



# Node JS

## 60 Hours

### (Basic + Intermediate+Advanced)

### Programming & Development



**Pre-requisite / Target Audience:**

- Basic Knowledge of JavaScript and OOPS
- Knowledge in async programming will be added advantage

**Introduction:**

- HTML Basics
  - HTML Elements
  - HTML Attributes
  - HTML Styles
  - HTML Forms
  - HTML Form Elements
  - HTML Input Element Types
  - HTML Input Attributes
  - HTML File Paths Script tag and its uses
  - HTML & XHTML CSS
  - Introduction CSS Syntax CSS Selectors CSS Styling
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## **Java Script :**

- Introduction to JavaScript
- JavaScript Statements
- JavaScript Keywords
- JavaScript Functions
- JavaScript Programs
- JavaScript Operators
- Function Parameters
- Function Return Values
- JavaScript Data Types
- Primitive Types

## **Java Script & Objects:**

- Object Overview
- Object Oriented Programming
- Object creation
- Adding Properties to Objects
- Adding Methods to Objects
- JavaScript Conditional Statements
- JavaScript Loops & Iteration
- Enumerating properties
- Call-backs
- JSON

## **Node JS Basics:**

- Introduction
  - What is Node JS?
  - Advantages of Node JS
  - Traditional Web Server Model
  - Node.js Process Model
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## **Setting up the development environment for Node.js:**

- Install Node.js on Windows
- Installing in mac os
- Working in REPL
- Node JS Console

## **Node Js modules:**

- Functions
- Buffer
- Module
- Module Types
- Core Modules
- Local Modules
- Module Exports

## **Node Package Manager:**

- What is NPM
- Installing Packages Locally
- Adding dependency in package.json
- Installing packages globally
- Updating packages

## **Webserver Creation:**

- Creating web server
- Handling http requests
- Sending requests

## **File Systems:**

- Fs.readFile
- Writing a File
- Writing a file asynchronously
- Opening a file
- Deleting a file
- Other IO Operations

## **Debuggin Node JS Application:**

- Core Node JS debugger
  - Debugging with Visual Studio
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### **Events:**

- Event Emitter class
- Returning event emitter
- Inhering events

### **Express JS:**

- Configuring routes
- Working with express

### **Serving Static Resources:**

- Serving static files
- Working with middle ware

### **Database connectivity using Node JS:**

- Connection string
- Configuring
- Working with select command
- Updating records
- Deleting records

### **Template Engine:**

- Why Template Engine
- What is Jade
- What is vash
- Example

### **Project:**

#### **Real-time Project involving most of the above concepts with following will be provided**

- Product Abstract Document
  - Requirement Specification Document
  - Step-by-Step procedure for building the project from ground up
  - Complete Source Code
  - Database Script with Sample data
  - Instructions to Setup the Project on a Development box
  - Instruction to Deploy the project on Production Box / Microsoft Azure
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