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Node.js is an open source, cross-platform framework. It is an event-driven, server-based JavaScript environment that runs JavaScript with the help of Google's V8 engine. Silicon Beach Training introduces Node.js training to help the delegates in understanding and building web applications. The course includes powerful and flexible web application framework known as Express.js. Express.js offers several features for the development of web and mobile applications.

Node.js has many advantages, some of them are as follows:

- It is built in V8 engine of the Google, therefore, it is very fast
- The platform is highly scalable as it make use of single threaded model for its operation. This makes server respond quickly to handle user requests
- In this, the application outputs the data in segments which leads to low buffering

Node.js is a perfect tool for those who wish to build fast, scalable and lightweight network application. The course includes use of Events, Modules, Stream, advanced web technology in applications, communicating with databases, testing and debusgging applications and much more. The delelgates will receive course completion certificate at the end of the training. The training will be conducted by well-qualified and experienced instructors. By the end of the course, the delegates will master the concepts and terminologies of Node.js. During the course, our trainer will guide the delelgates on how to use and implement this platform within the business. Moreover, the delegates will get aware of installation (Local and global), framework of Node.js, file system, multi-processing, testing, ExpressJS, Socket.io, The Front-end, and A Chat App and more.

Prerequisites

There are no prerequisites for this course, however, having knowledge of JavaScript and HTML can be beneficial.

What are the objectives of the course?

Node.js training enable delelgates to:

- Understand the framework of Node.js
- Use HTTP APIs for building HTTP server with Node.js
- Work effectively with Node projects
- Learn how to build chat application with the help of Socket.io
- Work with Gulp and Grunt
- Know about unit and e2e testing
- Master file systems in Node.js
- Get to know about Buffers, Streams and Events

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- Understand connection of Express.js with MongoDB and SQLite

Introduction to Node.js

- Framework of Node.js
- Installing Node.js
- Using Node.js in executing scripts

Overview of Node Projects

- The Node Project Manager
- Creating a project
- The package.json configuration file
- Local vs Global package installation

Shrink-wrap

- Define shrink-wrap
- Working with npmvet and outdated command

Working with asynchronous programming

- Asynchronous basics
- Callback functions
- Working with Promises
- Advance Promises
- Using Request module for making API calls

Building a HTTP Server

- The HTTP protocol
- Building an HTTP server
- Rendering a response
- Processing query strings
- Processing posted data

Overview of File System

- Synchronous vs asynchronous I/O
- Path and directory operations
- _dirname and _filename
- Asynchronous file reads and writes

Buffers, Streams and Events

- Using buffers for binary data

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Multi-Processing in NodeJS

- Working with child process API
- Working with cluster API for multi-core servers

Introduction to ExpressJS

- The model-view-controller pattern
- Defining Jade templates
- Configuring Express
- Postman configuration
- Using REST
- JSON Data
- Reading POST data
- CRUD operations
- Adding middleware

Express JS with MongoDB and SQLite

- The connection of Node.js with database
- RDBMS databases and NoSQL databases
- Connecting to RDBMS and MongoDB databases
- Performing CRUD operations

Socket.io, The Front-end, and A Chat App

- How to add Socket.io to your app
- Exploring the Front-end
- Sending Live data back & Forth
- Creating the Front-end user interface
- Showing messages in App
- Working with time
- Timestamps

Introduction to Task Managers with unit testing

- Working with gulp and grunt
- Working with unit and E2E testing

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