

## Sprint 2

Requirements Artifact for 581 Casino Game - Ryan Grimsley, Mya Hoersdig, Henry Hoopes, Benjamin Stonestreet, Connor Williamson, Abdelrahman Amir Zeidan

### 1. System Overview

The Casino Simulator will allow users to log in or create an account online with blackjack as the initial game. Users will be able to gain points by winning games

### 2. . Functional Requirements

As an owner, I want to support multiple lobbies for games running concurrently

#### 2.1. Concurrent Lobbies - TBD

FR 1.1 The system shall allow grouping connected users into “lobbies”, which represent groups playing a game together

FR 1.2 The system shall support users connecting to a lobby when there is enough room in a game

FR 1.3 The system shall allow users to disconnect from a lobby

As a user, I want a page to acquire more in game currency when I run out

#### 2.2. Currency Store Page - TBD

FR 2.1 The system shall provide the option for adding more currency to a user account

FR 2.2 The frontend shall include a page that use api calls to add more currency to a user account

As a user, I want to be able to play in a lobby from a list of open lobbies or create a new one

#### 2.3. Lobbies Select Page - TBD

FR 3.1 The system shall keep a list of open lobbies

FR 3.2 The system shall support creating a new lobby if there is enough memory

FR 3.3 The system shall automatically close lobbies that are empty after 5 minutes

FR 3.4 The frontend shall support obtaining the list of open lobbies

FR 3.5 The frontend shall support the option to create a new lobby

As a user, I would like to be able to play black jack

#### 2.4. Black Jack Lobbies - TBD

FR 4.1 The backend shall implement Dealer Logic and rules for Black jack

FR 4.2 Lobbies shall support being tagged as black jack lobbies, a type of lobby for Black Jack

FR 4.3 The backend shall wait for players in a lobby in order, displaying to everyone the cards that are being played along with user name

FR 4.4 The frontend shall display clear graphics to show game state

FR 4.5 The frontend shall communicate user input to the backend, which will then update game state.

As a user, I would like the option to play alone instead of in a lobby

#### 2.5. Alone Option - TBD

FR 5.1 The system shall support creating single player lobbies

FR 5.2 The frontend will provide an option for the user to select single player lobby

As a user, I would like a page to view my win/lose percentage and all time winnings / losses

2.6. User Stats Page - TBD

FR 6.1 The system shall track user statistics inside the user database

FR 6.2 The system shall update user statistics after a hand ends

FR 6.3 The frontend shall include a page that displays the relevant user statistics

As an owner, I don't want to maintain connections for players not playing, so users will automatically forfeit their hand if they disconnect while playing.

2.7. Forfeit on Disconnect - TBD

FR 7.1 The system shall include timing tracking for each user session, which is updated on user activity.

FR 7.2 The system shall disconnect any user who is inactive for longer than 5 minutes.

As a user, I want the ability to see the top ten balances on the home screen.

2.8. Leaderboard - TBD

FR 8.1 The backend should have an endpoint for fetching leaderboard stats

FR 8.2 The backend should include a caching system with TTL of x time

FR 8.3 The Frontend should display the usernames and the balances of the leaders.