

# Creating backend applications using Express.js

Course code: JS\_EXPRESS1

This course is designed for programmers who want to use JavaScript server-side, either for creating interactive server-side applications or for creating REST APIs. Participants will learn about request processing using middleware functions, creating server-side HTML applications, and creating REST APIs. The course assumes knowledge of HTML at the [HTMLCSS] course level and moderately advanced JavaScript programming at the [JS\_PROG2] course level.

## For whom the course is intended

- Intermediate JS programmers who want to use server-side JavaScript

## What we will teach you

- The basic Request/Response model in Express
- Routing
- Working with middlewares
- Template libraries for HTML
- Creating and consuming REST APIs

## Required Entry Level Knowledge

- Knowledge of HTML at course level [HTMLCSS].
- Course-level knowledge of JavaScript [JS\_PROG2]

## Course outline

### Introduction

- HTTP
- Node.js and createServer()
- What is express.js
- Development environment
- Hello World
- Express generator

### Basic HTTP work

- Reading a request
- Generating and sending a response
- Handling static files

### Routing

- Simple routing
- Nested Routes
- Patterns
- Router object
- Parametric routers
- url query parameters
- custom parameters (e.g. /todo/:id)

### Middleware

- Built-in middlewares
- Custom middleware
- Data sharing via request object
- logging
- error management
- session
- authentication/authorization
- validation

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HTML generation using template

- Setting up the template engine
- Pug (ex Jade)
- Data presentation
- Conditional and repeated rendering
- Mixin

REST API creation

- JSON body parser
- CORS
- OpenAPI

Express and Typescript

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