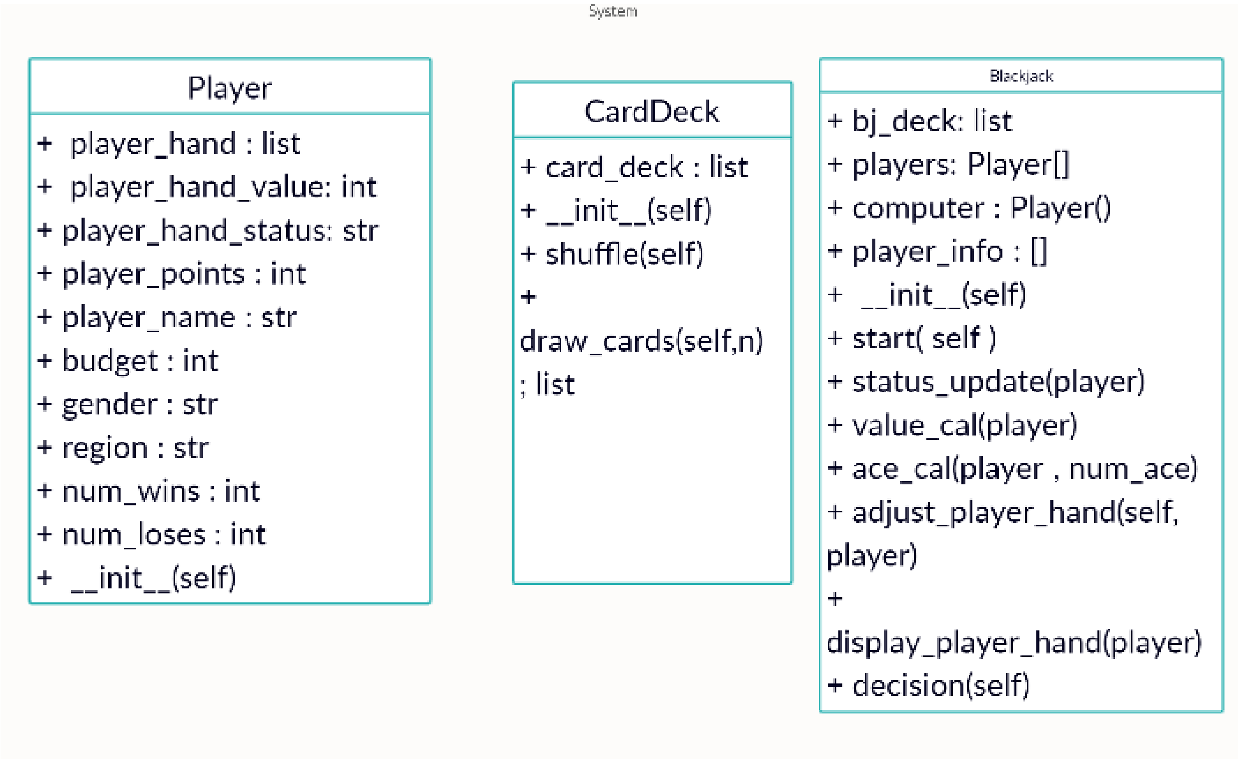


3 Classes exist in this program.

Player, CardDeck, Blackjack

Player class is for holding information about the player since they will be multiple player in the game so it's make sense to make a class to hold those information individually.

CardDeck class is for holding the method related to getting the card and store a list of card.

Blackjack class is for containing all the method to operate the game and include all the attributes need for operating the game.

Method in Player class:

__init__ : Set up attributes for player object

Method in CardDeck class:

__init__(self): Set up attributes for deck object

shuffle(self): Shuffle the deck draw_cards(self,n): Return n card drawn from deck.

Method in Blackjack class:

__init__(self): Set up attributes for blackjack game object start(self): Start the game(Draw card and adjust value for all players including computer)

status_update(player): Check whether current status of a player is legit or not.

value_cal(player): Calculate the value in the hand of a player.

