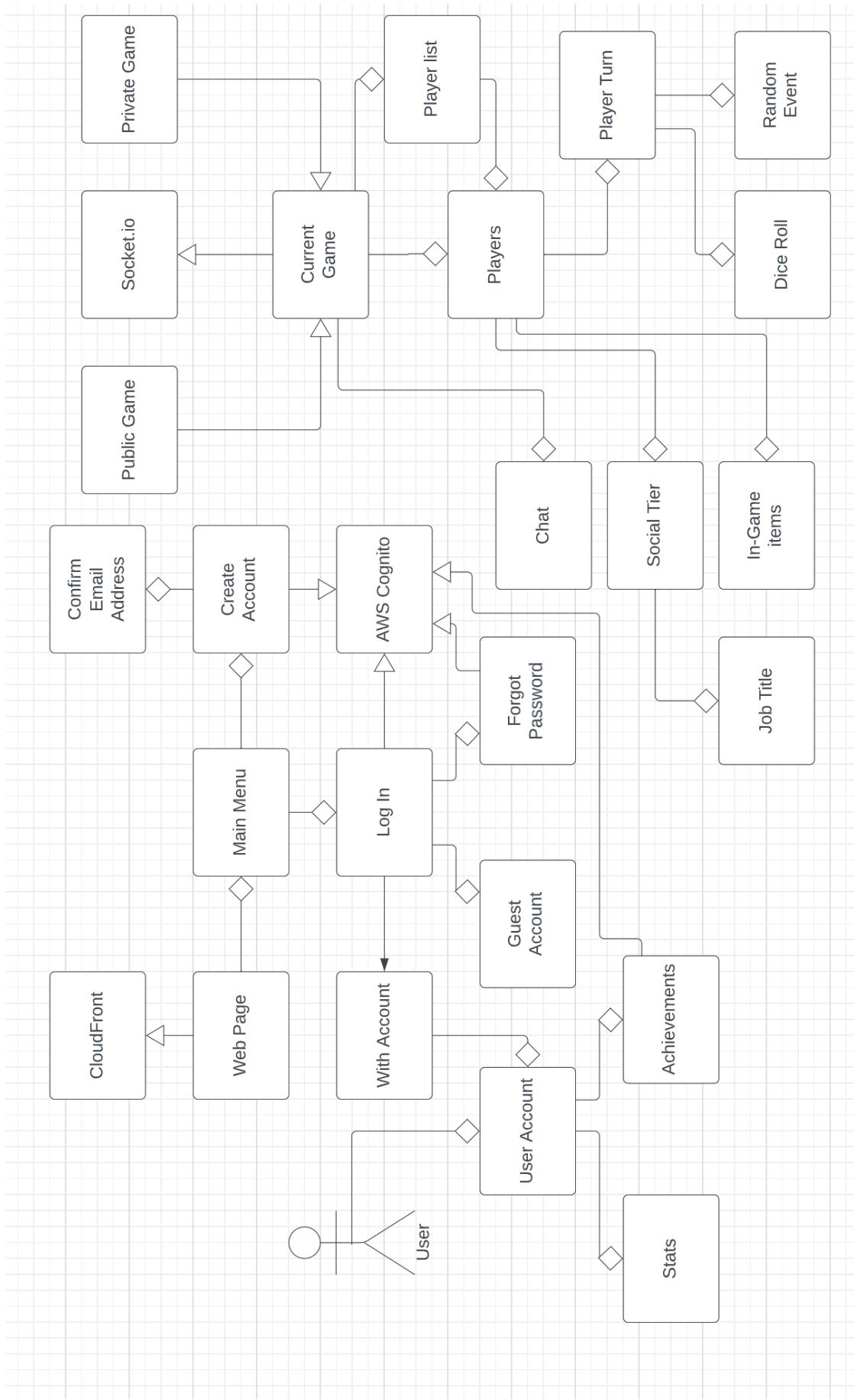


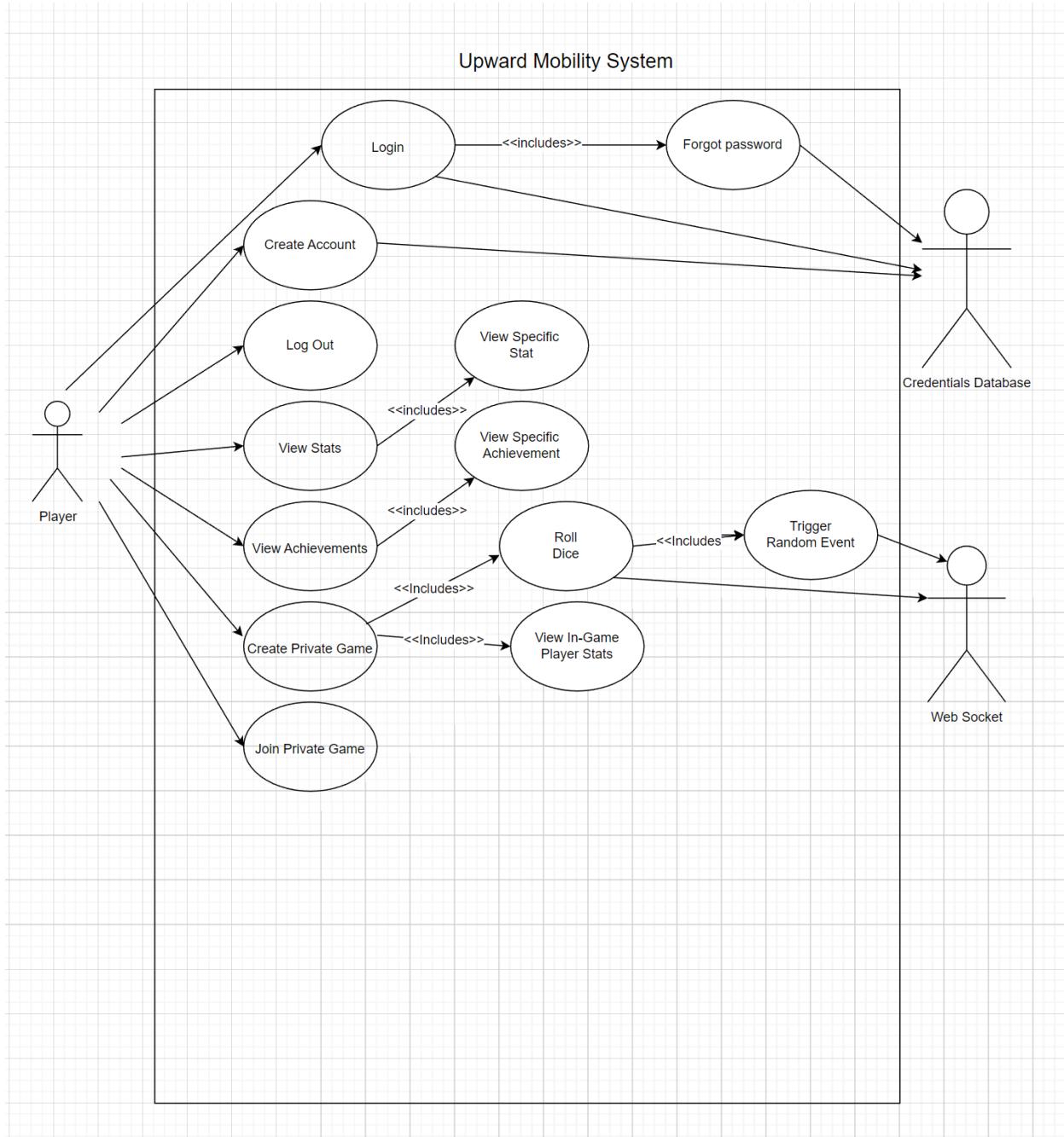
High Level Requirements:

- The User needs to create an account to be able to access the game.
- The system must protect user information such as password and must be encrypted and protected against potential threats.
- The system must store user information on a database such as MySQL or Microsoft SQL Server. This database must also be protected for the confidentiality and integrity of the user's information.
- The system must be able to track who is in a game at a given time and also be able to manage a large amount of users for a given time.
- The System must also be able to update the appropriate GUIs for a given action during the duration of a game in progress.
- The user must be able to access their account information at any time.
- The system must be able to communicate to the website hosting the game and vice versa. This will be done using AWS.
- The game will be hosted using an AWS EC2 instance.
- The game will be written in JavaScript using frameworks such as AJAX (to send and retrieve data from the server asynchronously without interfering with the display and behavior of the page), React (for interface design), NextJS (works alongside React to manage tooling and configuration), etc.
- A method of recording each game and asking every player if they want to save that game by downloading it to their computer.

