| **Variable Name** | **Variable Description** | **Variable Type** | **Variable Data at start (Value)/Limitations** |
| --- | --- | --- | --- |
| keep\_going | Tells if game is over or not | Boolean | True |
| pot | This will hold the amount of money a pot will have during the game for both players and the total pot, by default the pot will be empty | array | [ ] |
| card\_deck | This will represent the existence of a card. This will be a 2d array with all items starting with a boolean of True | 2d array with boolean True  (13\*4) | Empty [ ] |
| suit\_value | This is to allow the name of the suit to be associated with the card indices for the card deck | one dimensional list of suit values | [“CLUBS”,”DIAMONDS”,”HEARTS”,”SPADES”] |
| card\_values | to allow the value of the card to be associated with the card indices for the card deck | one dimensional list of card values | [ “ACE”, ……”JACK”,”QUEEN”,”KING’] |
| num\_cards | This will hold the number of cards that is available to be played |  | num\_card\_values \* num\_suits |
| num\_suits | Hold the values of suits in the deck | Integer | 4 |
| which\_player | This will make the person who last played to go first | Boolean | False |
| num\_card\_values | This variable will hold the number of card values in the deck | Integer | 13 |
| reset\_deck | This will be an integer on when there is this amount of cards less than equal to 4 | Integer | 4 |
| ante | This will be the amount of money that will cost the player to play the game | Integer | 20 |
| player\_hand | This will hold the player's hand of cards for a round in the game. It gets reset every round | Array | [ ] |
| bet | This will hold the bet of the player for that round inside the function | Integer | 0 |
| message\_list | This will hold all the different messages in the program to display to the user | List | [“Place a bet”, “Bet too high”, “You lost this round as the card is not in between”, “Game Over”, “The pot is”, “You have” + pot[which\_player] + “in your bank”] |

Functions:

* def Initialize\_deck(deck, num\_suits, num\_card\_values):
  + Builds the deck
  + returns number of cards available
  + return num\_cards
* def initialize\_pot(pot):
  + pot = [ 500, 500, 1000 ]
* def get\_a\_card(deck):
  + sends one card to get\_a\_hand
  + returns card to get\_a\_hand
* def get\_a\_hand(deck, player\_hand):
  + set player\_hand to empty
  + get number of cards
  + puts cards in order
  + call function get\_a\_card
  + send get hand to array player\_hand
  + return player\_hand
* def what\_bet(pot, ante, bet):
  + ask their bet ( get valid num func )
  + store their bet in the variable bet
  + return variable bet
* def change\_ace(deck):
  + change ace card to either high or low ( 13 or 0 )
* def payout(pot, what\_bet, player\_hand):
  + check if card is valid
  + if card is valid
    - give them money from pot double the bet
  + if card is not valid
    - take their money and add to the pot
* def switch\_player(which\_player):
  + which\_player = not which\_player
* While game\_over == False:
  + which\_player = not which\_player
  + ask if they want to quit or play
    - no - display current result, drop the program
    - yes - give 2 cards ( call functions get a hand - get ante from their bank)
    - check if they are ace
      * change ace to high and low
  + call bet functions to ask what they want to bet
  + get bet
  + randomly generate a card and send to player\_hand
  + call payout() function
  + check enough cards, when num\_cards get to lowest amount re-initialize deck
  + remove those 2 cards from deck
  + quit if person chooses to quit , they out of money, pot out of money or their bank amount is less or equal than the ante amount