

CSCI 205: Final Project

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## **User Manual for Black Jack**

### **General Statement**

Our team wanted to create a fun card game of Black Jack to play. All of us have been familiar with playing various card games throughout our lives, but Black Jack was one that we all enjoyed the most. Black Jack is a skill and luck game that people can enjoy in casinos, online, and among friends. We were posed with the question, “How can we get others to experience the fun of playing Black Jack in a simple manner without ads, real money, or private information being necessary?” As a team, we came up with a way to implement the classic card game that is still capable of tracking the money you bet, while not using any of your own real life money! All you need is to enter a name of your choice to keep track of the money you have won or lost throughout the game. You can also play again as many times as you like without any ads popping up! This implementation allows for anyone to play the game, regardless of them knowing how to actually play Black Jack or not.

### **Introduction, Background, and Motivation**

Our team has created a Black Jack game that can be easily used by someone who has never played before to someone who identifies as a card shark. Black Jack, for those who have never heard of it or played before, is a card game that has been around for centuries. The game occurs between a player (or players) and a dealer. The goal of this card game is to reach a total of or closest to 21 with your hand of cards. Each card holds the value that is displayed on it, while face cards are a value of ten. The ace is a versatile card that can be played as a one or eleven. Both the player and the dealer will have two cards each to begin. The player has the option to stand, meaning they keep the cards they have because they total high in value, or the player can hit, meaning they get a new card to add on to their hand. If the player manages to get a value over 21, they bust, meaning they lose the game. The game is rather simple, but many strategies can be used to increase the chances of success.

This game of Black Jack is particularly different from others in that it is simple, does not require personal information or real money, and has no pop-up ads. Some Black Jack games can get quite complex, especially with being able to split or having multiple players involved. Our team’s game of Black Jack does not include the option to split to save for complexity and it was created for the game to just be between the player and the dealer. If we were to have a longer time frame and desire to make the game more complex, our team would certainly implement a split option and potentially make the game multiplayer. The other positive thing about our game is that it does not require any information or real money, thus making it risk-free. The only

information gathered from the player is their name of choice, meaning they could input any name they would like, and that data is not even stored, let alone shared. Certain websites or apps and casinos require your information and actual money, but our game is just for enjoyment without the worries of real money. Pop-up ads are also a terrible part of online gaming, so this program helps players avoid those pesky ads and stay focused on the game they want to play and enjoy. Players can truly improve their skills and practice playing the game in this safe environment, no matter the skill level.

