



Real Time College

Course: Node JS

Duration: 60 Hours

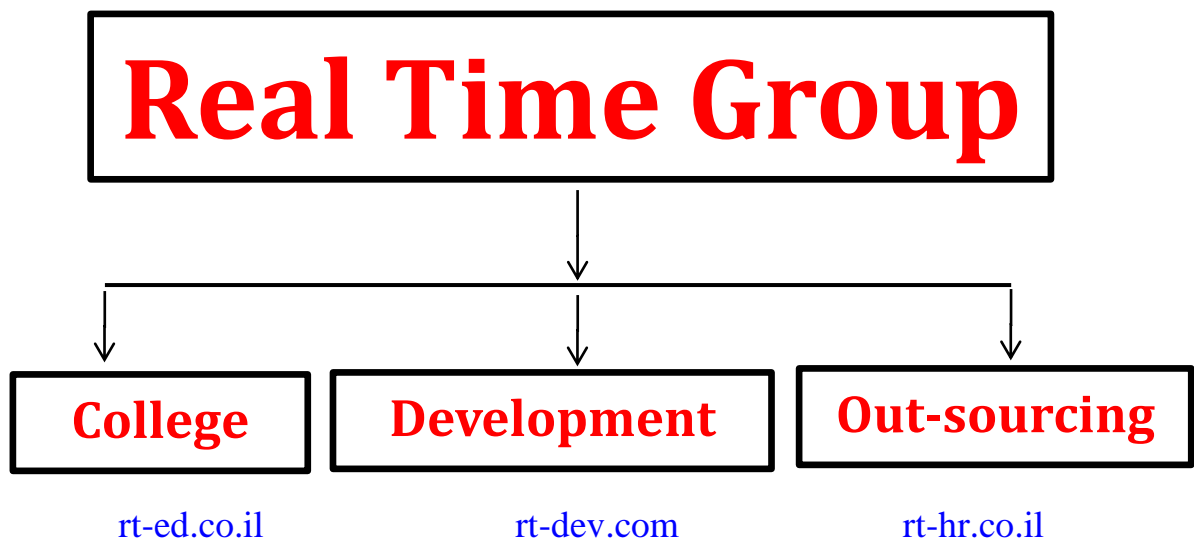
Hands-On-Training: 50%



Real Time Group is a multi-disciplinary dynamic and innovative Real-Time O.S. and Embedded Software Solutions Center, established in 2007.

Providing Bare-Metal and Embedded Linux solutions, professional services and consulting, end-to-end flexible system infrastructure, outsourcing, integration and training services for Hardware, Software and RT-OS \ Embedded Systems.

The company is divided into the following three Divisions:



Training Division:

Professional Training Services for Hardware, Software, RT-OS and Embedded systems industries.

We provide the knowledge and experience needed to enable professional engineers to Develop, Integrate and QA Hardware, Software and Networking Projects.

In order to insure experience, all courses are practical – hands-on-training. The latest Development, QA and Automation equipment which are adopted by the industry are used.

All students are supplied with Development-Boards for home-work and course projects.

Course Overview:

NodeJS is a software platform that allows you to create server-side programs in JavaScript. Its distinctive feature is an asynchronous library, which greatly increases the ability of a NodeJS server to respond to requests from a large number of clients.

The course covers the NodeJS architecture, the Common JS module system, the NPM builder, and the use of NodeJS as a web server. The popular Express MVC framework is studied, demonstrates how to develop an HTTP server based on Express, and also deals with sessions, file system, database (using MongoDB as an example), debugging NodeJS applications, using WebSocket as an alternative to HTTP.

Who should attend:

- Developers of the server side of WEB applications.
- Developers who provide interaction of client web applications with ready-made enterprise services,
- Web developers.

Prerequisite:

- Familiarity with HTML / CSS
- Knowledge of modern JavaScript.
- Basic knowledge of object-oriented programming

Node JS

1. Introduction to Node.js

- What is Node.js. Beginning of work
- First application

2. The Basics of Node.js

- Modules
- Working with modules
- The global object and global variables
- Passing parameters to the application
- NPM. Package.json. Installing modules. Defining commands
- Nodemon
- Asynchrony in Node.js
- Working with files
- Developments
- Stream
- Pipe

3. Server

- Server creation
- File upload
- Templates

4. Express

- Getting started with Express
- Request processing pipeline and middleware

- Sending a response
- Static files
- Routing
- Call forwarding
- Transferring data to the application. Query string parameters
- POST requests and submitting forms
- Route parameters
- Router
- JSON and AJAX
- Handlebars EJS Pug Views and View Engine

5. Node.js and MongoDB

- Getting started with MongoDB
- Adding and Retrieving Data in MongoDB
- Deleting Documents in MongoDB
- Updating documents in MongoDB
- Express and MongoDB
- Mongoose
- Defining a schema in Mongoose
- CRUD in Mongoose
- Express and Mongoose

6. MySQL

- MySQL connection
- Executing queries against MySQL
- Promise API
- Basic data operations
- Knech

7. MVC Pattern

- Controllers
- Models and views
- MongoDB Database Communication