CS628 Full-Stack Development Web App

**PE02 – Movie List**

School of Technology & Computing (STC)

City University of Seattle (CityU)

**Before You Start**

* You already created a private GitHub repository for all your programming exercises, “cs628-pe-your\_first\_name.”
* You allowed your instructor and the Teaching Assistant to access your GitHub repository for programming assignments.
* The GitHub Codespaces may bill your account according to your usage. Check the price at <https://docs.github.com/en/billing/managing-billing-for-github-codespaces/about-billing-for-github-codespaces>. Please pay attention to the storage and core hours of use free of charge for personal accounts.
* Some steps are not explained in the assignment**.**If you are not sure what to do:
  + Consult the resources listed in your course.
  + If you need help solving the problem after a few tries (~15 minutes), ask a TA for help.

**Learning Outcomes**

Students will be able to:

* Create a movie list component in React. The component will render a list of movies with their titles, genres, and release years. It will allow the user to filter the movies based on the selected genre.

**Problem**

1. Set up a new React application using create-react-app.
2. Create a **MovieList** component that will be the main component of your application.
3. Inside the **MovieList** component, create an array of movie objects. Each movie object should have the following properties:
   * Title
   * Genre
   * ReleaseYear
4. Render the list of movies in the following format:
   * Display the movie title, genre, and release year.
   * Each movie should be displayed as a separate list item or card.
5. Implement a filter functionality:
   * Create a dropdown select element that contains all the unique genres from the movies list.
   * When the user selects a genre from the dropdown, filter the movies based on the selected genre and display only the movies that match the selected genre.
   * If the user selects "All Genres" from the dropdown, display all the movies.
6. Implement the functionality to handle user events:
   * When the user clicks on a movie, displays an alert with the movie title.
7. Use JSX syntax to write the component markup and JSX expressions for dynamic data rendering.
8. Use stateful components to manage the movie list and the selected genre.
9. Use functional components and hooks where appropriate.
10. Use import and export statements to organize your code and components.
11. Apply styles to your components using CSS or any styling approach of your choice.

**Sample output:**

A screen shot of a computer

Description automatically generated with medium confidence

When user clicks on a Movie it should alert the movie title,

A screenshot of a computer

Description automatically generated with medium confidence

When user filters based on the genre, application should filter the movie list,

A screen shot of a computer

Description automatically generated with medium confidence

**Submission**

1. Create a GitHub repository for your programming exercises. The repository name will be “cs628-pe-*your\_first\_name*.”

Graphical user interface, application

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1. Click the Settings menu. Invite your instructor and TA to collaborators.