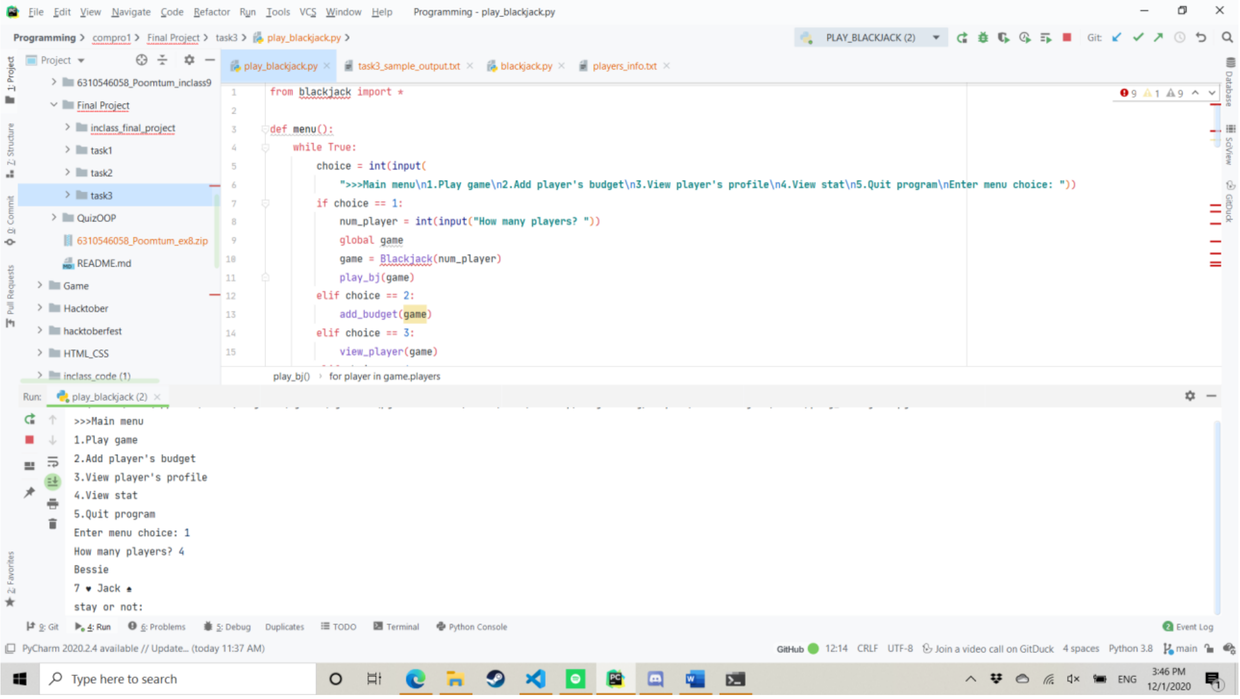
ace_cal(player , num_ace): Calculate whether the ace in the hand should be 1 or 11.

adjust_player_hand(self, player): Adjust the hand of player(Draw more) according to the status of the player.

display_player_hand(player) : Show the hand of the player to the screen.

decision(self): Check who is winning and print out result + plus the point to the winner.