Domain Model

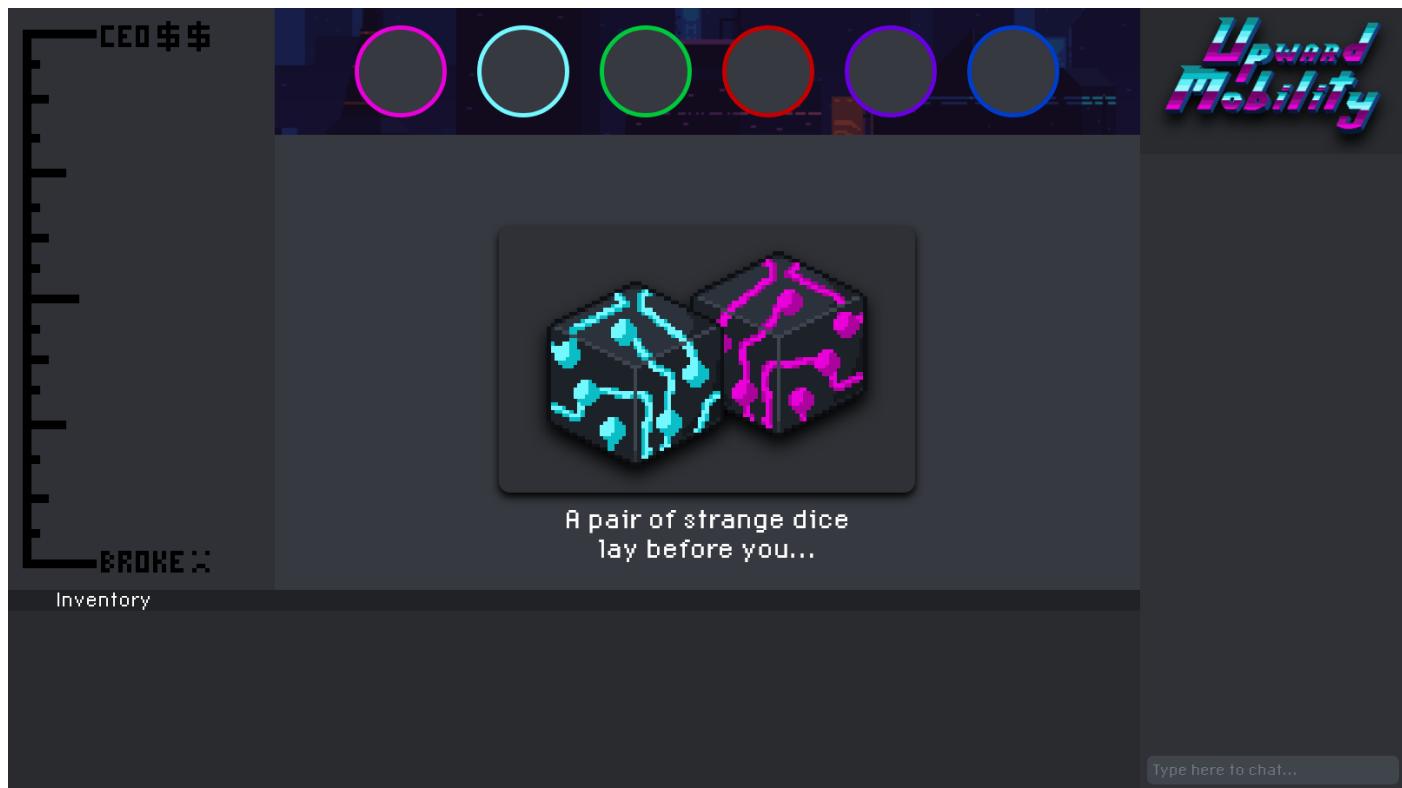


Use Case Diagram



GUI Prototypes





Use Case: Create Account

BASIC COURSE:

On the Login Page, the User clicks the Create Account Button and the system displays the Create Account Page. The user enters their username, password, email, and phone number into the fields and clicks the Create Account Button. The system checks this information in the database to see if it is valid. The system then displays the Home Page.

ALTERNATE COURSES:

- **Account existing error:** The system shows a Create Account Error Message displaying the username, password, email, and/or phone number already exist for an account.

Network error: The system shows a Network Error Message and redirects the user to the Login Page.

Database connection error: The system shows a Database Connection Error Message and redirects the user to the Login Page.



Use Case: Create Private Lobby

BASIC COURSE:

On the Home Page, the user clicks the Create Game Button, then the system displays the Create Lobby Page. The user enters the information for the game they are trying to create. The system then takes the user to the Game Page where the game is played.

ALTERNATE COURSES:

Network error: The system shows a Network Error Message and redirects the user to the Home Page.

Game Creation error: The system shows a Game Creation Error Message and redirects the user to the Home Page.

