Use Case Diagram

A [**UML**](https://en.wikipedia.org/wiki/Unified_Modeling_Language)use case diagram is the primary form of system/software requirements for a new software program underdeveloped.

This use cases specify the expected behavior of a Player, the main user of the app and an Admin, who have responsibilities for maintaining the app.

System Architecture

Our project uses NodeJS to host a server.

Our main purpose is to create an interactive game that can

handle many users interact with the others, for that reason, we use the Web Socket

and its services along with client-side JavaScript functions. In this way, we are able to make and accelerate the interaction between users and make changes in the page without reloading everytime.

**Class Diagram**

A class diagram models the static structure of a system. It shows relationships

between classes, objects, attributes, and operations.

Sequence Diagram

A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario. The following diagrams describe the most important functions in this project:

**Sign-up**

**Brief Description**

This Use-case describes how a Player sign-up for new account.

**Flow of Events**

*Basic Flow*

This use case starts when the player wishes to sign-up.

1. The Player fill in the sign-up form.

2. The form will check if valid input.

3. The server check if account exists, based on the Inputs.

*Alternative Flows*

**Invalid Input**

If invalid input format, the sign-up form will show error, Player can then input again or cancel, at which the use case ends.

**Account Exists**

If in the Basic Flow, the Player enters an existed account the system displays an error message. The Player can choose to either return to the beginning of the Basic Flow or cancel the sign-up, at which point the use case ends.

**Log-in**

**Brief Description**

This Use-case describes how a Player logs in to the App.

**Flow of Events**

*Basic Flow*

This use case starts when the Player wishes to sign-in to the Web App.

1. The Player enters his/her Username and password.

2. The server validates the entered username and password based on the Player Account database and logs the Player into the app.

*Alternative Flows*

**Invalid Username/Password**

If in the Basic Flow, the Player enters an invalid Username and/or password, the Login form displays an error message. The Player can choose to either return to the beginning of the Basic Flow or cancel the log-in (play as guest), at which point the use case ends.

**Select Character + Name + Flag**

**Brief Description**

This Use-case describes how a Player customize Character + Name + National Flag.

**Flow of Events**

*Basic Flow*

This use case starts when the Player is redirected to the main page (index).

1. The Player choose his/her character, enter name, choose flag.

2. The server add player info to firebase database when the Player click play button.

*Alternative Flows*

**Player Logged In**

If in the Basic Flow, the Player logged in in with his/her account, the page will initialize player info with his/her username and national flag.

**Set up Game Rule**

**Brief Description**

This Use-case describes how a Player setup rules before starting game.

**Flow of Events**

*Basic Flow*

This use case starts when the Player is redirected to the Hall (waiting room).

1. The First Player to enter the Hall will set up rules for the game (time limit, rounds or add custom words).

2. The server add game rule info to firebase database when the Player click start game button.

*Alternative Flows*

**None.**

**Draw & Guess**

**Brief Description**

This Use-case describes how the Players play the game.

**Flow of Events**

*Basic Flow*

This use case starts when the Players are redirected to the Room (Game Room).

1. The Drawer chooses between 3 random generated words to draw each round.

2. The other Players guess the word through the chat, if one Player guess the word right, that Player get point, the round will end.

*Alternative Flows*

**Nobody Guess It Right**

No one get point, the round will end when it hits time limit.