

COURSE

ExpressJS – NodeJS whale

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Introduction to ExpressJS: Crafting Web applications

About me



Just quick stuff

Name: Bektemirov Aziz

Position: Middle Software Engineer at Vention

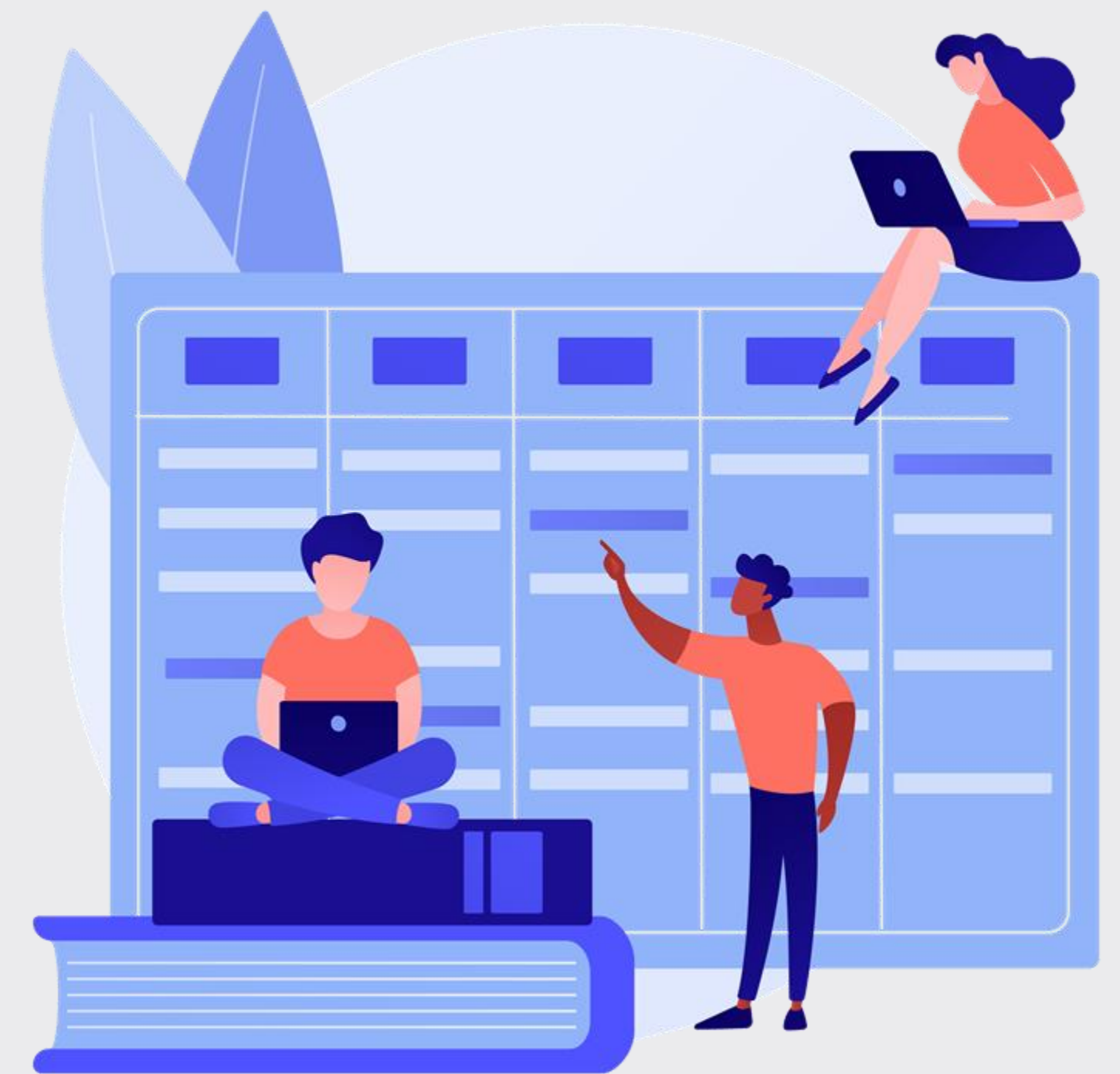
Education: BS in MIS

Tech Stack: Frontend (React.js, Next.js), Backend (Node.js, Express.js, Nest.js)

Motto: Anything that can be written in JavaScript, would be written in JavaScript

Agenda for today

1. Why ExpressJS
2. What is ExpressJS
3. ExpressJS and Architecture
4. Middlewares
5. Routing in ExpressJS
6. Building basic ExpressJS app