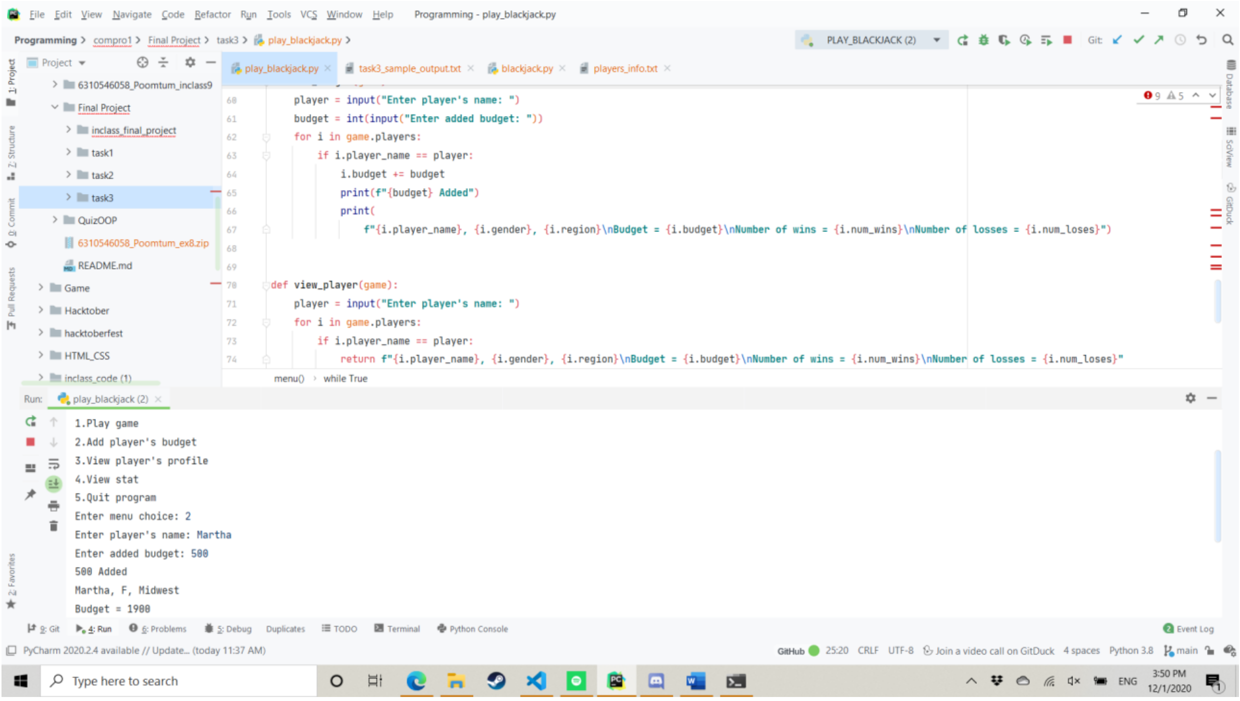
Sample:



```python
from blackjack import *

def menu():
    while True:
        choice = int(input(
            ">>>Main menu\n1.Play game\n2.Add player's budget\n3.View player's profile\n4.View stat\n5.Quit program\nEnter menu choice: "))
        if choice == 1:
            num_player = int(input("How many players? "))
            global game
            game = Blackjack(num_player)
            play_bj(game)
        elif choice == 2:
            add_budget(game)
        elif choice == 3:
            view_player(game)
```