Graphical user interface, application

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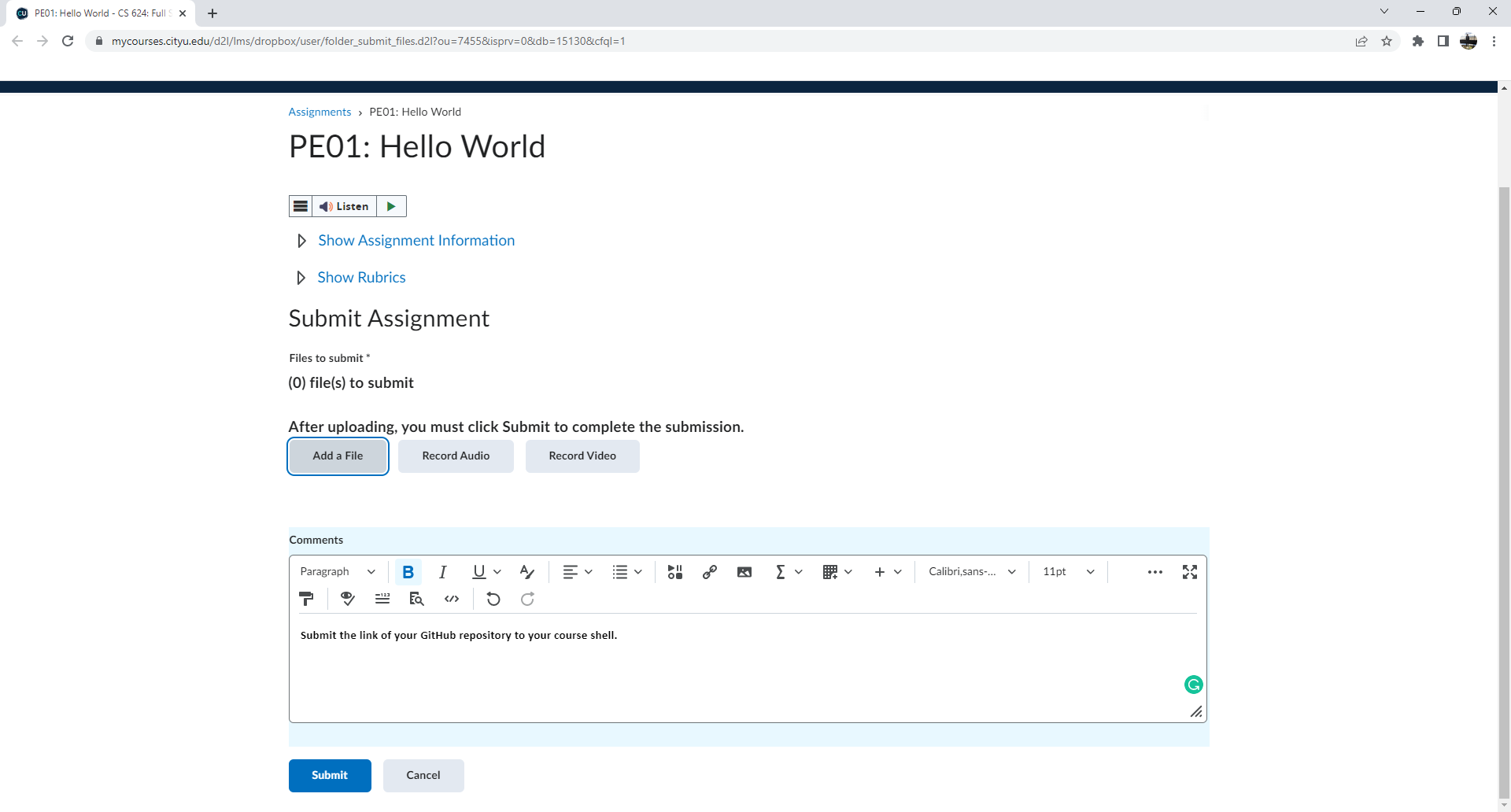
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1. Under the repository, create a directory for the programming exercise 2, “PE02-MovieList.” For example, the screen below shows the directory created for programming exercise 01.

Graphical user interface, application

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1. Finish your programming exercise under the PE02 directory.
2. Write a 150-word analysis report to explain how the program works in [README.md](https://www.markdownguide.org/basic-syntax/) in terms of the [input-process-output model](https://press.rebus.community/programmingfundamentals/chapter/input-process-output-model/). The README.md has three level-1 headings – Input, Process, and Output.
3. Please upload the screenshots of your output to your GitHub repository to demonstrate that you have completed the requirements.
4. Submit the link of your GitHub repository to your course shell through your assignment submission.



Github link: <https://github.com/aliifathi/cs628-pe-Ali-Fathi>

The input-process-output model is used by the Movie List application. It accepts a list of films as input, each of which has information on the film, including title, genre, rating, and year of release. The input may come from a JSON file, user input entered through the command line, or data that is already loaded into the application. To enable effective operations, the program organizes the data into a structured format, like a list or dictionary, after the input has been loaded. Among the actions available to users include searching for a certain movie by title, sorting them by rating, and filtering them by genre. To produce precise and pertinent results, these procedures are carried out using filtering and sorting algorithms. A smooth user experience is ensured by displaying the output as a refined list of movies based on the user's queries, such as a sorted list of the best-rated films or all films in a particular genre.

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