ReactJS Application Development

using ReactJS, Express and TypeScript

About me

Trayan Iliev

– CEO of IPT – Intellectual Products & Technologies

– Oracle® certified programmer 15+ Y

– end-to-end reactive fullstack apps with Java, ES6/7, TypeScript, Angular, React and Vue.js

– 12+ years IT trainer

– Voxxed Days, jPrime, jProfessionals, BGOUG, BGJUG, DEV.BG speaker

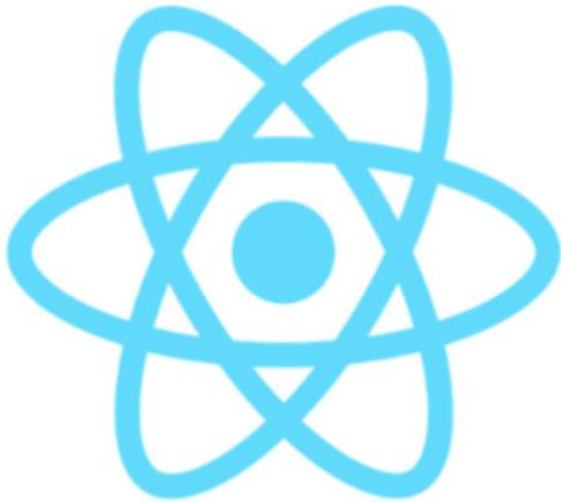– Organizer RoboLearn hackathons and IoT enthusiast

The Course Main Goals

The course provides in-depth study of state-of-the-art *ECMAScript and ReactJS* platform for rapid development of modern, component-based, mobile-first, responsive web applications, that are easy to extend and maintain.

Time Schedule

- 12.40 – 14.10 – Block 1

- 14.10 – 14.20 – Break

- 14.20 – 15.50 – Block 2

- 15.50 – 16.00 – Break

- 16.00 – 18.00 (17.00, on 24.09, 28.09 and 01.10) – Block 3

Where to Find The Code and Materials?

https://github.com/iproduct/fullstack-typescript-react

Why to Attend This Training?

What will you learn?

You Will Learn How To:

- Develop ECMAScript projects – front-end with React + Redux, using NodeJS development platform;

- Build reusable React components,

- Integrate them in a full-stack project using REST/JSON APIs;

- Use React Router v5 to develop single page apps (SPA)

- Employ Redux for scalable and predictable application state management

- Test and debug React applications

Course Schedule (1)