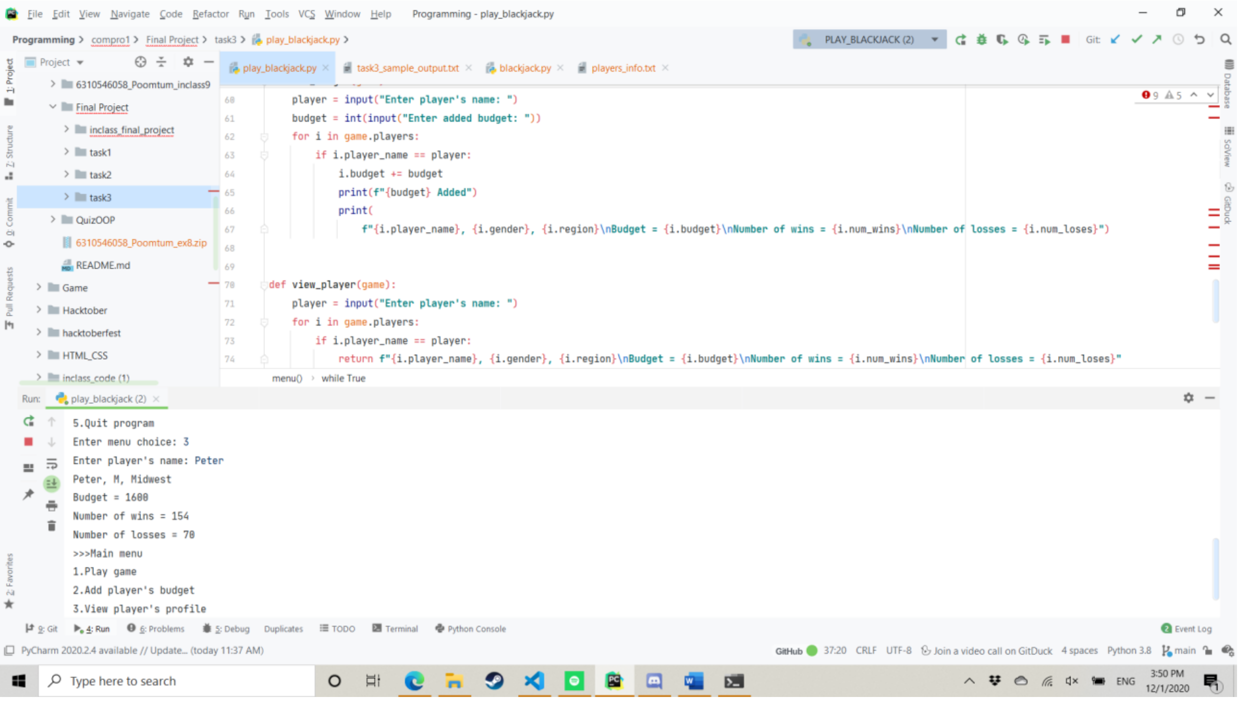
```
>>>Main menu
1.Play game
2.Add player's budget
3.View player's profile
4.View stat
5.Quit program
Enter menu choice: 1
How many players? 4
Bessie
7 ♥ Jack ♠
stay or not:
```



```python
    player = input("Enter player's name: ")
    budget = int(input("Enter added budget: "))
    for i in game.players:
        if i.player_name == player:
            i.budget += budget
            print(f"{budget} Added")
            print(
                f"{i.player_name}, {i.gender}, {i.region}\nBudget = {i.budget}\nNumber of wins = {i.num_wins}\nNumber of losses = {i.num_loses}")


def view_player(game):
    player = input("Enter player's name: ")
    for i in game.players:
        if i.player_name == player:
            return f"{i.player_name}, {i.gender}, {i.region}\nBudget = {i.budget}\nNumber of wins = {i.num_wins}\nNumber of losses = {i.num_loses}"
```

