TLS

4. Express JS

- An Introduction to Express JS
 - Routing
 - Setting Up Router
 - Route Parameter and queries
 - HTTP Interaction
 - Handling Form Data
 - Handling Query Parameters
 - Error Handling
 - Creating and Consuming RESTful Services
 - Using Templates
 - The model-view-controller pattern
 - Defining Jade and Handlebars templates
 - Building a front-end controller
 - Defining routes
 - Creating actions
 - Configuring Express to use Handlebars
 - Using REST
 - Reading POST data
 - Building Handlebars helpers
 - Adding middleware
 - Data Sources
 - How Node.JS connects to databases
 - RDBMS databases and NoSQL databases
 - Connecting to RDBMS and NoSQL databases
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Angular JS

1. Angular JS Introduction

- What is Angular JS?
- Why we need Framework?
- Pre-requisite requirement

2. Introduction to MVS

- Design pattern

3. Data Binding

- Two way binding with Model and view
- Two way binding with view and Model

4. Controllers

- Understanding controller
- Setting up initial state of a \$scope object
- Adding behavior to a Scope object
- Associating controller with Angular scope object
 - Explicitly using angular module controller function
 - Implicitly using ng-controller or \$route
- Scope inheritance

5. Service

- What is angular service?
- Usage of service

6. Scopes

7. Dependency Injection

8. Filters

- Angular JS build in filter
- Custom filter

9. Directives

- Angular JS build in directives
- Creating custom directive
- Isolated scope in directive
- Adding event listener

10. Module

- What is a module
- Module loading and dependencies

11. Providers

- Value recipe
- Factory recipe
- Service recipe
- Constant recipe
- Provider recipe

12. Routing

13. Basics of Security in AngularJS

Hands on Experience on Live Project

- ❖ **CRUD Operation with mlab**
- ❖ **E-commerce Website**