

## **Web Development using AngularJS, NodeJS and MongoDB**

(5 days – Based on JavaScript Programming Language)

Day 1:

1. Introductions
  - a. Meet your instructor
  - b. Course overview
2. Lesson 1: JavaScript fundamentals
  - a. JavaScript variables and global variables
  - b. JavaScript functions and function variables
  - c. Conditional statements and loops
  - d. Lab exercise
  - e. Arrays
  - f. Lab exercise
  - g. Undefined, typeof, NaN and operators
  - h. Lab exercise
  - i. HTML Objects and DOM
  - j. DOM manipulations
  - k. JavaScript events
  - l. Lab exercise
  - m. Stylesheets and JavaScript classes
  - n. Lab exercise
3. Lesson 2: Advanced JavaScript
  - a. Object Oriented JavaScript
  - b. Passing objects to functions
  - c. Lab exercise
  - d. Namespaces
  - e. Dependency injections
  - f. Lab exercise
4. Lesson 3: JavaScript frameworks JQuery, AngularJS and Bootstrap
  - a. How to include frameworks
  - b. How do you access them
  - c. Lab exercise

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Day 2:

5. Lesson 4: Angular JS Framework introduction
  - a. UI MVC frameworks introduction.
  - b. AngularJS Overview
  - c. Environment Setup
6. Lesson 5: AngularJS Directives
  - a. ng-app, ng-init,
  - b. Lab exercise
  - c. ng-model and ng-repeat
  - d. Lab exercise
7. Lesson 3: AngularJS Expressions
  - a. Using numbers, and strings
  - b. Lab exercise
  - c. Objects and Arrays
  - d. Lab exercise
8. AngularJS Controllers and Filters
  - a. Controllers introduction
  - b. Uppercase, Lowercase, Currency, Filter and Orderby
  - c. Lab Exercise
9. AngularJS Tables and HTML DOM
  - a. AngularJS table using ng-repeat
  - b. Lab Exercise
  - c. ng-disabled, ng-show, ng-hide, ng-click
  - d. Lab Exercise
10. AngularJS Modules and Forms
  - a. Application Module, Controller Module
  - b. Lab Exercise
  - c. Angular JS Events, Validate Data,
  - d. Lab Exercise
11. AngularJS Includes
  - a. ng-include
  - b. Lab Exercise
12. AngularJS Views
  - a. ng-views introduction
  - b. Lab Exercise
  - c. ng-template
  - d. Lab exercise
  - e. \$routeProvider
  - f. Lab exercise

## **Web Development using AngularJS, NodeJS and MongoDB**

### Day 3: AngularJS and NodeJS

#### 14. Lesson 13: AngularJS Scopes

- a. \$scope  
Lab exercise
- b. \$scope inheritance  
Lab exercise

#### 15. Lesson 14: AngularJS Services

- a. Factory  
Lab exercise
- b. service  
Lab exercise

#### 16. Lesson 15: AngularJS ajax (HTTP CALLS)

Lab exercise

#### 17. Conclusion AngularJs and Next steps

#### 18. Lesson 16: NodeJS Introduction

- a. What is Node.js?
- b. Environment Setup
- c. First Application
- d.

#### 19. Lesson 17: Node.js Features.

- a. Callbacks, Events
- b. Buffers, Streams and File System.
- c. Global Objects.
- d. Lab exercise

#### 20. Lesson 18: Web module

- a. Express Framework
- b. RESTFul API.
- c. Lab exercise

## **Web Development using AngularJS, NodeJS and MongoDB**

### Day 4: MongoDB

#### 21. Lesson 19: MongoDB Overview

- a. What is MongoDB?
- b. RDBS Vs MongoDB
- c. Environment Setup
- d. First Application

#### 22. Lesson 20: MongoDB Database

- a. Data Modeling
- b. Create Database.
- c. Drop Database.

#### 23. Lesson 21: CRUD operations

- a. Create Collection
- b. Drop Collection.
- c. Insert Document
- d. Update Document.
- e. Delete Document.

#### 24. Lesson 22: Document Querying and functions

- a. Query Document
- b. Limiting the records.
- c. Lab exercise
- d. Sorting the Records
- e. Aggregation
- f. Lab Exercise

#### 25. Lesson 23: MongoDB is a Cloud database

- a. MongoDB as a Cloud database.
- b. High availability and scaling Cloud DB
- c. MongoDB and noSQL
- d. Lab exercise

### Day 5: Web project using AngularJS, NodeJS and MongoDB