

(1)Name and school ID:

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(2)Player Strategy

My player Strategy is quite simple.

First, my player never surrender and never buy insurance for the player wasn't provided with the value face-down card to come up with the decision.

Second, when splitting, my player always splits except for the some cases(paris of value 10, paris of value 5, and when my pets is lower then 14 with the dealer open card greater than 8).

Third, my player do double when two cases happens, the total points is 9 to 11(hard hand) and the case that player having soft hand while dealer is having poor card with open value is 4 to 6.

As for the decision of whether to stand of hit, my strategy is that when player's hand is hard, the player will check whether the dealer open is less than 7. If is less then 7, the player will hit if until the points exceed 13. If player's hand is hard and points exceed 17, player will stand. At last for the case having a soft hand, the player will keep adding until points exceed 17.

(3)The design of classes and the reason

I implemented three class, including **Deck**, **Player** and **POOCasino**. The class of **Player** is defined as interface, however, i added two more private function to help player calculate points and make sure and hand is hard or soft. The class **Deck** is where i create the deck need for the game with the Card(foop package). The player and dealer will get cards with Deck's assignCard() or assignCards() functions. At last, the **POOCasino**, is the place where program runs together with all the classes. POOCasino is responsible to check whether the player wants to do the operations as the spec required, add card from deck to player or dealer and at last printed out the result to screen.

(4)The result of the duel between me and my classmate

All the players initially will have 200000 chips and play for 100 round. The snapshot on the right side is a result for the duel. I tried to increase the round to play to 500+. However, all the player will lose all their chips in most cases, i think it's because we can't know the face-down card when we are making the decision of whether to surrender or not.

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Game Started - Round: 99
Make bet and Assign Cards
Player1: make bet 5000.0
Player2: make bet 6133.0
Player3: make bet 5000.0
Player4: make bet 7856.0
Now players: 1 2 3 4
Dealer face-up: 6
Dealer asking players to surrender..
Player1: Stands!
Player2: Stands!
Player3: Stands!
Player4: Stands!
Dealer pts: 17
Player1 - Hand: 12 8 Pts: 18
Player2 - Hand: 11 4 Pts: 14
Player3 - Hand: 13 1 Pts: 21
Player4 - Hand: 10 3 Pts: 13
Player1 Chips remaining: 290000.0
Player2 Chips remaining: 55204.0
Player3 Chips remaining: 140000.0
Player4 Chips remaining: 70709.0
```