



Section Title



Milestone Project 2



Complete Python Bootcamp

- We've learned enough to start a second milestone project!
- You can treat this project a few ways:
 - Code along project with the solutions.
 - Attempt the project on your own.
 - Use the workbook as a guide for the project on your own.



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- For this project you will use OOP to create a BlackJack Game with Python.
- Let's quickly go over the main idea of the game and discuss how OOP should be used for this project.



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- For our version of the game we will only have a computer dealer and a human player.
- We start with a normal deck of cards, you will create a representation of a deck with Python.



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COMPUTER DEALER



HUMAN PLAYER

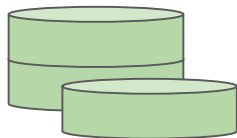


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COMPUTER DEALER



**PLAYER PLACES
A BET**



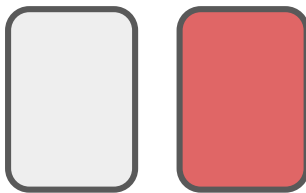
HUMAN PLAYER



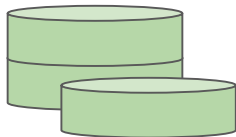
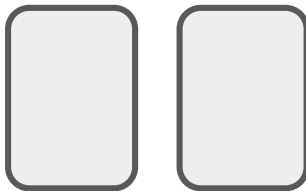
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COMPUTER DEALER

Dealer starts with 1 card
face up and 1 card face
Down



Player starts with 2 cards
face up



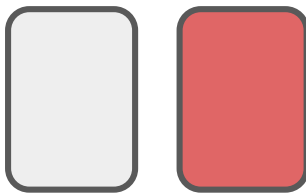
HUMAN PLAYER



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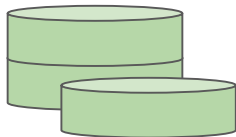
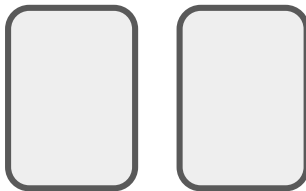
COMPUTER DEALER

Dealer starts with 1 card
face up and 1 card face
Down



**PLAYER GOES
FIRST IN
GAMEPLAY**

Player starts with 2 cards
face up



HUMAN PLAYER

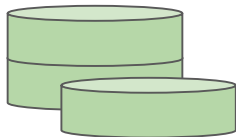


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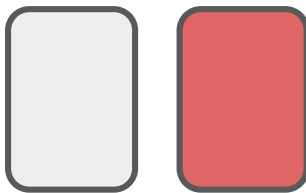
COMPUTER DEALER



HIT for more
cards from
DECK



HUMAN PLAYER



PLAYER GOAL: Get closer to a total value of 21 than the dealer does.

Possible Actions:

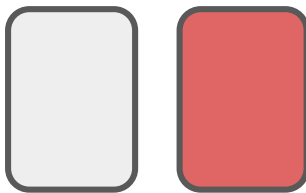
1. **Hit** (Receive another card)
2. **Stay** (Stop Receiving Cards)

We'll ignore actions like "Insurance", "Split", or "Double Down"



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COMPUTER DEALER



PLAYER GOAL: Get closer to a total value of 21 than the dealer does.

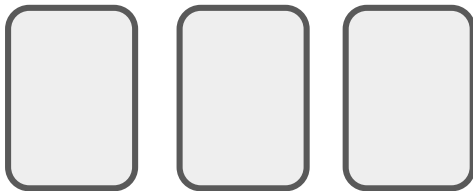
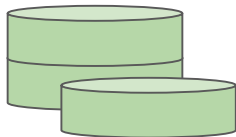
Possible Actions:

1. **Hit** (Receive another card)
2. **Stay** (Stop Receiving Cards)

We'll ignore actions like "Insurance", "Split", or "Double Down"



**HIT for more
cards from
DECK**



HUMAN PLAYER

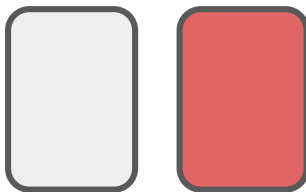


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COMPUTER DEALER

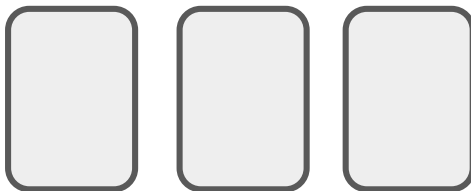
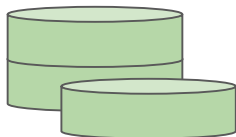


Dealer HIT for
more cards from
DECK



AFTER PLAYER TURN:

2. If player is under 21,
dealer then hits until
they either beat the
player or the dealer
busts.

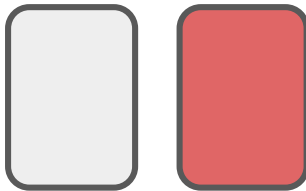


HUMAN PLAYER



GAME END: PLAYER BUSTS

COMPUTER DEALER

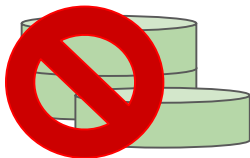


AFTER PLAYER TURN:

1. If player keeps hitting goes over 21, they bust and lost the bet!



The game is then over and dealer collects the money.



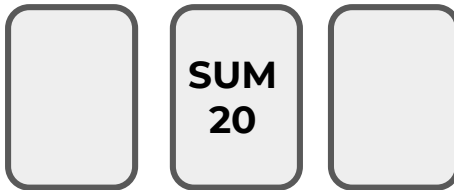
HUMAN PLAYER



GAME END: Computer Beats Player

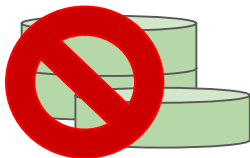
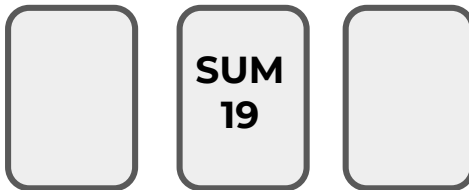
COMPUTER DEALER

Computer sum
higher than player
sum **and** still under
21.



AFTER PLAYER TURN:

2. If player is under 21,
dealer then hits until
they either beat the
player or the dealer
busts.



HUMAN PLAYER



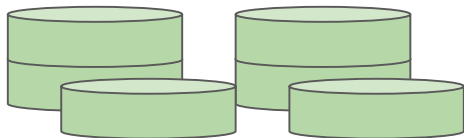
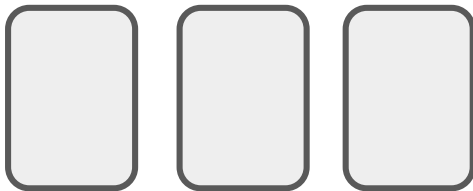
GAME END: PLAYER WINS

COMPUTER DEALER



AFTER PLAYER TURN:

2. If player is under 21, dealer then hits until they either beat the player or the dealer busts.



HUMAN PLAYER





Complete Python Bootcamp

- Special Rules:
 - Face Cards (Jack, Queen, King) count as a value of 10.
 - Aces can count as either 1 or 11 whichever value is preferable to the player.



Complete Python Bootcamp

- Check out the resource links for other explanations of BlackJack for more information.
- Let's now explore the project itself and the workbook!



Milestone Project 2

Example Solution