

## Node JS Syllabus

### **Pre-requisite / Target Audience:**

- ❖ Basic Knowledge of JavaScript and OOPS
- ❖ Knowledge of ES6

### **Module 1:- Introduction to Node JS**

In this module, you learn What is Node JS and advantages of Node JS and How Node JS Works and the difference between the traditional web server and what are the limitations of the traditional web server modal.

- ❖ Introduction
  - ❖ What is Node JS?
  - ❖ Advantages of Node JS
  - ❖ Traditional Web Server Model
  - ❖ Node.js Process Model
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### **Module 2:- Setup Dev Environment**

In this chapter, you will learn about the tools required and steps to setup development environment to develop a Node.js application and to work with the REPL to work with the Console.

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

### **Module 3:- Node JS Modules**

In this chapter, you will know what is a module, functions and examples. And achieving modularity and separation of concern with the NodeJS Modules.

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

### **Module 4:- Node Package Manager**

This deals with working with npm to install and update packages and Updating your package to the

## SHIVA CONCEPT SOLUTION

NPM and managing and updating your current Packages.

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

### Module 5:- Creating Web server

In this chapter we will learn creating web server, handling GET, POST, PUT and Delete requests and listening to certain port numbers and handling routing with basic web server.

- ❖ Creating web server

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- ❖ Handling http requests
  - ❖ Sending requests

### Module 6:- File System

In this module, we will work with files, reading, writing, updating files, and the concept of chunks, buffers, and uploading files synchronously and asynchronously.

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

### Module 7:- Debugging Node JS Application

In this chapter you will learn how to debug node js application. Debugging is a process of tracing the bugs and performance issues to optimize your code.

- ❖ Core Node JS debugger
- ❖ Debugging with Visual Studio

### Module 8:- Events

In this chapter you work with the events in Node JS, and the significance of the events, writing your own events because Node is event driven framework.

- ❖ EventEmitter class
- ❖ Returning event emitter
- ❖ Inhering events

### Module 9:- Express.JS

## SHIVA CONCEPT SOUTION

In this chapter you will learn how to use express framework to create web applications. Express is the most popular framework to build efficient web applications with minimum coding.

- ❖ Configuring routes
- ❖ Working with express

### **Module 10:- Serving Static Resources**

In this chapter you will learn how to serve static html pages to the browser, and serving other file formats and restricting certain files.

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In this you will to serve static resources with built in middle ware.

- ❖ Serving static files
- ❖ Working with middle ware

### **Module 11:- Database connectivity**

In this chapter you will learn how to connect to MONGO DB , MYSQL and perform CRUD operations. It is like ADO.net for MS.NET applications and JDBC for java. We will use different Node JS modules to connect with database.

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

### **Module 12:- Template Engines**

In this chapter you learn how use template engines to perform 2 way databinding and appending dynamic data to the webpage and different view engines and their syntax.

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