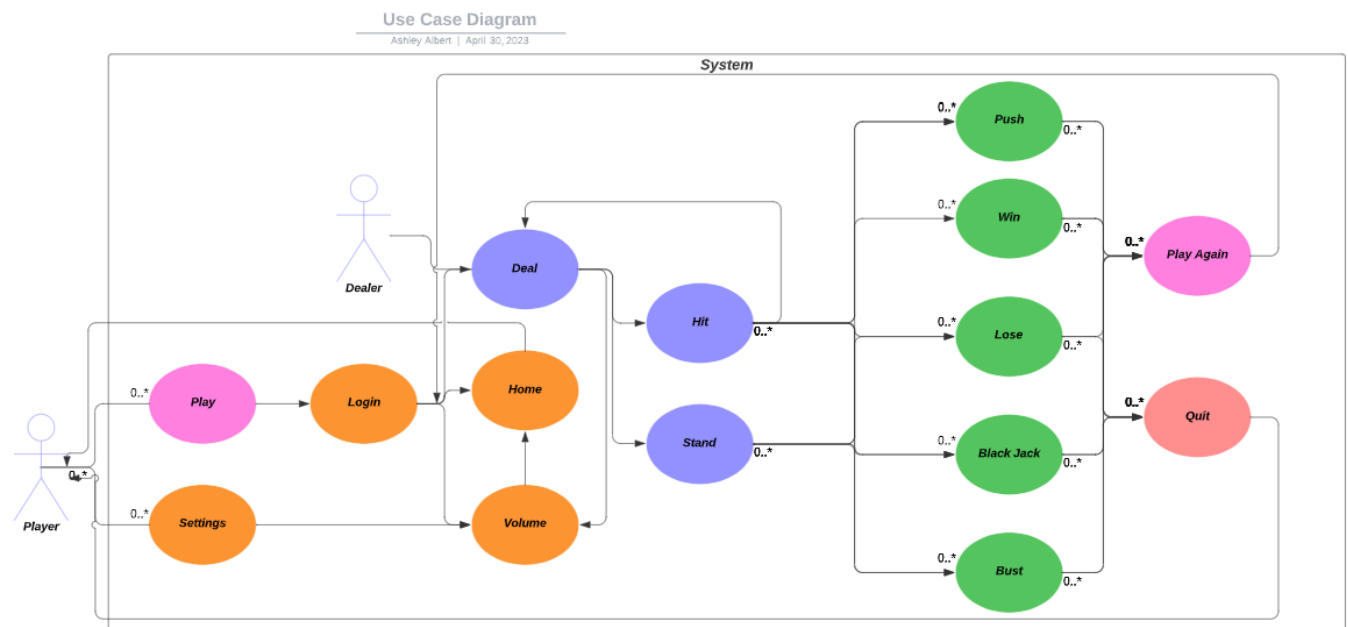


Figure 1: Use Case Diagram for our Black Jack Game

Above is an image of a use case diagram for our Black Jack Game. You, as the player, are given two options when you begin: play or settings. If you select settings, you can turn the volume on or off for the music that is playing, then return back to the screen that says play or settings. If you select play, you are then prompted to log in. After you log in, the dealer becomes involved in the game once you place your bets with the chips presented and then select “Deal”. The player can also select to go home, which displays the page saying “Play” and “Settings”, or select volume, which takes you to the settings page of turning the volume on or off again (then returning back to the game or home from there). After dealing, the player can either hit or stand. These buttons can be used just once or go in a cycle until one of the five ending possibilities is reached. The player can: push, meaning they tie with the dealer, win, lose, black jack, meaning they got exactly 21, or bust, meaning they went over the max value of 21. From

there, the player can select quit to exit the game or play again to start the whole program from the beginning.

In terms of color coding, the colors above mean the following:

1. Pink: playing/starting the game
2. Orange: settings and preferences
3. Purple: in the game doing the core components
4. Green: outcomes of the game
5. Coral: quitting the game

## Instructions for Program Use

### Planning Stage

In our planning stage of creating this game, one team member was able to draw a mock-up of what we would like our user-interface to look like (Figure 2, seen below).

