

Node JS and Express JS

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Node .js

- Introduction to Nodejs
 - What is nodejs
 - A word on eventloop
 - Event driven architecture
 - Blocking vs non-blocking code
 - Setup nodejs
 - Node REPL
 - HelloWorld program
 - Debugging nodejs app
- Modules in JS
 - Understanding exports and require
 - Creating modules
 - Importing modules
 - Quick tour on npm
 - Installing 3rd party modules
- Events & streams
 - Significance of Events
 - EventEmitter class
 - Emitting and listening to events
 - Types of streams
 - Working with streams
 - Composing streams using pipe
- Working with Process and File System
 - Process object
 - Handling exceptions at process level
 - Listening to process events
 - Working with file system using fs module
 - Creating, Copying, Deleting files
 - Creating, Copying, Deleting directories

- Watching for file changes

Express .js

- Expressjs Introduction & Setup
 - Installing express
 - First App with express - Demo
 - Little about routes
 - Little about Express middleware
 - Serving static files with express
 - Express application generator
 - What is expressjs
- Routing in Depth
 - Route Methods
 - Route Paths
 - Parametrized Routes
 - Route Handlers
 - Express Router
- Middleware
 - Types of middleware
 - ◆ Application
 - ◆ Router
 - ◆ Error
 - ◆ Builtin
 - ◆ Thirdparty
 - Error middleware
 - Bodyparser, cookie parser, session management
- Template Engines
 - What are template engines
 - EJS
 - Jade
 - Handlebars
- Expressjs security
 - Authentication
 - JWT
 - Securing routes
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- Realtime programming with Socket.io
- Scaling nodejs applications
 - The Child process model
 - exec, spawn, and fork functions
 - Using the Cluster module