

NodeJS Training Programme [2 Days]

JavaScript Primer (Foundation for NodeJS)

- Working with Objects
 - Creating Custom Objects (Using Object Literal & Constructor)
 - Understanding of Prototype
 - Object Oriented v/s Prototype Programming Language
 - Working with Properties
- Working with Functions
 - Different way in which Functions are used in JavaScript
 - Understanding of Scope & Closure
 - Understanding of Context & this variable
 - Use of Call, Apply & Bind
 - Callback Pattern
- Understanding of Event Loop & the concept of Next Tick

NodeJS

- **Architecture of NodeJS**
 - Understanding the Traditional Server's Blocking I/O
 - Comparing Blocking I/O with Non-Blocking IO used by NodeJS
 - Why and How JavaScript is used in NodeJS
 - Benefits of having JavaScript both on Client and Server
 - NodeJS beyond JavaScript
 - Meaning on the term Node in NodeJS
- **NodeJS Environment**
 - Installing NodeJS
 - Understanding what is Node Console
 - Understanding what is NPM and its package ecosystem

- Understanding the structure of package.json
- Installing Packages using NPM
- Global v/s Local Packages
- **NodeJS Key Aspects**
 - What is CommonJS and NodeJS Module System
 - Async nature (default nature) of all APIs
 - Callback Pattern & Error Signaling Mechanism used by NodeJS
 - Global Object
 - Events in NodeJS using EventEmitter
- **File System (FS) API**
 - Using the Path API
 - Using __dirname
 - Using __filename
 - Reading/Writing files synchronously
 - Reading/ Writing files asynchronously
- **HTTP API**
 - Creating a Web Server
 - Reading the Request parameters:
 - URL
 - Method
 - Headers,
 - Query String
 - Query Parameters
 - Posted Data
 - Defining Routing Logic
 - Creating and Sending a Response
 - Writing the Head

- Writing the Body
 - Sending file contents as response
 - Sending JSON as response
- Understanding the anatomy of Request & Response Objects
- **ExpressJS Framework**
 - Building a HTTP Server
 - Overview of MVC implementation by ExpressJS
 - Creating a Express Server Application
 - Defining Packages & Configuration of Middlewares
 - Defining Routes
 - Defining Controllers
 - Using Data sent from Client Browsers
 - Query String
 - Route Parameters
 - Posted Data
 - Defining Views
 - Understanding of View Engine
 - Defining Models
 - Passing Model Object to Views
 - Defining Status Response
 - Defining Custom Middlewares
 - Logging
 - Error Handling
 - Authentication
 - Defining RESTful Services
 - Determining the right set of Middlewares for RESTful Web Services
 - Defining REST Endpoints for CRUD operations
- ✓ Database Interaction

- No-SQL (Mongo DB)
 - Basics of MongoDB
 - Connecting to Mongo DB
 - Performing CRUD operations