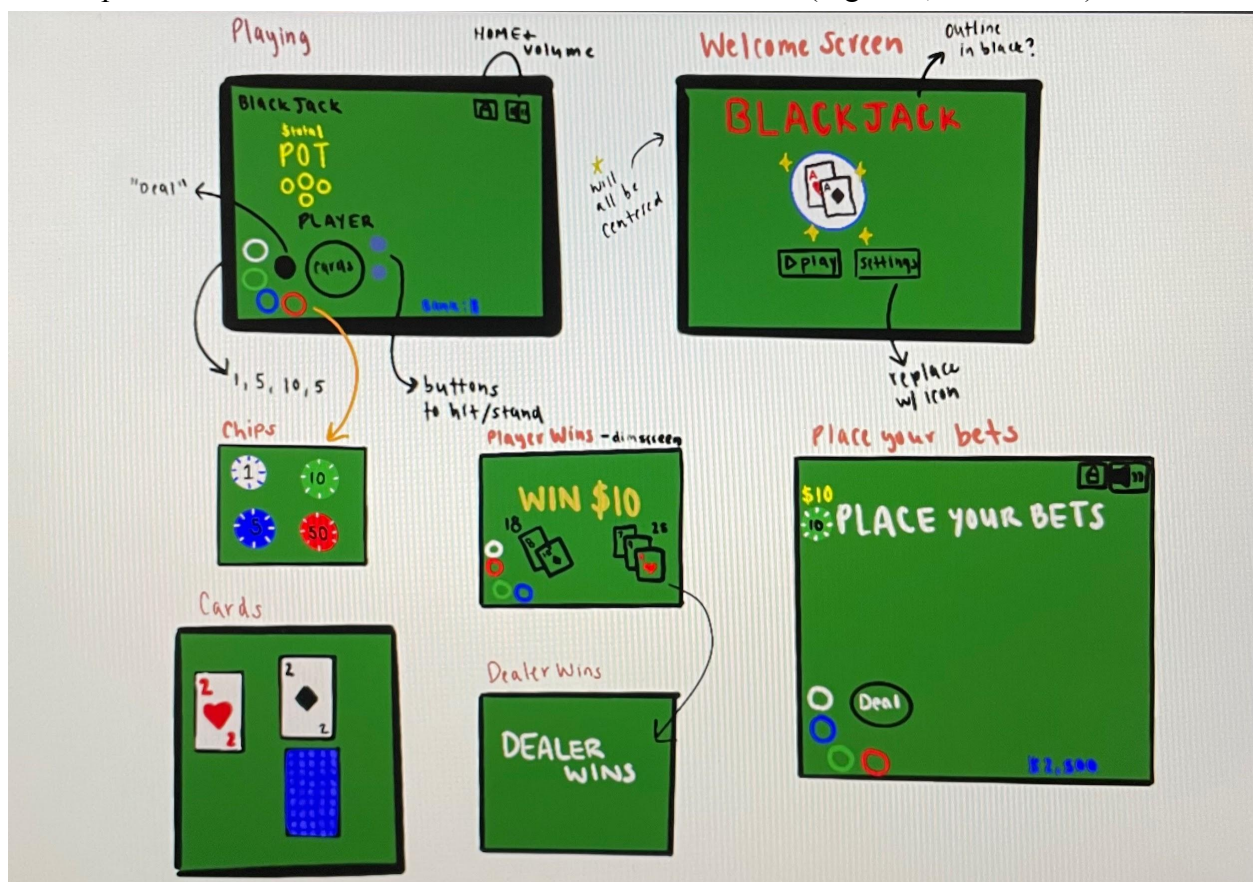


Figure 2: Mock-up of our Black Jack Game's Graphical User Interface (GUI).

In Figure 2, one can see that a welcome, playing, and betting screen were drawn. These drawn screens are nearly identical to our end result. Other images seen on this mock-up are of

the chips and cards, which we also were able to implement nearly identical to this mock-up. The only thing in this mock-up that differs from our final result is having new screens depending on how the game ends, such as a new screen popping up saying “You Win!”. Instead, our team has created text that pops up based upon the result of the game rather than a whole new screen appearing. Overall, this mock-up was incredibly drawn and genuinely ended up as the direct inspiration for the interface we implemented.

Another image from our planning stage is included below. Figure 3, as shown, is an early image of the welcome screen to our Black Jack game. Our team was hesitant and not confident on how to use the SceneBuilder tool at first. Here, you can see an image that we took to celebrate the fact that we got text, buttons, an image, and a dark green background to appear. Little did we know that we would improve this screen so much and create even more screens for the ease and enjoyment of the player.