Why ExpressJS?

```
import { createServer } from "node:http";

const server = createServer((req, res) => {
  const requestUrl = req.url;

  if (requestUrl === "/") {
    res.writeHead(200, { "Content-Type": "application/json" });
    res.write(JSON.stringify({ message: "Hello, world!" }));

    return res.end();
  }
});

server.listen(9087, () => {
  console.log("Server running at http://localhost:9087/");
});
```

NodeJS has build-in HTTP module

- Cumbersome
- No native support of route params
- Everything is in one place
- Difficult to read and maintain

Looking at Node.js World

express

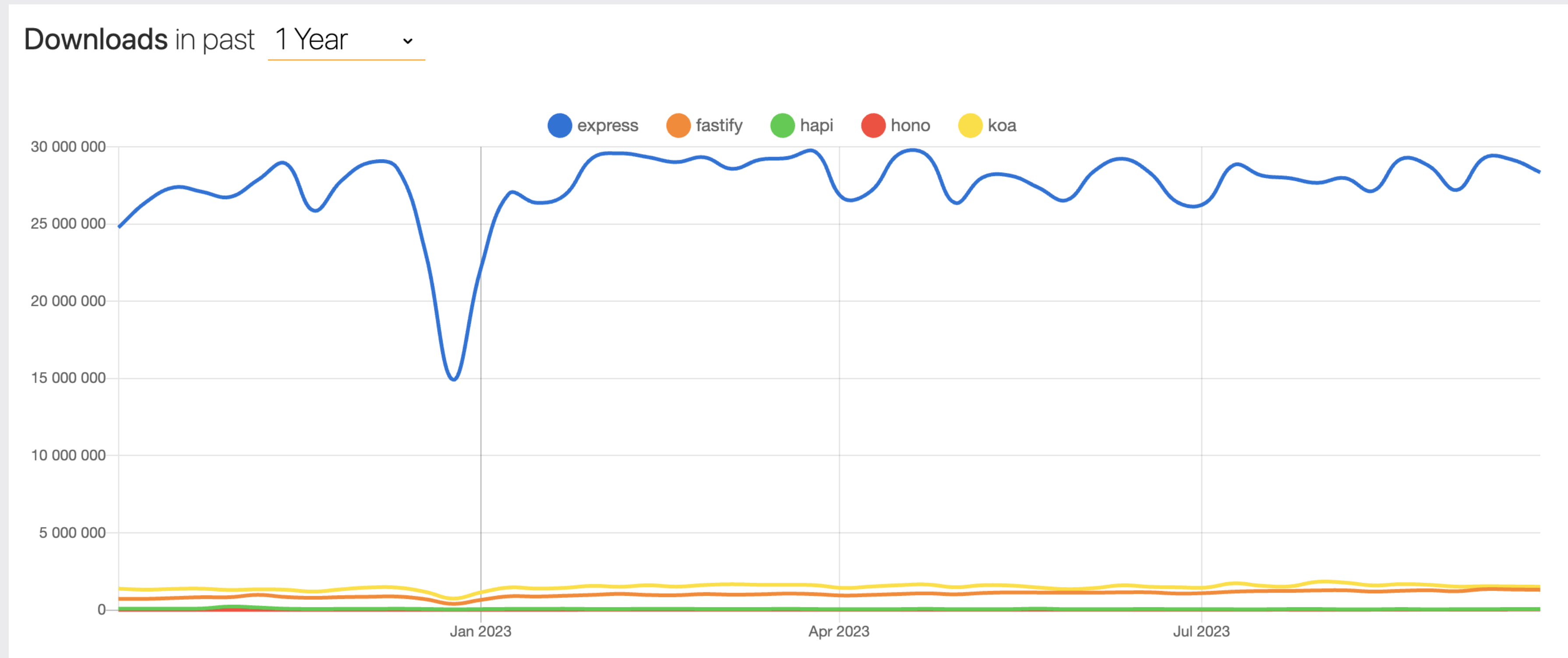
fastify



koa 

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Looking at Node.js World - Trends



ExpressJS is dominating

What is ExpressJS?

