



WELCOME TO BLACKJACK

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Project Overview

- We made Blackjack
- Single Player vs. Dealer
- Assumed everyone can play Blackjack
- Bet and win/loss modes
- Make the house pay mode
- Auto round start

Game description and rules / images

- Objective: Achieve a hand value close to 21 without exceeding it.
- Initial Dealing: Players receive two cards, and the dealer has one face-up and one face-down card.
- Card Values:
 - Number cards: Face value.
 - Face cards (King, Queen, Jack): 10.
 - Aces: 1 or 11.
- Player's Turn:
 - Choose to "hit" for more cards or "stand" with the current hand.
 - Aim for a hand value closest to 21.
 - Busting (exceeding 21) results in a loss.
- Dealer's Turn:
 - Follow specific rules (e.g., hit until the hand is at least 17).
 - Busting means players who haven't busted win.
- Winning:
 - Closest hand to 21 wins.
 - Winning pays 3:2
- Ties: A "push" results in the player's bet being returned.

Project Requirements

Functional

- Card dealing – tracking a deck properly and shuffling when needed
- Game logic – win/losses and dealer algorithm
- User interaction – player hit and stand

Non-functional

- GUI background
- GUI layout

Project Solution Approach

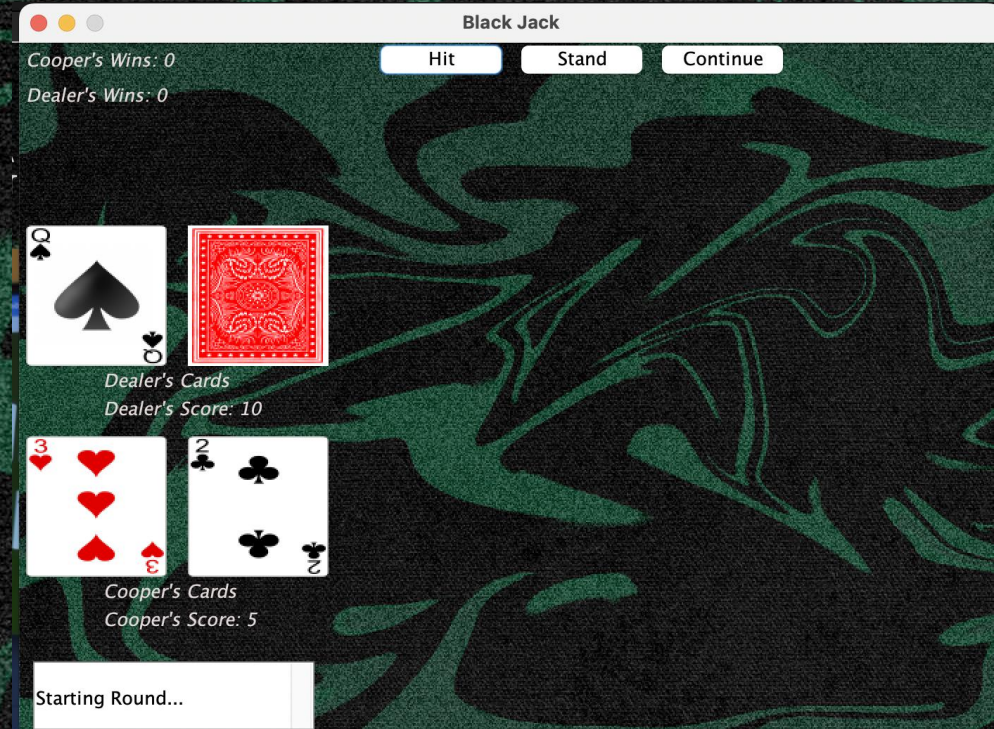
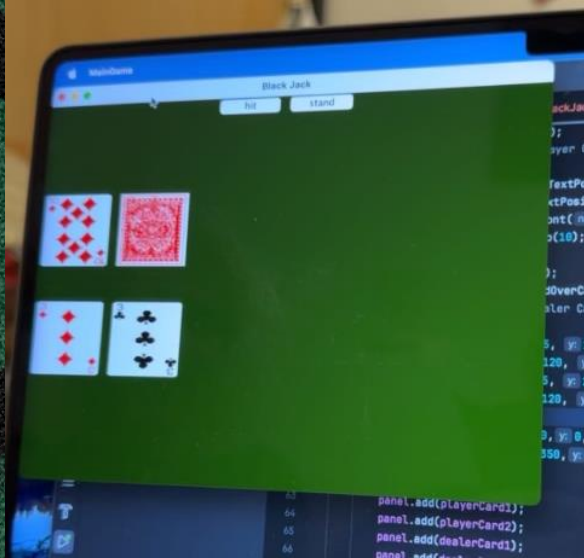
Major Components