- Introduction to HTML5, CSS and JavaScript – 6h

- HTTP Client and Fetch APIs – 3 h

- Novelties in ES6+ – 3 h

- Single Page Applications (SPA) development with ReactJS and ECMAScript – 1h

- Building React components and applications – 3 h

- JSX in depth – 4h

- Working with forms – 2h

- Components composition in depth – 4h
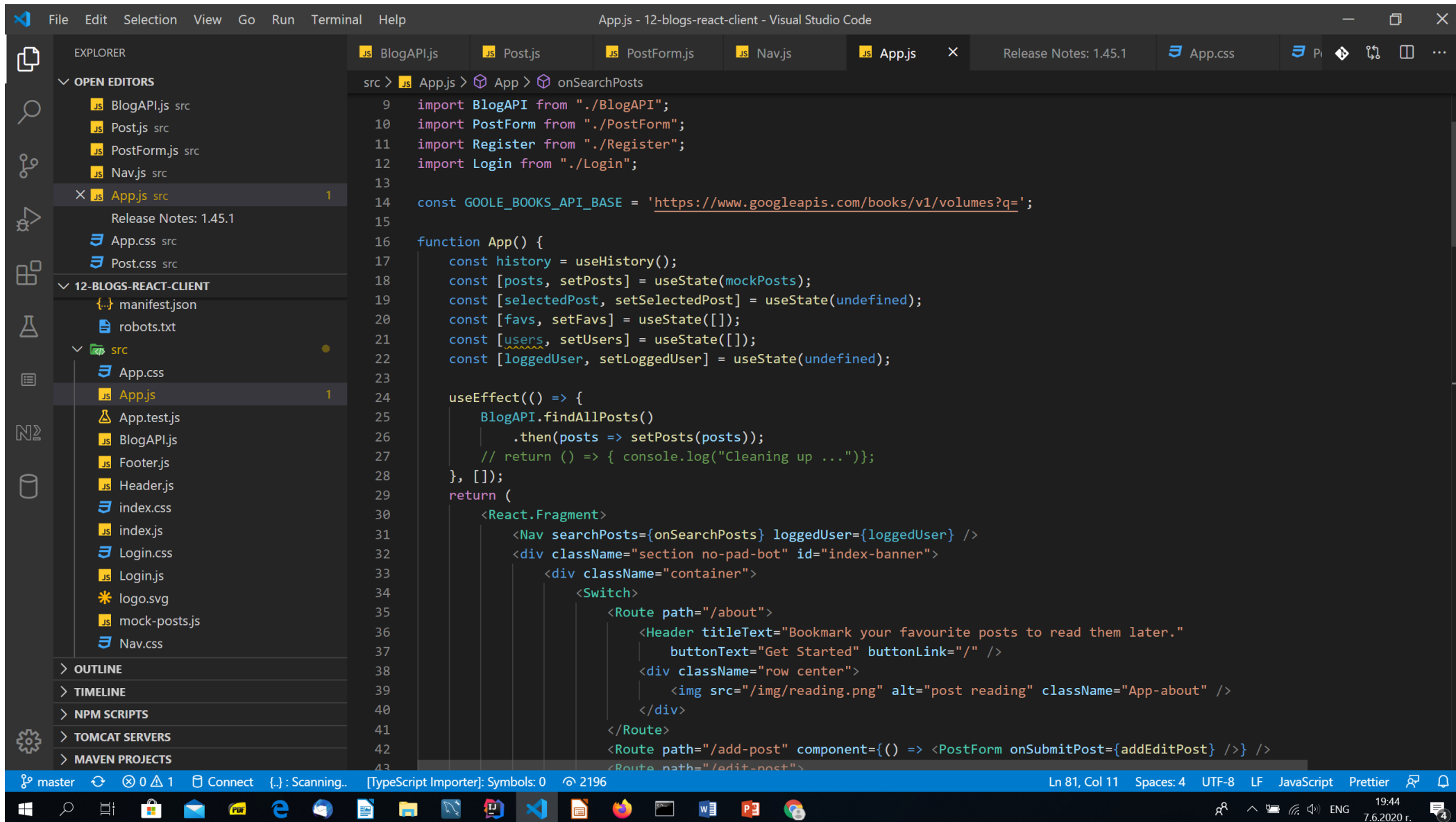
- New lifecycle methods – 2h

Course Schedule (2)

- Building purely functional components using new Hooks API – 6 h

- Other novelties in React 16+ - 1h

- Dependency Injection (DI) of custom application services using React Context – 2 h

