DMIT2008 Theory Assessment: Thinking in React.

Introduction

For this assessment, you will need to prepare a two page report using the concepts in the "Thinking in React" article on a web page of your choosing.

This assessment is to make you think about the architecture of websites and applications. Note: this does not need to be perfect, it just needs to be well thought out and well argued.

Overview of functionality

You can use the "sample report" as a bit of a template to the application.

Please refer to the sample report, if you hand in the sample report or the same site as the sample report, you'll get a zero. As well if you use ChatGPT to write any of this report you'll get a zero.

Required Tasks

- Create a short report, this can be via docx, or a markdown file (use README.md if you do) that will contain all the following points below. You can use any website or app for a challenge of your knowledge. (Note: if you're unsure if you should or should not use a specific site please ask your instructor).
    - **Start with a Mock**
        - Provide a screenshot of the application you'll be using.
        - Discuss the functionality that the application will need.
            - Note: this doesn't need to be perfect it just needs to be a general idea.
        - Provide a sample REST API/JSON data for the page. It should have all the data needed for the UI of the page.
    - **Break the UI into a Component Hierarchy**
        - Identify the components that you're going use and name them accordingly. A component should do one thing (this is called the single responsibility principle).
        - Highlight the different components in an image, you can use boxes or circles using different colors (you can also number them for the next point). You can do this using so many different applications (please ask instructor if you need a suggestion).
        - Identify the components, and clearly state what props they may take and any other functionality it needs.
        - Use a nested list to display the "hierarchy" of the components and how they should interact (refer to the sample report if you're confused about this).
    - **Identify the minimal representation of state**
        - List stateful variables that you've identified and how it relates to the functionality.
        - List why some components needs state or not, and discuss the functionality in terms of state and props.
            - Try to think of everything possible that could pop up.

    - (Bonus) Build a static mockup
        - It doesn't need to work but you can make it work.
        - You get no bonus marks for this if you hand in an old assignment.
- Project restrictions
    - You need to have some state in the application that makes sense at least two or three components that have state, or some type of global application state.
    - You need to have at least 8-9 components otherwise you're using a site that doesn't really need react and as an application.
    - You can't use any of the following companies web sites: Meta, Apple, Airbnb, Twitter, TikTok Amazon, Netflix, Google/Alphabet , and Microsoft
    - Looking for ideas? Look here https://mobbin.com/browse/web/apps use one of the sites for some pieces here.

Marking key

Tasks	Grade	Marks	Total
Start with a mock • Screen shot included. • Functionality described reasonably, JSON/REST API is discussed (if it has one) and sample JSON is given. Note: This is subjective to your arguments, so please refer to the comments below		**1** **5**	
Break the UI into a Component Hierarchy • Image included with breakdown of components highlighted in some way with either numbers or colors for obvious referencing in component hierarchy list • Component Hierarchy list makes sense, props are defined and make sense, other notes are sensible on the component itself. Note: This is subjective to your arguments, so please refer to the comments below		**3** **5**	
Minimal Representation of State. • Stateful variables listed are reasonable and make sense. According to the functionality described in the "Start with a mock" section. • Minimal Representation of state is argued correctly and correctly reflects the functionality of the application. Functionality that wasn't defined with explicit state values was discussed why and where there could be some state (if possible). Note: This is subjective to your arguments, so please refer to the comments below		**3** **5**	
Static Mockup • Static Mockup uses React, props are properly defined, components defined properly. • Hierarchy is the same as the "Break the UI into a Component Hierarchy" section.		**[3]**	
Formatting and Style • Easy to read, formatting is easy to follow. • Uses ChatGPT or any large language model to generate text or does not meet project restrictions.		**-3** **-22**	

Marking Rubric

Marks	5 Marks Criteria
5	**Task was completed with the highest of proficiency adhering to best practices and followed subject matter guidelines all tasks were completed to a professional standard.**
4	**Task was completed well some minor mistakes. Well above average work shows good understanding of the task and high degree of competence**
3	**Satisfactory work some features missing or incorrectly implemented. Show a moderate level of understanding in the task with room for improvement.**
2	**Below average work. Task was poorly complete. Show understanding of the task and the requirements to implement but implementation was poorly executed.**
1	**Some of the task was completed. Showed a lack of understanding in the subject matter and very poorly executed**
0	**Not completed.**

Marks	**3 Marks Criteria**
3	**Proficient shows a high degree of competence in completing task.**
2	**Capable above average degree of competence in completing task**
1	**Satisfactory shows a satisfactory degree of competence in completing task.**
0	**Shows a limited degree of competence in completing task.**

Marks	**1 Marks Criteria**
1	**Task Completed satisfactorily**
0	**Task was not executed.**