- Tracking a deck to ensure accurate odds of winning
- Working GUI
- Working settings
- Accurate player and dealer logic

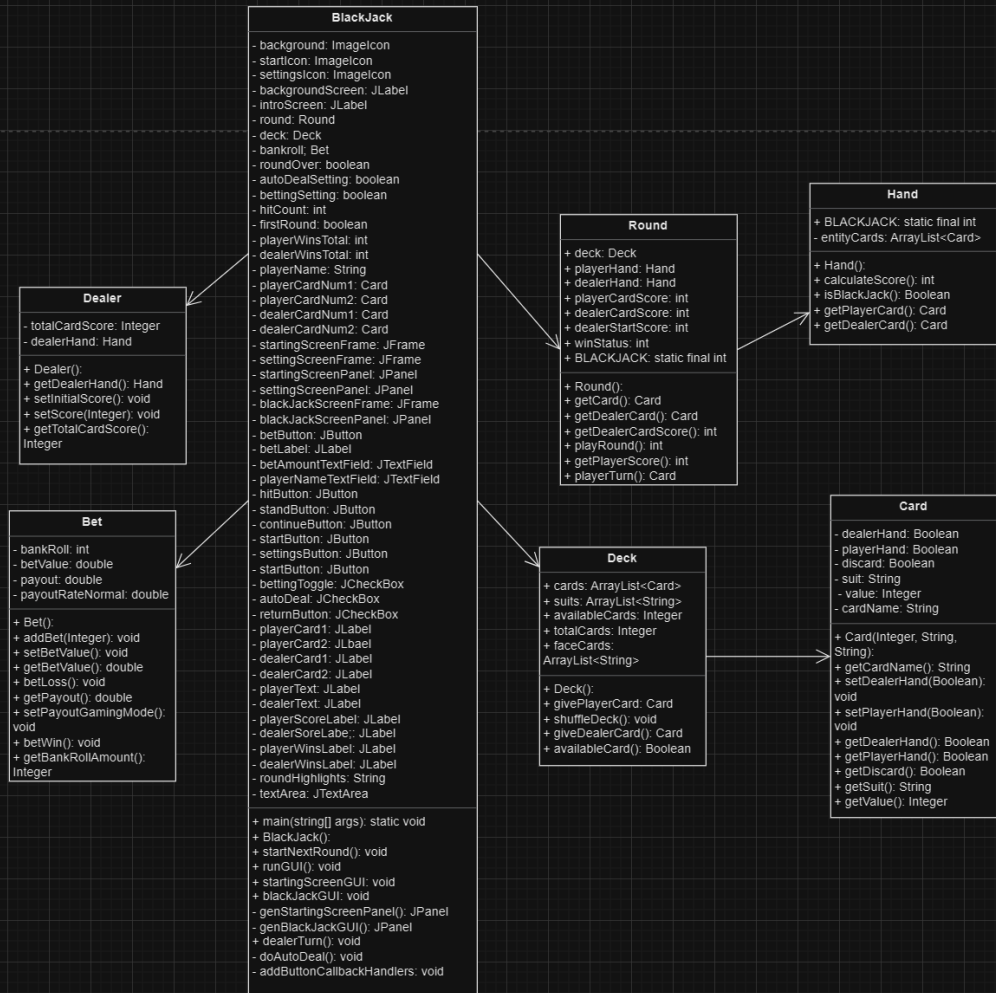
Game/UI features

- Card layouts
- Terminal printing info
- Game settings

GUI improvements



UML Design



Team Collaboration Approach

- Messaging Used
 - Snapchat
 - iMessage
 - Discord
- A few initial issues with merging
- We used branches a ton
- Coding as a group was super useful when combining features
- Coded 60% independently and 40% together

Testing, Validation, and Acceptance Plan

- Testing used
 - Unit tests
 - User tests
- #1 way we decided if the project was finished was through user testing



Live Demo

Summary

Lessons Learned

- Start with the GUI
- Group coding was very efficient
- Branches are powerful

Positive Experiences

- We are proud of what we've built
- It was great to see everyone's efforts come together