React.js Project Assignment

Your task is to **design** and **implement** a web application using React.js. Use a service like Kinvey or Firebase for your **back-end** or create your own with Node.js and MongoDB or a framework in another language (ASP.NET, Spring, Symfony). It can be a discussion forum, **blog system, e-commerce site, online gaming site, social network,** or any other web application by your choice.

1. Application Structure

The application should have:

- public part (accessible without authentication)
- private part (available for registered users) and

1.1 Public Part

The public part of your projects should be visible **without authentication**. This public part could be the application start page, the user login and user registration forms, as well as the public data of the users, e.g. the blog posts in a blog system, the public offers in a bid system, the products in an e-commerce system, etc.

1.2 Private Part (User Area)

Registered users should have personal area in the web application **accessible after successful login**. This area could hold for example the user's profiles management functionality, the user's offers in a bid system, the user's posts in a blog system, the user's photos in a photo sharing system, the user's contacts in a social network, etc.

2. General Requirements

Your Web application should use the following technologies, frameworks and development techniques:

- At least 3 different **dynamic pages** (pages like about, contacts, etc. do not count towards that figure)
- Use React.js for the **client-side**
- Communicate to a **remote service** (via REST, sockets, GraphQL, or a similar client-server technique)
- Implement **authentication**
- Implement **client-side routing**
- Demonstrate use of programming concepts, **specific to the React library**: stateless and state full components, bound forms, synthetic events, React Hooks, Context API, Component Styling…
- Use a **source control system**, like GitHub
- Brief **documentation** on the project and project architecture (as .md file)

Other Requirements

- Apply **error handling** and **data validation** to avoid crashes when invalid data is entered
- Good UI and UX

3. Public Project Defense

Each student will have to deliver a **public defense** of their work in front of the trainers and assistants. Students will have **only 10-15 minutes** for the following:

- **Demonstrate** how the application works (very shortly)
- Show the **source code** and explain how it works

Please be **strict in timing**! On the 15th minute you **will be interrupted**! It is good idea to leave **the last 2-3 minutes for questions** from the trainers and assistants.

Be **well prepared** for presenting maximum of your work for minimum time. Open **the project assets** beforehand to save time.

4. Bonuses

- Use a **state management** solution
- Write **Unit Tests** for your code
- Use a **file storage cloud API**, e.g. **Dropbox**, **Google Drive** or other for storing the files
- Connect to an external API, like Google Maps, AccuWeather, etc.
- Anything that is not described in the assignment is a bonus if it has some practical use

5. Assessment Criteria

General Requirements – 25 %

Functionality Presentation – 50 %

Adequately and clearly demonstrate the requested functionality. Know your way around the application and quickly demonstrate the code.

Answering Questions – 25 %

Answer questions about potential functionality outside the scope of the project.

Bonuses – up to 10 %

Additional functionality or libraries outside the general requirements, with motivated usage.

6. Submission Deadline

You **must** submit your project on the course page no later than 23:59 EST on **18th**. A presentation schedule will be available on the **18th** and will include only the projects that were **submitted beforehand**. Non-submitted projects will **NOT** be evaluated.

7. Restrictions

You can use **parts** (some components, routing configurations, form validation etc...) of the **course workshop**, but you are **NOT** allowed to use the **whole workshop** as your project assignment.