

Updated 10/10/2024

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Express Training

3 days (21 hours)

Presentation

This minimalist framework for Node.js is designed to simplify the development of web applications and APIs. Our Express.js training course will enable you to create fast, robust servers with efficient route and middleware management.

During this course, you'll learn the fundamentals of Express.js, including route management and the use of middleware to process requests and responses. Error handling and query parameters will also be covered.

You'll explore advanced features such as database integration with [ORMs](#) like Mongoose, and performance optimization using caching and compression techniques.

Thanks to this framework, your teams will acquire skills in back-end development, RESTful API creation and Node.js server architecture. You'll be able to design scalable, maintainable web applications to reinforce your web development expertise.

As with all our training courses, this one will include the [latest developments](#) in Express.js.

Objectives

- Understanding and configuring Express.js: mastering the fundamental concepts and installation of an Express project
- Managing routes, middleware and data validation: Creating and organizing routes, using and implement middleware, and validate data efficiently
- Handling and integrating databases: Use MongoDB with Mongoose or MySQL with Sequelize to perform CRUD operations

- Ensure security and apply best practices: Implement authentication and authorization and structure project according to development best practices

Target audience

- Web developers
- Professionals

Prerequisites

- Knowledge of JavaScript
- Understanding Node.js
- Web development
- Experience with development tools

OUR EXPRESS TRAINING PROGRAM

Introduction and basic configuration

- Introduction to Express.js
- Installing Node.js and Express
- Creating and configuring an Express project

Route management

- Basic route concepts
- Creating simple routes
- Using route parameters and queries

Middleware

- Understanding the middleware lifecycle
- Use integrated middleware (`express.json()`) and third-party middleware (`morgan`, `cors`)
- Creating customized middleware
- Using workflow templates
- Best practices for task and workflow management

Databases

- MongoDB with Mongoose
 - Introduction to MongoDB and Mongoose
 - Configuring and connecting to MongoDB
 - Data modeling with Mongoose
- MySQL with Sequelize
 - Introduction to MySQL and Sequelize
 - MySQL configuration and connection
 - Data modeling with Sequelize

Data validation

- Introduction to data validation
- Using Joi to validate data schemas
- Integrating validation into the data flow

CRUD operations

- General CRUD concepts
- MongoDB specifics with Mongoose
- MySQL specificities with Sequelize

Error management

- Error handling with Express
- Creating custom error handlers

Authentication and authorization

- Authentication and authorization concepts
- Implementing JWT for authentication
- Roles and permissions management

Advanced and best practices

- Modular project structure
- Best practices for efficient Express.js development

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.