CPSC 224 Final Project

PROJECT PLAN

11/4/2023

Blackjack

High Rollers

<Insert Team Logo (if you have one)>

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1 Project Overview

1.1 Project Summary

Our group is making blackjack. This is a game played between a dealer and player. The goal is to get a hand that is as close or equal to 21. The player will recive two cards and then have the option to either gamble on getting closer, but risking going over 21, or standing, and seeing if the dealer will be able to get closer. If the player doesnt go over 21 and the dealer does or is not as close to 21, the player will win. For our game we will be making it a one player game. This game is a card game but will have an element of betting to it.

2 Project Requirements

2.1 Major Features

Provide a description of the major features that must be implemented for a viable and useful product. Major features include broad feature areas, constraints that must be met, and other major items that must be completed for the project to be considered successful. You should have at least 4-5 major features.

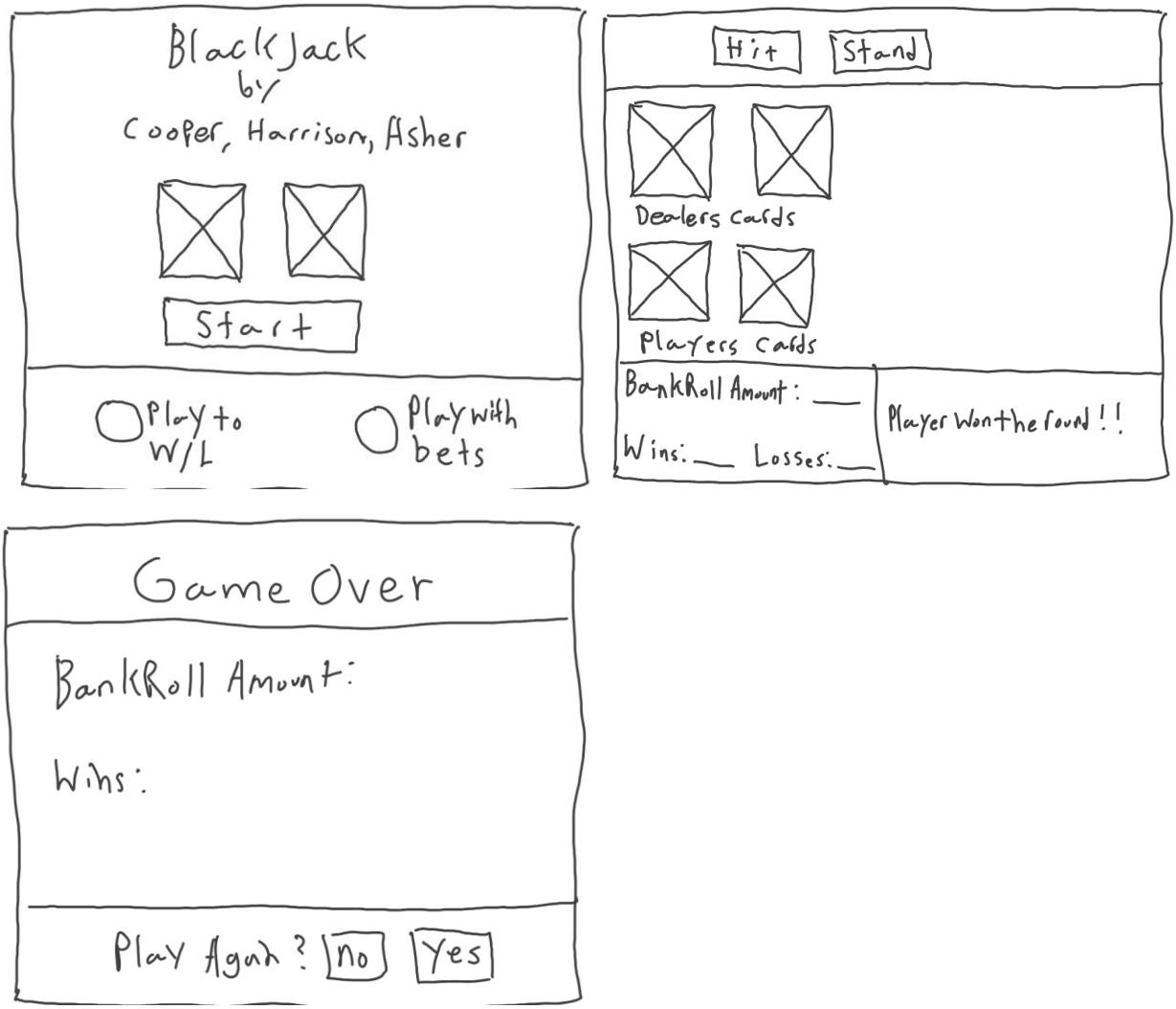
Table 1: Major Features

Feature	*Description*
Deck of Cards	A deck of cards to use and maintain throughout the game
Dealer	A dealer algorithm to automatically play the dealer's hand
Player Actions	A player will be able to hit or stand
Scoring	A player will be able to make bets on their hands and it will track their score
GUI	A player will be able to interact with the game through a GUI