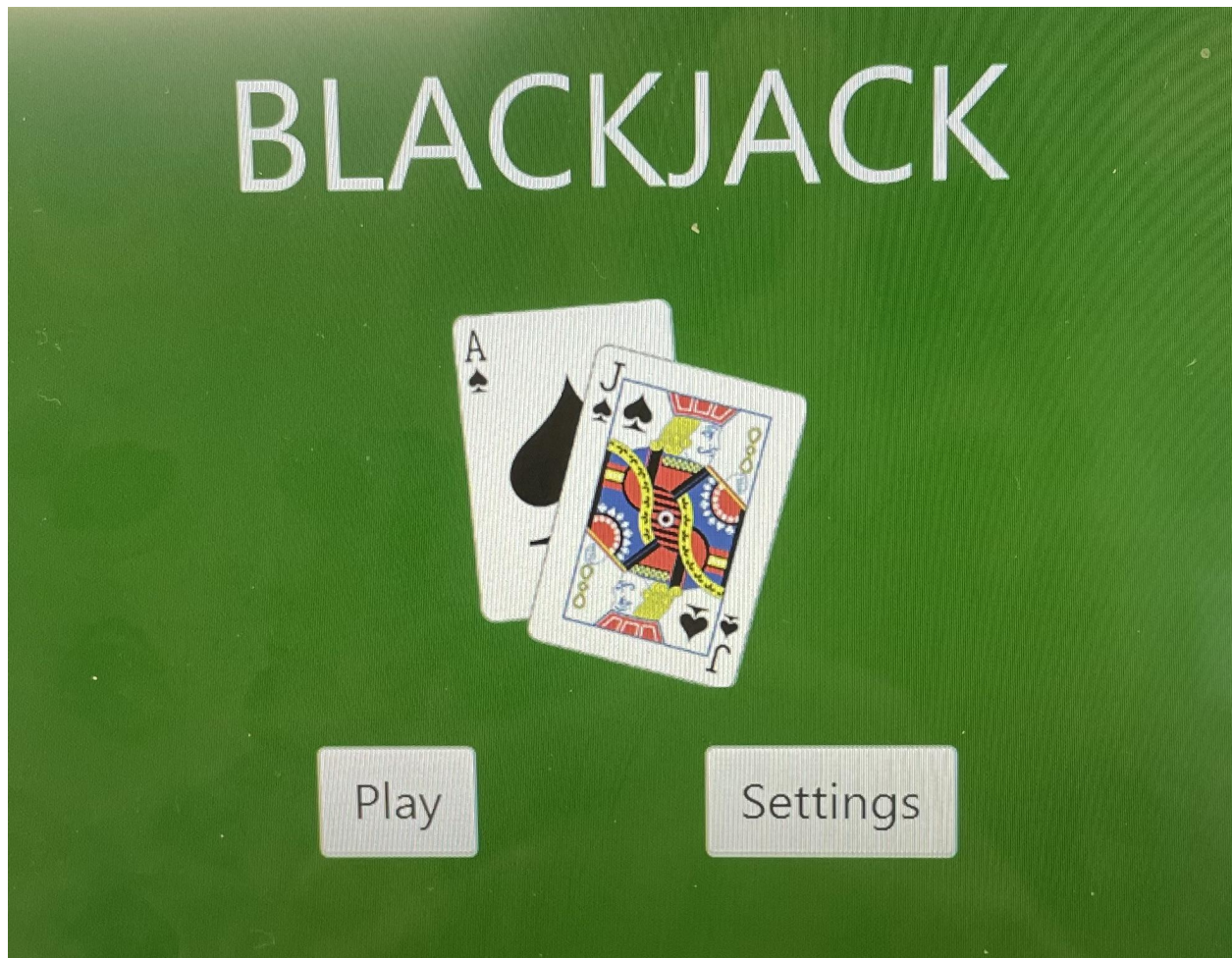


Figure 3: Early Stage Welcome Screen

## Final Result

Our final version of the Black Jack game is nothing short of exciting and incredible. Our team is so proud of what we have accomplished and been able to provide for users who want an enjoyable card game to play without any hassles involved. When you start the program, you are brought to a welcome screen that appears as seen in Figure 4 below.

