**CS1300 Assignment Development**

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1. Link to the page: <https://edwardcgeorge.github.io/hotel-filter>

2. How to run code locally

1. Download and unzip the file
2. Open terminal, *cd* into its directory,
3. run *npm install*
4. run *npm start*
5. App runs at localhost:3000

3. Goal of the application

This application shows hotels in California, and each hotel comes with an average rating score from many visitors. User can filter the hotel by rating range and their location, or both. Also, user is allowed to sort any category in ascending or descending order. This gives user a way to find a good hotel for travel. For this assignment, I use just 47 of items, but original data source includes 10k+ hotels in US. If applying all of them, this website would become a very valuable reference site for travel planning.

4. Design of the application

I use CSS grid to divide page into several functional parts, this gives a good learnability for new users. All option buttons are on same line, provide good simplicity and users are easy to memorize their functionality. Whole page is in a consistent skyblue–darkblue–black color pattern, which is clear and aesthetically well. All functional components are reusable React component, good reusability.

Top level component has states: data (original data), displayData (core part, the data for building display list), focus (the item currently displayed in detail), sorted (whether data has been sorted once), functions are passed to lower-level components as props to allow them to modify App’s state.

When user click on filter options or sorting, it will trigger the upper level functions (passing by props) with filter or sorting key, which then will modify displayData to change to the wanted result, and by setState it will re-rendering the whole page. When user click Reset, all states are set back to default.

Special notice for testing:

1. Each location usually only have 1-2 hotels, so I suggest run “filter by rate range” first, then by location; as they will intersect. (“San Francisco” and “San Diego” has multiple hotels)

2. Filtering is one-way process. To do a filtering by another option, it needs reset first.