3 Project Game Design

3.1 Initial User Interface Design

For the initial splash/ intro screen of the game we want to let the user know what game they are playing, letting them know who made it, two sets of cards for UI/UX, and below that a start button for beginning the game. For our requirement of having settings to choose from, we want them to be able to choose between betting or playing till they win or lose. For the second screen, which is the play screen, we want to display the player and dealer cards in the middle of the screen. In the north side we prompt the user to hit or stand. On the south end of the screen, we have on the left side, the players wins/losses or their bankroll amount and on the right side we an area to show whether they won the round. For the final screen we will show that the player lost if they ran out of money from betting or if they just lost from selecting the win/loss setting. If they won, then we will show them that they won. If they chose to quit in the betting mode, then we will show them the end screen with their betting amount left.

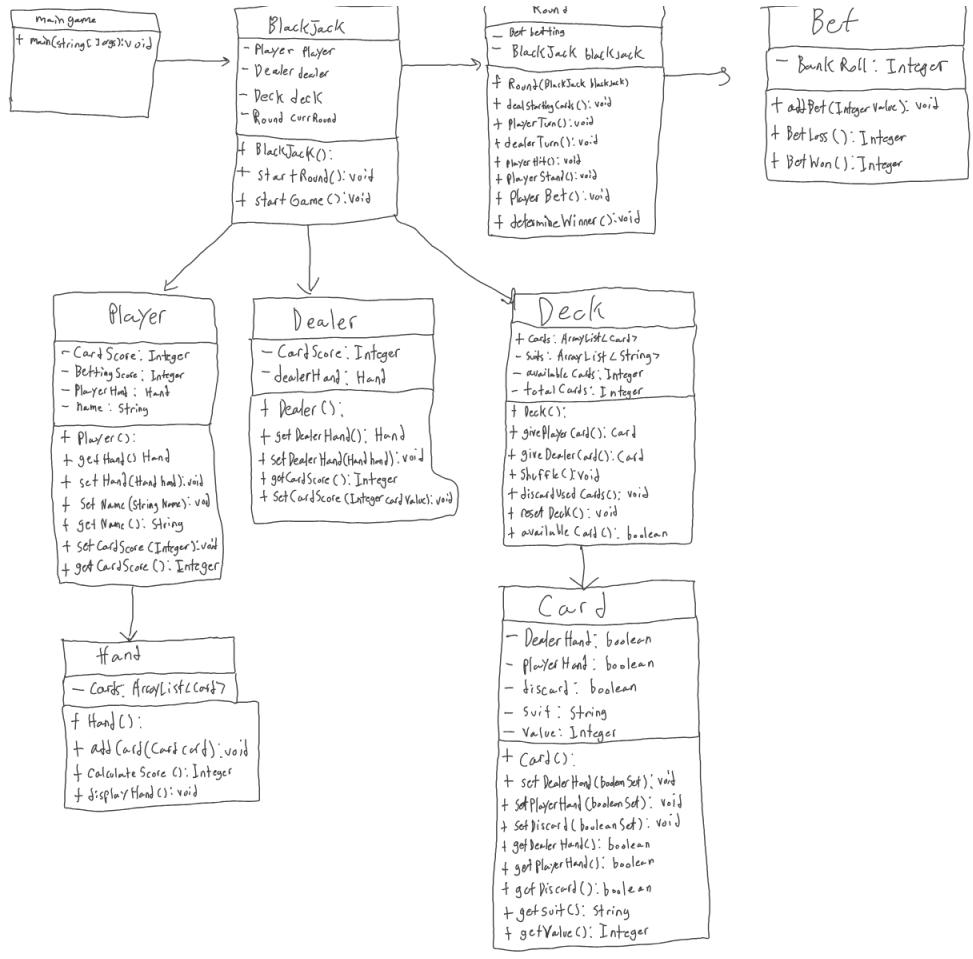


3.2 Initial Software Architecture

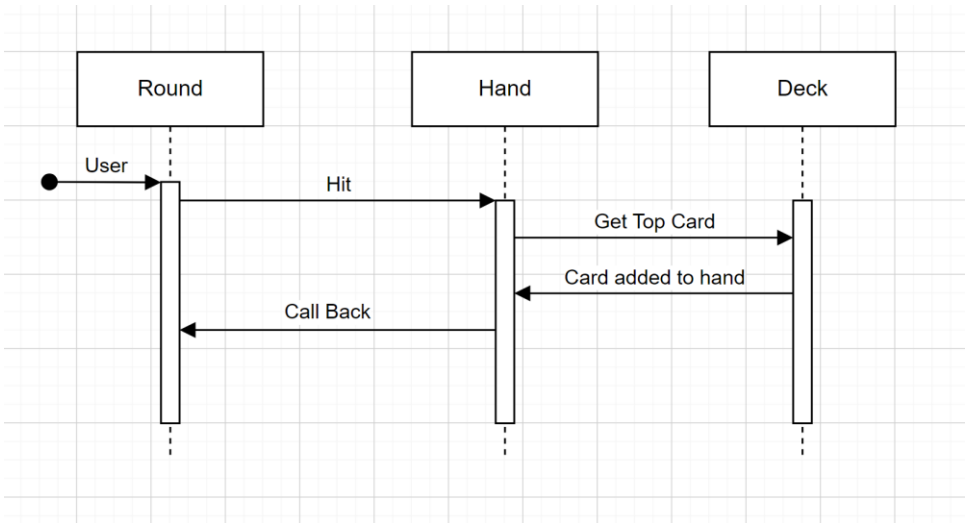
For our structure of our BlackJack game, we plan on having 8 classes. We plan on having a player and dealer class which has a hand object, and getters and setters for their name and hand. Classes for card and deck which deals cards to the player and dealer. A hand class that has an arrayList of Cards and uses