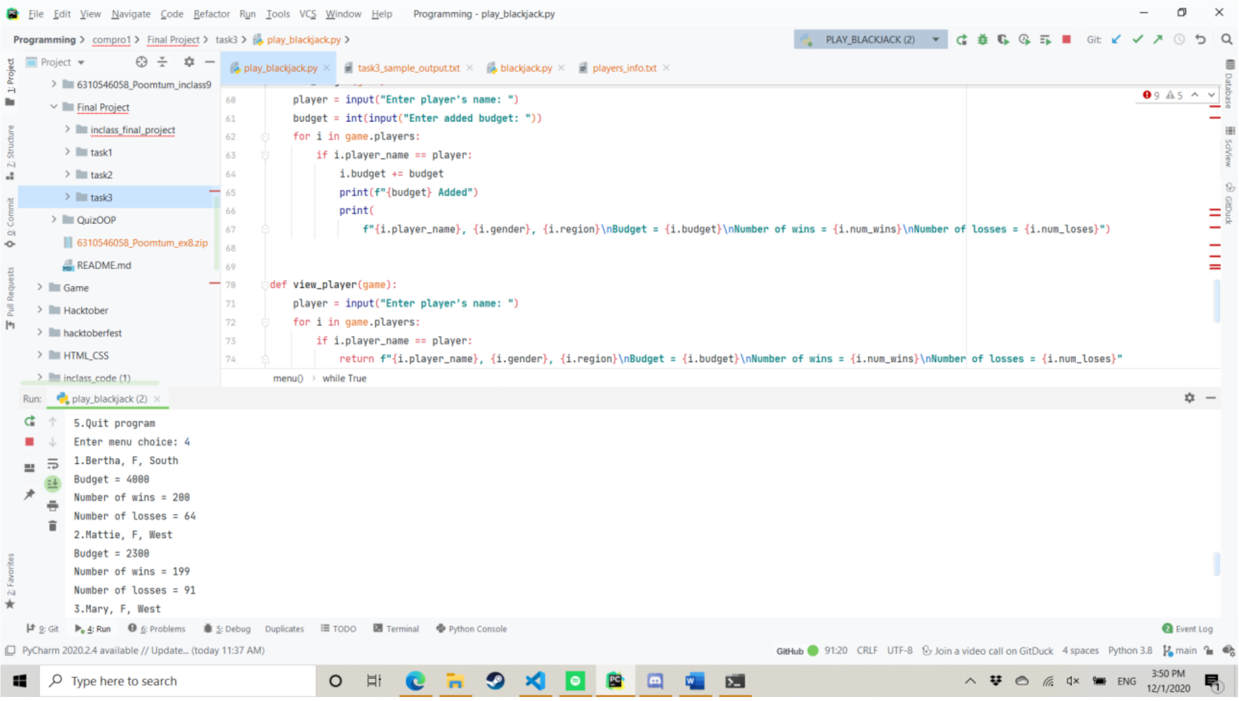
```
1.Play game
2.Add player's budget
3.View player's profile
4.View stat
5.Quit program
Enter menu choice: 2
Enter player's name: Martha
Enter added budget: 500
500 Added
Martha, F, Midwest
Budget = 1900
```



```
    player = input("Enter player's name: ")
    budget = int(input("Enter added budget: "))
    for i in game.players:
        if i.player_name == player:
            i.budget += budget
            print(f"{budget} Added")
            print(
                f"{i.player_name}, {i.gender}, {i.region}\nBudget = {i.budget}\nNumber of wins = {i.num_wins}\nNumber of losses = {i.num_loses}")


def view_player(game):
    player = input("Enter player's name: ")
    for i in game.players:
        if i.player_name == player:
            return f"{i.player_name}, {i.gender}, {i.region}\nBudget = {i.budget}\nNumber of wins = {i.num_wins}\nNumber of losses = {i.num_loses}"
```

```
5.Quit program
Enter menu choice: 3
Enter player's name: Peter
Peter, M, Midwest
Budget = 1600
Number of wins = 154
Number of losses = 70
>>>Main menu
1.Play game
2.Add player's budget
3.View player's profile
```



```
    player = input("Enter player's name: ")
    budget = int(input("Enter added budget: "))
    for i in game.players:
        if i.player_name == player:
            i.budget += budget
            print(f"{budget} Added")
            print(
                f"{i.player_name}, {i.gender}, {i.region}\nBudget = {i.budget}\nNumber of wins = {i.num_wins}\nNumber of losses = {i.num_loses}")


def view_player(game):
    player = input("Enter player's name: ")
    for i in game.players:
        if i.player_name == player:
            return f"{i.player_name}, {i.gender}, {i.region}\nBudget = {i.budget}\nNumber of wins = {i.num_wins}\nNumber of losses = {i.num_loses}"
```

```
5.Quit program
Enter menu choice: 4
1.Bertha, F, South
Budget = 4000
Number of wins = 200
Number of losses = 64
2.Mattie, F, West
Budget = 2300
Number of wins = 199
Number of losses = 91
3.Mary, F, West
```

Conclusion:

Most of the things work except for one thing. The game can’t find the winner so they’re some numbers of problems happen because of that.