express

A minimal and flexible web application framework
for Node.js

Main ExpressJS features

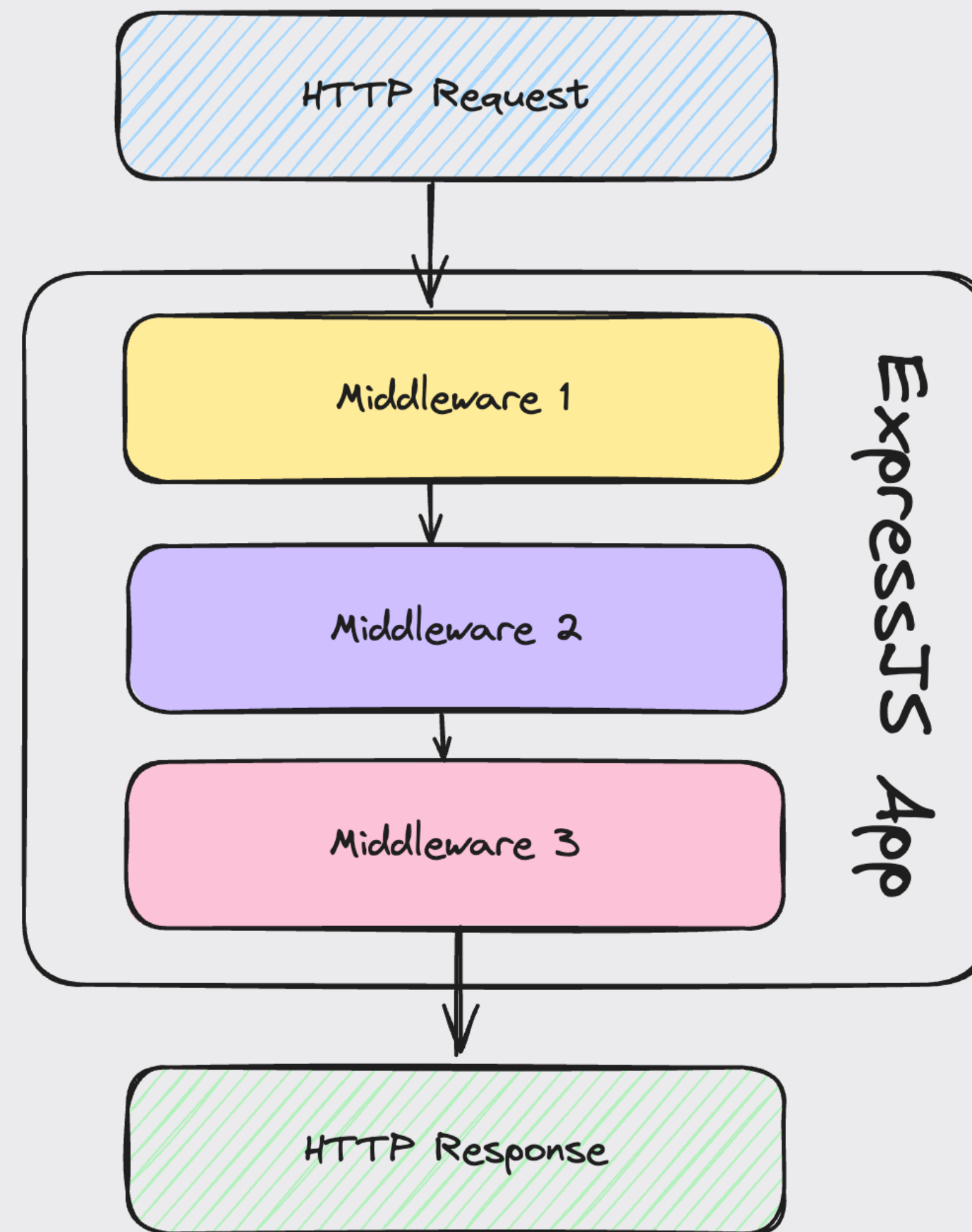
- Routing
- Simplicity
- Rich ecosystem
- Middleware
- Lightweight

