Express Intro

Node.js framework

What is express ?

Express is a **lightweight framework built for Node that simplifies web development.**

It provides extra tools **for building web applications**, **the most common functionalities** being:

- managing outside **connections (e.g. http requests)**
- reading from and writing to a **database**
- sending **html and json files**

Simple express server

Let’s look at a very minimalist Express server with the following features:

- **accept GET requests to ‘/’** (only)
- **response** is always a string ‘Hello World!’
- **listen to requests** on port 3000

```
const express = require('express');
const app = express();
const port = 5000
```

```
app.get('/', (req, res) => {
 res.send('Hello World!')
});
```

```
app.listen(port, () => {
 console.log(`Example app listening on
port ${port}`)
});
```

Express methods

Router methods

All the http methods we know (and more) are available in the router:

- get()
- post()
- put()
- delete()
- ...

For a full list, see app.METHOD.

```
app.get('/', () => {});

app.post('/', () => {});

app.put('/', () => {});

app.delete('/', () => {});
```

Express methods example

Let’s imagine a movie api where we can manipulate the data through different methods.

As we don't know yet how to manipulate a database we will manipulate an array for now.

First we will create our array of movies.

```
const movies = [
    {id : '', movie : ''},
    {id : '', movie : ''},
     {id : '', movie : ''}
]
```

Get method

Here we return our array by accessing our newly created api : /api/movies

```
app.get('/api/movies', (req, res) => {
    res.send(movies)
})
```

Here we access the id added in the url by the params !

```
app.get('/api/movies/:id', (req ,res) => {
    let id = req.params.id
    let movie = movies.find(movie => movie.id === parseInt(id))
    res.send(movie)
})
```

Post method

```
app.post('/api/movies', (req, res) => {
    const movie = {
        id : movies.length + 1,
        name : req.body.name
    }
    movies.push(movie)
    res.send(movies)
})
```

Put and delete

```
app.put('/api/movies/:id', (req, res) => {
      let {id} = req.params
      const movie = movies.find(e => e.id === parseInt(id))
      movie.name = req.body.name
      res.send(movie)
  })

  app.delete('/api/movies/:id', (req, res) => {
      let {id} = req.params
      const movie = movies.find(e => e.id === parseInt(id))
      const index = movies.indexOf(movie)
      movies.splice(index, 1)
      res.send('My movie has been deleted')
  })
```

Practice

- Create your own API using your array in the theme of your choice
- Use postman