

Cards

- Create an enum of cards that have a numerical value associated with them
- Deck

Dealer

- Simulate the responsibilities of a Blackjack dealer (draw cards, count total, compare to player)

Player

- Simulate the responsibilities of someone playing the game from the console

Deck

- Create a deck of cards using the Cards enum
- Cards

randomPlayer

- Simulate a player that makes completely random moves

RandomPlayGame

- | | |
|---|--|
| <ul style="list-style-type: none">• Run the game making random moves for a specified number of hands of blackjack | <ul style="list-style-type: none">• randomPlayer• Dealer• Deck |
|---|--|

PlayGame

- | | |
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| <ul style="list-style-type: none">• Play the game of poker between a user and a dealer | <ul style="list-style-type: none">• Deck• Dealer• Player |
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randomTrackSuccess

- | | |
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| <ul style="list-style-type: none">• Track what percentage of the time that the random move bot wins a hand of the game | <ul style="list-style-type: none">• RandomPlayGame |
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Money

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| <ul style="list-style-type: none">• Simulate betting money in a game of blackjack | |
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GetCards

- Get the image of a specified card, create a JavaFX rectangle shape, then put the image on the rectangle.

LandingPageMain

- Create a GUI scene that gives the user of simulating blackjack with AI or choosing to play the game
- SinglePlayerController
 - SinglePlayerModel
 - SinglePlayerView
 - AIGraphicsModel
 - AIGraphicsView
 - AIGraphicsController
 - LandingPageView
 - LandingPageModel
 - LandingPageController

LandingPageController

- Serve as the controller for the landing page
- LandingPageView
 - LandingPageModel

LandingPageModel

- Serve as the model for the landing page

Landing Page View

- Set the scene for the landing page, handle changing scenes with buttons, play music.
- LandingPageModel

SinglePlayerController

- Control the single player GUI, handle moves.
- SinglePlayerView
- SinglePlayerModel

SinglePlayerModel

- Handle what happens at the end of each move. Generate win/lose messages.

SinglePlayerView

- Display cards and other interactive aspects of the single player game to the user
- SinglePlayerModel

AIGraphicsModel

- Handle generating results from the AI for graphing

AIGraphicsController

- Get how many turns and what kind of AI the user wants to simulate with, then start the simulation. Make sure they enter a valid, numerical input for the number of turns.
- AIGraphicsView
- AIGraphicsModel

AIGraphicsView

- Make a graph to show the AI's results
- AIGraphicsModel

layer

- Creates neurons and fires them.

- neuron
- network

network

- Builds a network of neurons

neuron

- Creates the neurons for the AI

NNBlackJack

- Uses the neural net to simulate the game

- NNPlayGame

NNPlayGame

- Serves as the engine to run the neural net on the game