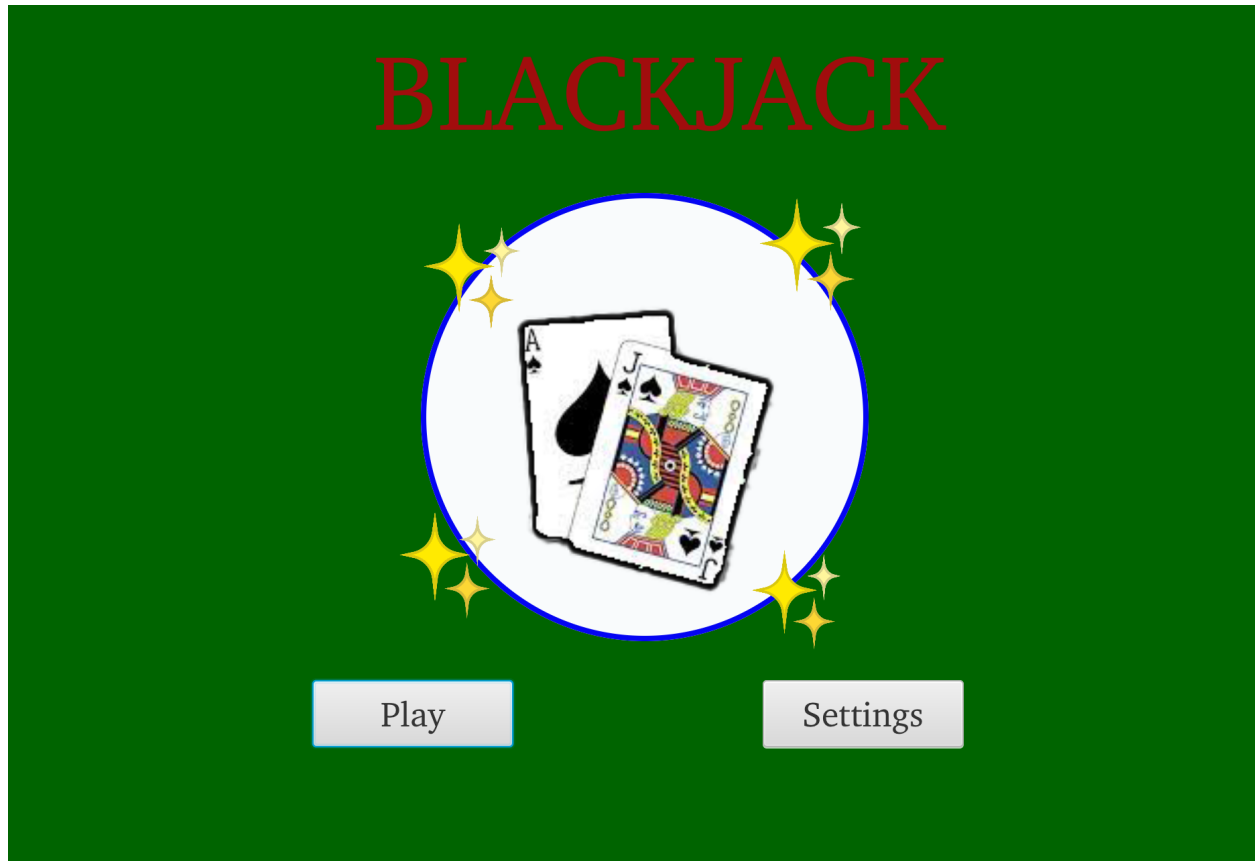


Figure 4: Final Stage Welcome Screen

As you can see, Figure 4 is very comparable to the welcome screen that was drawn in Figure 2. You, as the player, are given two options when you begin: play or settings. With settings, you can turn the volume on or off for the soothing jazz music that is playing, then return back to the screen that says play or settings. If you select play, you are then prompted to log in. Here, you will enter a name of your choice then select “Go”. In Figure 5, as seen below, you can see exactly how that appears if you enter the name “Jimi Hendrix”.



