

PCEmpire System Design

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CRC Cards

App.js

Parent Class: None

Subclasses: Main Page Container

Responsibilities

- Main entrance point for App

Collaborators

- React Router
- React

Main Page Container

Parent Class: App.js

Subclasses: Main Page Component

Responsibilities

- Container for Apps main page

Collaborators

- React
- Connect

Main Page Component

Parent Class: Main Page Container

Subclasses: None

Responsibilities

- App's main page

Collaborators

- React
- Bootstrap
- Style.css

API.js

Parent Class: None

Subclasses: None

Responsibilities

- Hold API calls

Collaborators

- TBA

Style.css

Parent Class: None

Subclasses: None

Responsibilities

- Contains themes and colours of Webpage

Collaborators

- TBA

Search Bar Component

Parent Class: TBA

Subclasses: None

Responsibilities

- Provide a search capability for users

Collaborators

- React
- Bootstrap
- Style.css

Menu Bar Component

Parent Class: Main Page

Subclasses: None

Responsibilities

- Provide routes (buttons) to other pages

Collaborators

- React
- Bootstrap
- Style.css

Login Component

Parent Class: Login Container

Subclasses: None

Responsibilities

- Allow user to login to their account

Collaborators

- React
- Bootstrap
- Style.css

Login Container

Parent Class: None

Subclasses: Login Component

Responsibilities

- Container for login

Collaborators

- React
- Connect

Register Component

Parent Class: Register Container

Subclasses: None

Responsibilities

- Allow user to register their account

Collaborators

- React
- Bootstrap
- Style.css

Register Container

Parent Class: None

Subclasses: Register Component

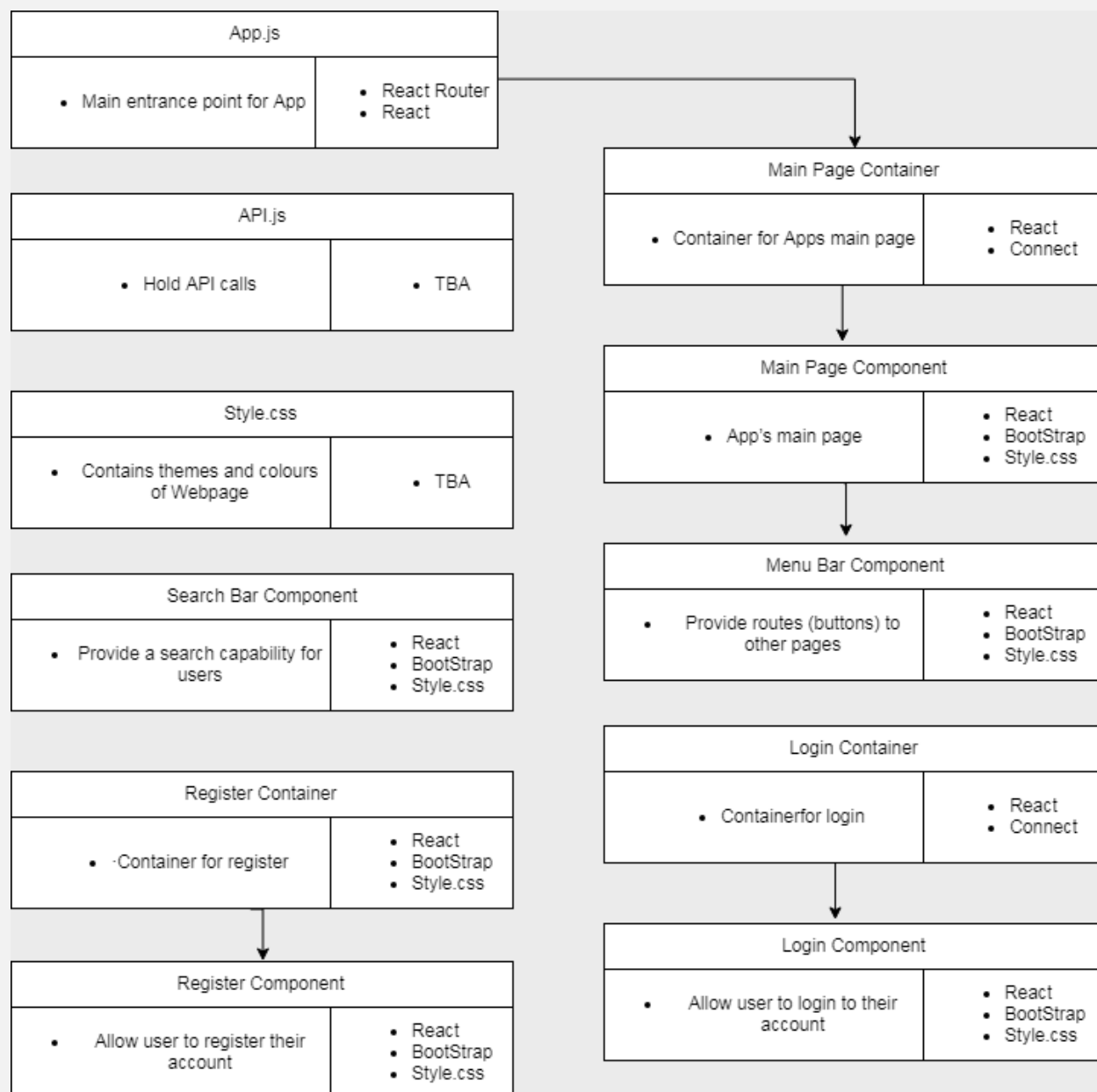
Responsibilities

- Container for register

Collaborators

- React
- Connect

CRC Model



System Interaction

PCEmpire will require the following assets for creation:

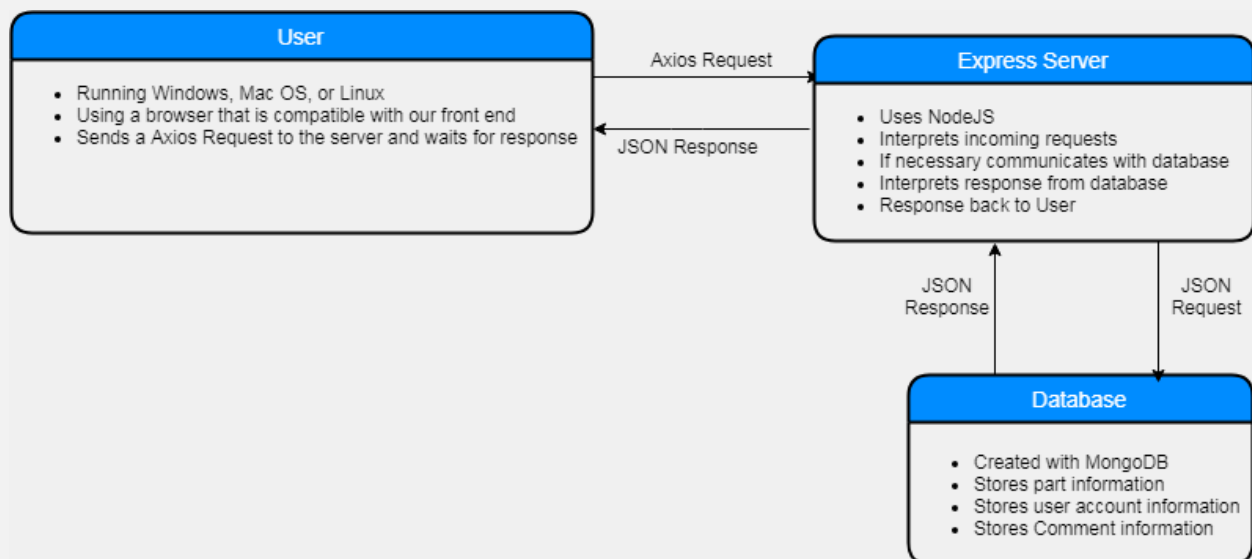
Server: NodeJS, Express, Mlab

Database: MongoDB

Front-End: HTML

Majority of users have computers that run on either Windows, Mac OS or Linux and as such should be able to run a browser compatible with the front end of PCEmpire. The database will be created in MongoDB and then hosted on a server provided by Mlab which can easily respond to request made by these users.

