Programowanie Aplikacji Internetowych

Javascript / Typescript stack

Plan na dziś

- Javascript
- React
- Express
- Typescript

Javascript

- lightweight, interpreted,
- just-in-time compiled,
- first-class functions,
- imperative, and declarative (e.g. functional programming) styles;
- ECMAScript.

więcej na developer.mozilla.org

Nodejs

- Node.js to otwarto źródłowe i międzyplatformowe środowisko uruchomieniowe dla języka JavaScript;
- Oparte jest o silnik wykonywania kodu JavaScript o nazwie V8;

npm

- manager pakietów;
- najlepiej zarządzać z pomocą nvm;
- `npx`.

Express

- Fast server-side development;
- Middleware;
- Routing;
- Templating.

Express - helloworld

```
const express = require("express");
const app = express();
const port = 3000;

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

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

Express

- Struktura wygenerowanego projektu:

```
npx express-generator  --view=pug myapp
```

- `app.js`, `routes/`, `public/` i `views/`.

Express

- routes;
- template engines;
- static.

React

Benefits:

- JSX - JSX is a syntax extension to JavaScript with react;
- Virtual Document Object Model (DOM) - This defines how documents are accessed and manipulated on a web page;
- Performance - There are several ways to speed up the react application by using virtual DOM because it reduces the re-render time;
- One-way data-binding - Information flows in one direction.

React

- React Props
- ReactJS State
- ReactJS Components
- React with Redux

Typescript

- TypeScript is JavaScript with syntax for types;
- `npm install @types/http`.

Dziękuję za uwagę

Backup slides