methods add cards to the hand and to score the players and dealers card totals. A BlackJack class and a round class that is in charge of creating the objects and running the game, and finally a betting class that is in charge of adding and subtracting a players BankRoll (the total amount of money that have to bet) amount.

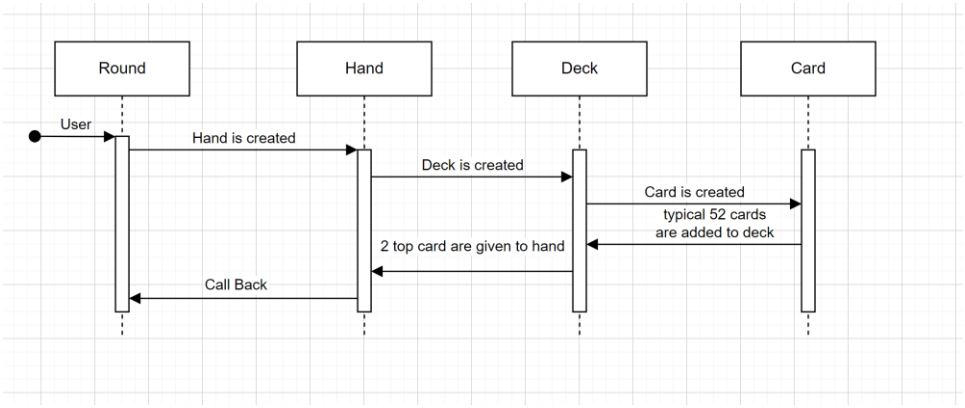
Class Diagram:



When a player hits:



When a round starts:



4 Project Schedule

Provide a description of the major scheduling dates of your project. For each schedule milestone dates, clearly describe the milestone (e.g., what features will be implemented) and when the milestone must occur by. Include the project plan, code complete, presentation, and final report dates.

Table 3: Major Scheduling Milestones

Milestone	*Description*	*Target Completion Date*
Project Plan, Classes Created	All of our classes are completed with all of the required variables & methods	11/9/23 - 11/11/23
distributing cards to player and dealer, and scoring each hand.	We will start distributing the cards to each player and correctly scoring each hand. We will also implement	11/18/23

Implement hit and stand scenarios	the hit (adding a card to the hand) or stand (not adding a card and taking your current score.	
Adding betting and playing to win/loss. Implement GUI to code.	We want to start adding the win/loss scenario for the player for each round. We also want to implement betting and playing to a win/loss amount so that they can start acquiring a score. We also want to finish up the coding by adding GUI and UI.	11/29/23
Present, and write final report	By now we should have finished coding in time for presentations, we should also begin writing the final report.	12/2/23

Appendix

Provide additional supplemental information in an appendix as necessary.