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

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

app.listen(port, () => {
  console.log(`Server is running at http://localhost:${port}`);
});
```


ExpressJS "Architecture"



What is Middleware?



Middleware is a function that intercepts and processes HTTP requests and responses during the request-response cycle. It has access to the request and response objects

- From technical perspective

Middleware - What?



Let's try with an example

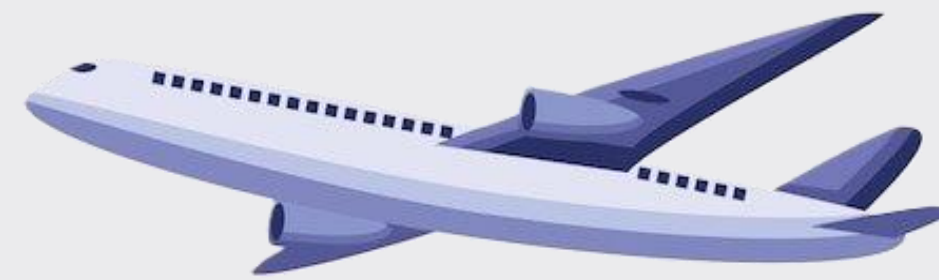
Middleware and Airport

Imagine you're at an airport, and you have to go through several checkpoints

- Check your passport,
- Scanning your luggage
- Check your ticket
- Go through the customs



Middleware and Airport



Each checkpoint (middleware) performs a specific task before allowing you (the request) to proceed to your flight (the response).

Routing

Routing in ExpressJS maps URLs and HTTP methods to specific handler functions that process and return the appropriate response

- GET
- POST
- Etc.

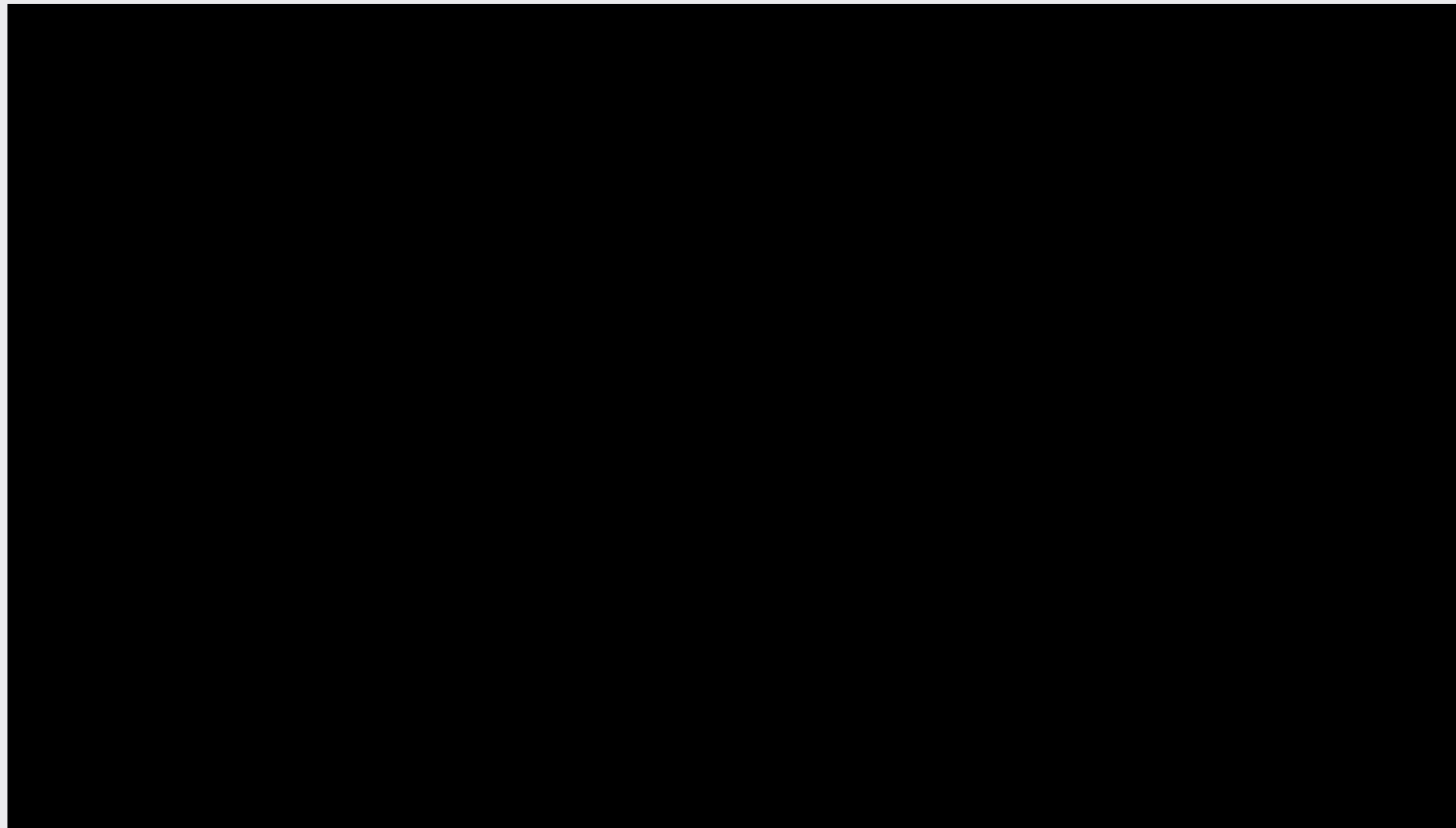


Routing - Example

```
app.get("/", (req, res) => {  
  res.json({  
    statusCode: 200,  
    message: "Welcome to the Event Service API",  
  });  
});
```

Example of handling of GET request using
ExpressJS

Let's do some coding!



Any questions?

Thank you very much!