System Architecture



System Decomposition

PCEmpire can be broken down into three main components the user-side component, the server-side component and the Database-side component.

User-side: The user-side classes are those that directly impact the user viewing experience these ones are the classes that require user input and communication with the database via our server. These include the following: App.js. This Class is the one that require the user to make inputs and will be error checked by making sure that all inputs are of the proper type and size. We will also attempt to portray as clearly as possible the intended format for user input in order to minimize the chance of user error.

Server-Side: The server-side classes are those that communicate between the Database and the user. These classes include: Main Page Container, Login Container, Register Container and API.js. These functions are the ones that hold all the calls between the user and database as well as how to interpret them in an efficient way. To avoid errors, we will be checking the format of the inputs and outputs and in the case of an exception we will send a specific error code that can be read in the user-side and output a relevant error message.

Database-side: The Database-side Classes are the ones that pull information from the Database and send them upstream to be interpreted by the server. These Classes include: Main Page Component, Search Bar Component, Menu Bar Component, Login Component and Register Component. These are the functions that parse information from the database and sent it to the server. If there is some error in pulling from the database, we will send a specific error code upstream so that the user can receive an informative error description.

For network and server errors we plan to have a client-side page that will direct users in ways to help them hopefully reconnect with PCEmpire. Things such as refreshing the page or restarting their internet connection. These network errors are difficult to solve and are often due to user connection problems and cannot be solved by our team as such all we can do is to attempt to guide the user to solve the problem with our guidance