```
############### Blackjack Project #####################

############### Our Blackjack House Rules #####################

## The deck is unlimited in size.
## There are no jokers.
## The Jack/Queen/King all count as 10.
## The the Ace can count as 11 or 1.
## Use the following list as the deck of cards:
## cards = [11, 2, 3, 4, 5, 6, 7, 8, 9, 10, 10, 10, 10]
## The cards in the list have equal probability of being drawn.
## Cards are not removed from the deck as they are drawn.
## The computer is the dealer.

import random as r
from replit import clear

#Hint 4: Create a deal_card() function that uses the List below to
*return* a random card.
#11 is the Ace.
def deal_user():
    cards = [11, 2, 3, 4, 5, 6, 7, 8, 9, 10, 10, 10, 10]
    card = r.choice(cards)
    return card

#Hint 6: Create a function called calculate_score() that takes a List
of cards as input
#and returns the score.
#Look up the sum() function to help you do this.
def calculate_score(cards):
    #Hint 7: Inside calculate_score() check for a blackjack (a hand
with only 2 cards: ace + 10) and return 0 instead of the actual score.
0 will represent a blackjack in our game.
    if sum(cards) == 21 and len(cards) == 2:
        return 0

    #Hint 8: Inside calculate_score() check for an 11 (ace). If the
score is already over 21, remove the 11 and replace it with a 1. You
might need to look up append() and remove().
    if 11 in cards and sum(cards) > 21:
        cards.remove(11)
        cards.append(1)

    return sum(cards)

#Hint 13: Create a function called compare() and pass in the
user_score and computer_score. If the computer and user both have the
same score, then it's a draw. If the computer has a blackjack (0),
then the user loses. If the user has a blackjack (0), then the user
wins. If the user_score is over 21, then the user loses. If the
```

```
computer_score is over 21, then the computer loses. If none of the
above, then the player with the highest score wins.
def compare(user_score, computer_score):
    if user_score == computer_score:
        return "match draw"
    elif user_score == 0:
        return "you won with the black jack"
    elif computer_score == 0:
        return "you lose, oppenent won with a black jack"
    elif user_score > 21:
        return "you overwent and lose"
    elif computer_score > 21:
        return "oppenent over went and you won"
    elif computer_score > user_score:
        return "you lose"
    else:
        return "you won"

def play_game():

    #Hint 5: Deal the user and computer 2 cards each using deal_card()
and append().
    user_cards = []
    computer_cards = []
    is_game_over = False  #acts as a flag

    for i in range(2):
        user_cards.append(deal_user())
        computer_cards.append(deal_user())

    while not is_game_over:

        #Hint 9,11: Call calculate_score(). If the computer or the
user has a blackjack (0) or if the user's score is over 21, then the
game ends.
        user_score = calculate_score(user_cards)
        computer_score = calculate_score(computer_cards)
        print(f"your cards = {user_cards}, your score = {user_score}")
        print(f"computer's first card = {computer_cards[0]}")

        if  user_score == 0 or computer_score == 0 or user_score > 21:
            is_game_over = True
        else:
            user_should_deal = input("Type 'y' to get another card 'n'
to stop")

            #Hint 10: If the game has not ended, ask the user if they
want to draw another card. If yes, then use the deal_card() function
to add another card to the user_cards List. If no, then the game has
ended.
```

```
            if user_should_deal == 'y':
                user_cards.append(deal_user())
            else:
                is_game_over = True

    #Hint 12: Once the user is done, it's time to let the computer
play. The computer should keep drawing cards as long as it has a score
less than 17.
    while computer_score != 0 and computer_score < 17:
        computer_cards.append(deal_user())
        computer_score = calculate_score(computer_cards)

    print(f"\tyour final cards = {user_cards}, final score =
{user_score}")
    print(f"\tcomputer final card = {computer_cards}, computer final
score = {computer_score}")
    print(compare(user_score, computer_score))

#Hint 14: Ask the user if they want to restart the game. If they
answer yes, clear the console and start a new game of blackjack and
show the logo from art.py.
should_continue = input("type 'y' to restart or 'n' to stop")

while should_continue == 'y':
    clear()
    play_game
```