- SPA routing using React Router v5 – 3 h

- Testing React Components using Jest and Enzyme – 2h

- Using Component Libraries: Material-UI – 2h

- Redux – predictable state container for JavaScript apps – 3h
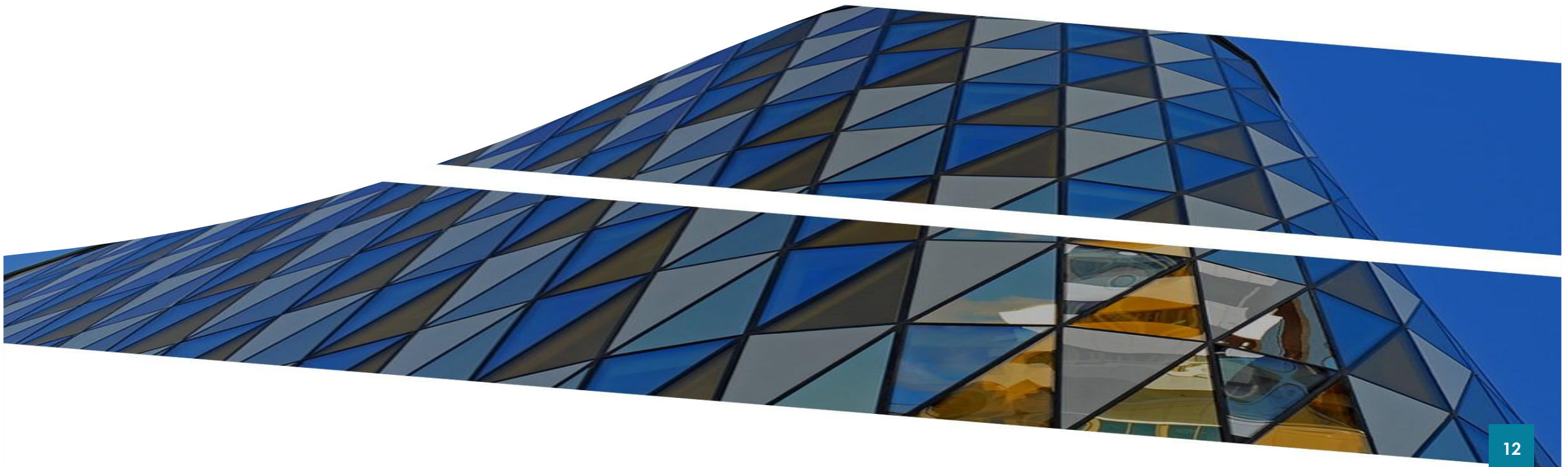
Software to Install

- NodeJS – https://nodejs.org/en/download/current/

- Visual Studio Code – https://code.visualstudio.com/download

- MongoDB Community Server –
  https://www.mongodb.com/try/download/community
  Don't forget to install MongoDB Compass (GUI) too.

- MySQL Community Server v8 – https://dev.mysql.com/downloads/mysql/

- MySQL Workbench – https://dev.mysql.com/downloads/workbench/

- Yarn package manager for NodeJS –
  https://classic.yarnpkg.com/en/docs/install/#windows-stable

- Chrome Web Browser

Visual Studio Code

Introduction to HTML5, CSS & JavaScript

Web design technologies recap

Introduction to HTML 5

Base tags, semantic markup, styling

We will follow the HTML 5 Tutorials at W3Schools:

- HTML Elements

- Styles and formatting

- Integration with CSS

- Basic building blocks: links, images, tables, lists

- Block and inline elements

- Ids and classes. Basic CSS selectors

- Adding behaviour with JavaScript

- Basic layouts with HTML and CSS

- Semantic markup

Quiz Time

https://www.w3schools.com/quiztest/quiztest.asp?qtest=HTML

Exercises

https://www.w3schools.com/html/exercise.asp

Introduction to CSS

Selectors, positioning, backgrounds, box model and layout, grid system, Flexbox

We will follow the CSS Tutorials at W3Schools:

- Selectors

- Positioning

- Colours

- Gradients

- Backgrounds

- Borders

- Box model

- Text and fonts

- Horizontal and vertical alignment

We will follow the [CSS Tutorials at W3Schools](#):

- Complex selectors

- Pseudo-classes and pseudo-elements

- How-to's: navigation bar, dropdowns, gallery

- Forms styling

- Counters

- CSS units

- Selectors specificity

- Web page layout using CSS floating

- Animations and transforms. Styling images

We will follow the CSS Tutorials at W3Schools:

- CSS variables (custom properties) - https://developer.mozilla.org/en-US/docs/Web/CSS/Using_CSS_custom_properties

- calc() Function - https://developer.mozilla.org/en-US/docs/Web/CSS/calc, https://css-tricks.com/creating-color-themes-with-custom-properties-hsl-and-a-little-calc/

- Responsive web design (RWD)

- CSS *@media* rule and media queries

- Flexbox - https://css-tricks.com/snippets/css/a-guide-to-flexbox/

- Responsive page layout using Flexbox

- CSS Grid Layout - https://css-tricks.com/snippets/css/complete-guide-grid/, https://css-tricks.com/auto-sizing-columns-css-grid-auto-fill-vs-auto-fit/

Quiz Time

https://www.w3schools.com/css/css_quiz.asp

Exercises

https://www.w3schools.com/css/exercise.asp

Homework 1: MyBlogs - Page Layouts

https://github.com/iproduct/fullstack-typescript-react/wiki/Homeworks

Thank's for Your Attention!

Trayan Iliev

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