

Thoughts for P3 – Blackjack 21

- Title from an ASCII generator
<http://patorjk.com/software/taag/#p=display&h=2&v=2&f=Univers&t=BlackJack21>
- Don't get marks for making it look great so will leave other graphics to end if have time, like box round the cards.
- Instructions – don't need to be rules just how to play the game
 - Hi, <name>
 - The aim is to get as close to 21 (or ideally 21) and beat the dealers hand.
 - To place a bet – type a whole number that is less than or equal to your credit.
 - The cards will then be displayed. Two each for you and the dealer, one of the dealers cards will be held in the hole until his turn.
 - If you have two identical value cards you can then split by answering the y/n question.
 - You can Hit (get one more card) by typing H, Stick (stay where you are) by typing S, or Double down by typing D.
 - Your cards are worth their face value if they are a number card. Jack, Queen and King are worth 10 and Ace can be worth 1 or 11 depending on what is best for the hand.
 - If you exceed 21 or the dealer gets closer, then you will lose your bet
 - If you win the winnings will be paid into your credit.
- Betting – need to have current credit and current bet on screen at all times taken from the variables credit and bet.
 - When bet placed need to subtract it from the credit variable and place it in the bet variable.
- How to create the deck
 - [suit : spade, heart, diamond, club, value : Ace, 1->9 Jack, Queen, King]
 - suits = ["spade", "diamond", "heart", "club"]
 - values = ['Ace', 2, 3, 4, 5, 6, 7, 8, 9, 'Jack', 'Queen', 'King']
 -
 - cards = [{'suit': suit, 'value': value} for suit in suits for value in values]
- How to randomise the cards from cards -> deck import shuffle deck = random.shuffle(cards)- will need to import random
- Dealing the cards can be done by card = deck.pop(). Then card can be put in a list for a player using append and the deck will have had that card removed.
- Once hands have been put into variables dealer and player need to show the player the card 1 of dealer and hole and their cards in an f string.
- Calculate cards if integer then add together, if string then Jack / Queen / King = 10 and while score is <21 ace = 11 if score goes over 21 ace =1 and recalculates.
- Split if value card 1 = value card 2
- User input from input function

- Need to error check every user input for if it is the correct Key or even a alpha/numeric key, if wrong inform them of what the error is with an f string and ask again. Include examples
- Error check that the bet does not exceed the credit
- Add a new deck if we run out of cards so not trying to deal from an empty deck. Can randomise cards and .join()
- Pay out calculations
 - Push payout = bet
 - BlackJack payout = (floor((bet/2)*3))+bet import math?
 - Win payout = 2*bet
 - Then credit +=payout
- Finish game with an f string telling them how much they won/lost?

Reusable functions

1. Deal card(who):
2. Calculate score(card**)
3. Error check input integer
4. Error check input y/n/h/d/s
5. Check cards left in deck
6. Check if bust/over 21
7. Ace value – 1 or eleven
8. Payout
- 9.