Node js Training Startup

Course: NODE JS FOR BEGINNERS
Duration: 20 hours with demos and hands-on labs
Focus: Node js , NPM , node server , NON -IO Blocking Event Loop
Targeted Audience:
Format: This course combines lecture, discussion and demonstrations with hands-on labs.

Language / Tools: Javascript, Sublime, Node,Git

Node.js is a simple and powerful tool for backend JavaScript development. In this session, I will show you everything you need to know to get started in web development with Node.js.

- **Course Objectives: What You'll Learn**

Node.js is a simple and powerful tool for backend JavaScript development. In this session, I will show you everything you need to know to get started in web development with Node.js. We will start with the basics of Node.js and selecting an IDE. We will explore template engines, and rendering HTML out of Express. We will cover all aspects of routing including express middleware. We will work with multiple database and backend APIs. I will cover local security with Passport.js.

Course Structure: This program is an experiential program to develop knowledge and skills through practical examples

- **Audience & Prerequisites: Who Should Attend**

Participants of this program should have good understanding of HTML & Javascript.

Workshop Topics Covered

Topics Covered

Legend: [P] – Presentation, [D] – Demo, [L] – Lab

Main 1
Getting Started with Node JS

1. Getting Started
2. Installing io.js with nvm
3. Summary
4. Running Node Applications on io.js
5. Introduction
6. Running Node Applications
7. package.json - Engines and Engine Strict
8. Running Node Harmony Features
9. ECMAScript 6 with io.js
10. Summary
11. Deploying io.js Applications
12. Introduction
13. Testing Our Application
14. Running Our Application
15. Engine Preferences and Deploy
16. Summary

Main 1
Getting Started with Node js

1. Getting Started
2. Introduction and Installation
3. Node and the Command Line
4. Sublime Text
5. Webstorm
6. Other Editors
7. Configuring Brackets
8. Node Package Manager
9. Versioning Packages
10. Summary
11. Setting Up Express
12. Introduction
13. Our First App
14. NPM Start
15. Simple Routing
16. Bootstrap Templates
17. Static Files
18. Bower
19. Intro to Node.js
20. History of Node.js
21. Non-Blocking I/O
22. Node.js Benefits

23. Node.js Place in the Tech Stack
24. Evolution of Node.js Frameworks
25. Node.js Basics
26. Node.js Global
27. Node.js Process
28. Modules and Require in Node.js
29. Core Node.js Modules
30. Node.js Module Patterns
31. Node.js Command-Lne Interface Arguments
32. Running Node.js Scripts
33. Node.js Shell (REPL)
34. Node.js File System Module
35. Node.js—It's All About JavaScript
36. Building "Hello World" in Node.js
37. Node.js Core Modules
38. Node Package Manager
39. Deploying "Hello World" to PaaS
40. Deploying to Heroku
41. Message Board REST API: Run-Time Memory Version
42. Test Case for Message Board

Express.js

1. Express.js—The Most Popular Node.js Framework
2. Installation
3. Express.js 4 Generator
4. Configuration
5. Routers
6. Main Middleware
7. Jade Template Engine
8. Stylus CSS library
9. RESTful API
10. Express.js API
11. GET, POST, PUT and DELETE
12. Request
13. Response
14. Error Handlers
15. Scaling

MongoDB

1. MongoDB and NoSQL
2. NoSQL and CAP Theorem
3. MongoDB Database
4. MongoDB shell (mongo)
5. MongoDB Native Driver (mongodb)
6. MongoDB on Heroku: MongoHQ
7. MongoDB BSON data types
8. Message Board REST API: MongoDB Version

Section 2.0

1. **Templating Engines**
2. Introduction
3. Jade
4. Jade and JavaScript
5. Handlebars
6. EJS
7. Summary
8. Routing
9. Introduction
10. Navigation
11. Routing
12. Rendering
13. Separate Files
14. Single Book Route
15. Rendering a Single Book
16. Router Functions
17. Summary
18. Databases
19. Introduction
20. MS Sql
21. Prepared Statements
22. Middleware
23. MongoDB
24. Admin Routes
25. Adding Books
26. Testing Insert
27. Select Many
28. Select One
29. Summary
30. Authentication
31. Introduction
32. Sign in Form
33. Creating the Auth Routes
34. Passport Middleware
35. Local Strategy
36. Saving the User
37. User Sign In
38. Verifying the User in the Database
39. Securing Routes
40. Securing Multiple Routes
41. Summary

Section 3

1. Wiring up to MongoDB and Mongoose
2. Filtering with the Query String
3. Getting a Single Item
4. Summary
5. Posting Data
6. Using Body-parser

Section 4