React.js / JSX

**DEADLINE:** 08/05/2018

## FOLDER STRUCTURE

homework\_15/

├─ node\_modules/ (this folder will appear after `npm install`)

└─ src/

├─ assets/

└─ ...

├─ features/

└─ (your folders/files with source code)

├─ styles/

└─ ...

├─ app.js

├─ index.html

├─ index.scss

└─ root.js

└─ templates/

└─ (design templates and video)

├─ .babelrc

├─ package-lock.json

├─ package.json

└─ webpack.config.babel.js

## PREREQUISITES

Requires `node.js` and `npm` (node.js includes npm by default) to be installed.

## HOW TO RUN

1. Download homework
2. Extract files to your folder
3. Open cmd (terminal, bash)
4. Navigate to your folder which contains package.json file
5. Run `npm install` command
6. After all modules have been installed, use `npm run dev` command to run local server with project. (Please note, that `npm run dev` command requires webpack.config.babel.js config file, don’t remove/move/change it)
7. Navigate to `<http://localhost:9000/>`

## TASK

Create the “Color selector” web site using React.js library. The “Color selector” web site allows user to find and select colors.

This site has the only one page. The page contains following elements:

* Filter
* Selected colors
* Amount of color items
* List of available color items

Before start to write code, you should divide this elements into containers/components ([Think in React](https://reactjs.org/docs/thinking-in-react.html) article may be useful).

After you have divided elements into containers/components you can start to write your code.

Before populating your components with data, you have to [fetch](https://developers.google.com/web/updates/2015/03/introduction-to-fetch) (to get from somewhere) this data, haven’t you? In our case we are going to use the endpoint:

<https://epam-fe-homework-15.firebaseio.com/colors.json>

This endpoint returns an array with colors. Each item is an object which contains information about the color:

* Id - The unique identifier
* Color - The color value in hex format
* Tags - Human-readable synonym of the color

You have to store this data somewhere in your container and use it where it need.

### FUNCTIONAL REQUIREMENTS

Feature: The page default view is shown

**Scenario: User navigates to the page for the first time**

Given: The page is opened for the first time

When: NA

Then: The Color filter is in focus and available

And: The Color filter has the 'Color's name, tags' placeholder

And: The 3 Selected colors element placeholders (empty) are available

And: Amount of available colors (Colors: N) is shown as a text

And: List of available colors (sorted by id in ascending order) as a color-thumbnails with the '+ Add' button is available

**Scenario: User navigates to the page for the first time**

Given: The page is opened for the first time

When: User waiting for data fetching

Then: The Color filter is available

And: The Color filter has the 'Color's name, tags' placeholder

And: The 3 Selected colors element placeholders (empty) are available

And: Amount of available colors (Colors: N) is shown as a text

And: The blank page with `Loading…` message should be shown at center of screen

**Scenario: User navigates to the page to filter colors thumbnails by existing value**

Given: The page is opened

When: User enter the value which exist within color’s tags values

Then: The Color filter is in focus and available

And: The Color filter has the entered value

And: The 3 Selected colors element placeholders (empty) are available

And: Amount of available filtered colors (Colors: N) is shown as a text

And: List of available colors (sorted by id in ascending order) which match the rule as a color-thumbnails with the '+ Add' button is available

**Scenario: User navigates to the page to filter colors thumbnails by non existing value**

Given: The page is opened

When: User enter the non existing value within color’s tags values

Then: The Color filter is in focus and available

And: The Color filter has the entered value

And: The 3 Selected colors element placeholders (empty) are available

And: Amount of available filtered colors (Colors: N) is shown as a text

And: The blank page with `There are no colors found` message should be shown at center of screen.

**Scenario: User navigates to the page to select a color**

Given: The page is opened

When: User press the ‘+ Add’ button inside color thumbnail

Then: The Color filter is in focus and available

And: The Color filter has the 'Color's name, tags' placeholder

And: The 1 Selected color element with small red circle with cross is available

And: Amount of available colors decreased by 1 (Colors: N) is shown as a text

And: List of colors (sorted by id in ascending order) without chosen color as a color-thumbnails with the '+ Add' button is available

**Scenario: User navigates to the page to select 10 colors**

Given: The page is opened

When: User select 10 different colors by pressing ‘+ Add’ button inside color thumbnail

Then: The Color filter is in focus and available

And: The Color filter has the 'Color's name, tags' placeholder

And: The 5 latest Selected color element with small red circle with cross is available

And: Amount of available colors decreased by 10 (Colors: N) is shown as a text

And: List of colors (sorted by id in ascending order) without chosen colors as a color-thumbnails with the '+ Add' disabled button is available

**Scenario: User navigates to the page to select 6 colors**

Given: The page is opened

When: User select 6 different colors by pressing ‘+ Add’ button inside color thumbnail

Then: The Color filter is in focus and available

And: The Color filter has the 'Color's name, tags' placeholder

And: The 5 latest Selected color element with small red circle with cross is available

And: Amount of available colors decreased by 10 (Colors: N) is shown as a text

And: List of colors (sorted by id in ascending order) without chosen colors as a color-thumbnails with the '+ Add' button is available

**Scenario: User see the page with 1 selected colors and want to unselect this color**

Given: The page is opened, user has selected 1 color by pressing ‘+ Add’ button inside color thumbnail

When: User unselect 1 color by pressing small red button with cross inside Selected color element

Then: The Color filter is in focus available

And: The Color filter has the 'Color's name, tags' placeholder

And: The 3 Selected colors element placeholders (empty) are available

And: Amount of available colors increased by 1 (Colors: N) is shown as a text

And: List of colors (sorted by id in ascending order) with unselected color as a color-thumbnails with the '+ Add' button is available

**Scenario: User see the page with 10 selected colors and want to unselect this colors**

Given: The page is opened, user has selected 10 colors by pressing ‘+ Add’ button inside color thumbnail

When: User unselect 5 colors by pressing small red button with cross on different Selected color elements

Then: The Color filter is in focus and available

And: The Color filter has the 'Color's name, tags' placeholder

And: The 5 Selected colors element placeholders (empty) are available

And: Amount of available colors increased by 5 (Colors: N) is shown as a text

And: List of colors (sorted by id in ascending order) with unselected color as a color-thumbnails with the '+ Add' button is available

## CODE

Use Google material-icons for icons inside `Add` (plus), `Unselect` (red circle with white cross, where cross is icon from material-icons) buttons.

<i className="material-icons">face</i>

## TEMPLATE

Find template inside homework\_15/templates/

## RESTRICTIONS

* Don’t use any 3rd party plugins/modules
* Don’t modify webpack.config.babel.js file (There is an exception, if you have any troubles with the port number :9000, you can change it to any other)

## BEFORE SUBMIT

* Add comments to component’s functions
* Fix all warnings/errors in browser console in the latest Google Chrome (or Mozilla Firefox)
* Read requirements and compare to your homework result
* Create [.gitignore](https://git-scm.com/docs/gitignore#_description) file on the same level as package.json file. Inside this write `/node\_modules` to prevent this folder to be published.

## USEFUL LINKS

* <https://reactjs.org/docs/hello-world.html>
* <https://medium.com/@dan_abramov/smart-and-dumb-components-7ca2f9a7c7d0>
* <https://medium.com/@thejasonfile/dumb-components-and-smart-components-e7b33a698d43>