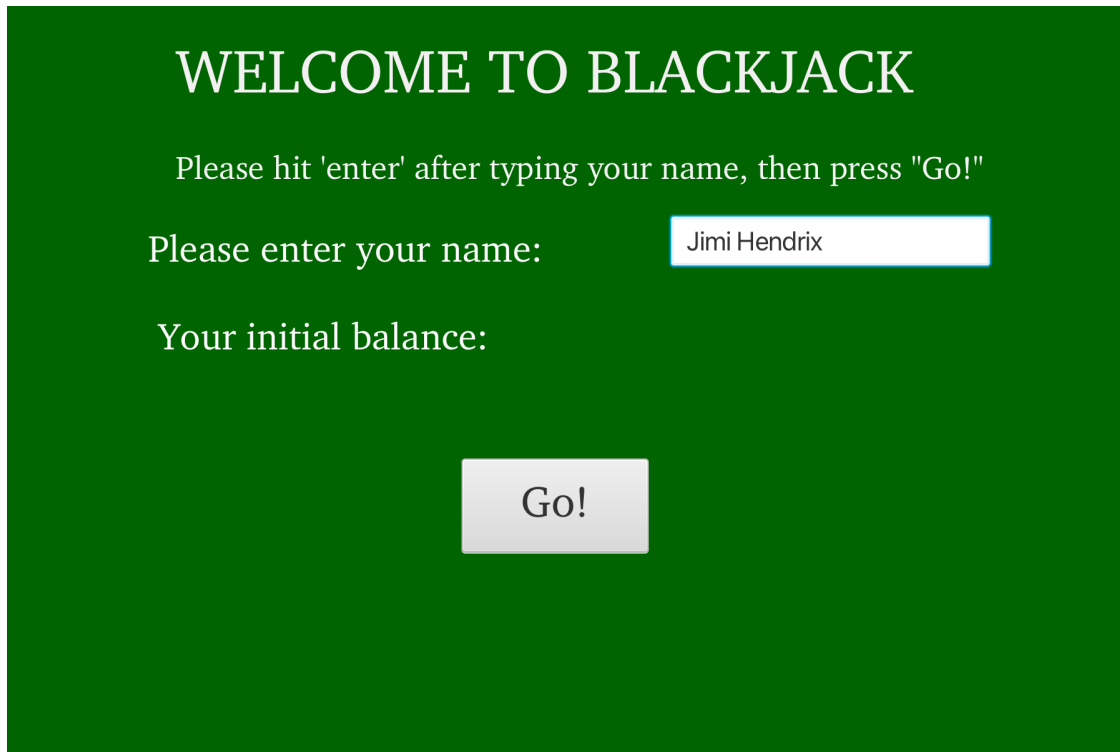


Figure 5: Final Stage Login Screen

After that, the dealer becomes involved in the game. You are to place your bets by selecting upon the chips in the bottom-left corner. You can only select an amount of chips that adds up to less than or equal to the amount of money you have in the game. Every player begins with a starting amount of \$500, but that can and will change throughout the course of games you play. Once you place your bets, you are to select “Deal” to receive your two cards and see one of the dealer’s two cards. You will see the value of your two initial cards added up on the screen to help you make your next decision of hitting or standing easier. These buttons can be used just once or go in a cycle until one of the five ending possibilities is reached. The player can: push, meaning they tie with the dealer, win, lose, get black jack, meaning they got exactly 21, or bust, meaning they went over the max value of 21. Throughout this entire time of playing the game, the player can also select to go home, which displays the page saying “Play” and “Settings”, or select volume, which takes you to the settings page of turning the volume on or off again (then returning back to the game or home from there). After the game has ended, the player can select quit to exit the game or play again to start the whole program from the beginning. Below is Figure 6 and Figure 7, which is an image that shows the main playing screen of the game while betting and dealing and the main playing screen once the game has ended.



Figure 6: Final Stage Playing Screen During Bets and Dealing

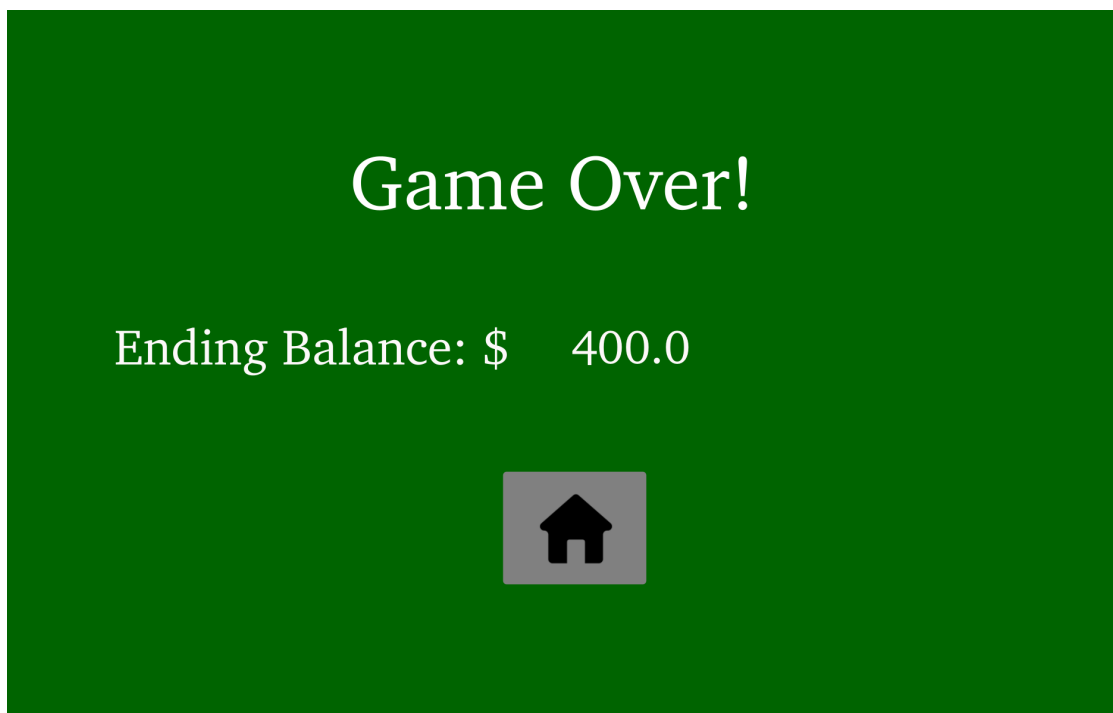


Figure 7: Final Stage Playing Screen with Ended Game

