IMY 220
Assignment 8:
Node + React.js

Due: Wednesday 19 October @ 13:00

The submission instructions are available on ClickUP. Your assignment will not be marked if you do not follow these instructions.

Instructions

- The aim of this assignment is to create a UI for displaying a list of events in a formatted Bootstrap row of cards.
- Download *index.js*, which contains an array of events. You will have to edit this file and create other files.
- You must use React the recommended way for this assignment. In other words, you must make use of the packages and functionality discussed in Lecture 19 (NodeJS + ReactJS) to be able to use JSX syntax for declaring components. You must also make use of the recommended file structure and define each React component inside its own file as discussed in this lecture.

Section 1 – Event component

After installing all the required modules for being able to transpile and bundle JSX into valid JS and serve a webpage that renders JSX components, create a component called Event in a new file called *Event.js* which receives a single JS object with the details for an event as its prop (in the format given in *index.js*) and renders a Bootstrap card that contains the event's information in the following format:

The above example would thus be the result of rendering the following, given the array of events inside *index.js*:

<Event event={events[0]}>

(Note that this is purely for testing purposes. You will only need to render a EventList component for this assignment, as this will contain multiple Event components.)

Section 2 – EventList component

Write the definition for a component called EventList, which takes two props:
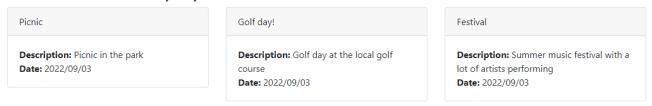
- An array of events in the format given by the array inside *index.js*
- A specific date, which must always be a string

The module must render a list of Event components which falls on the date provided with a heading above which shows the date. The results should be displayed in a Bootstrap row with three cards per row. For example, if the following is rendered:

<EventList theDate={"2022/09/03"} events={events} />
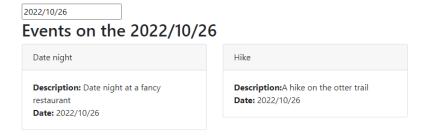
The result should be as follows:

Section 3 – PropTypes

Add extra validation for each component in the form of PropType validation. Each component's props must be required and the PropType validation must be set to the most appropriate type for each component's props.

Bonus Section – Date update form

Add extra functionality for updating the date and the list of events displayed in real-time. This has to be done through a component called DateForm which must be rendered above the list of events inside EventList. As the entered date changes, so should the date displayed in the heading ("Events on the X") as well as the list of events being displayed in cards. You will have to use component state for this to work in real-time. (Also remember to add PropType validation.) For example:

Additional Information

- Refer to the slides and react.js website for help

Submit all the files required for this assignment to work (including the config files for babel and webpack) except for your node_modules directory and its contents.