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Option 1: Rock-Paper-Scissors Game

for i in range (3) :

from random import \*

Rock = "r"

Paper = "p"

Scissors = "s"

def makeComputerOutput():

randomNumber = randint(0,2)

move = Rock

if (randomNumber == 1):

move = Paper

elif (randomNumber == 2):

move = Scissors

return move

def PlayerWin(playerInput,computerOutput):

Win = False

if ((playerInput == Rock) and (computerOutput == Scissors)):

Win = True

elif ((playerInput == Scissors) and (computerOutput == Paper)):

Win = True

elif ((playerInput == Paper) and (computerOutput == Rock)):

Win = True

elif playerInput not in (Rock, Paper, Scissors):

print("Please enter a valid move to continue.")

return Win

def computerWin(playerInput,computerOutput):

Win = False

if ((computerOutput == Rock) and (playerInput == Scissors)):

Win = True

elif ((computerOutput == Scissors) and (playerInput == Paper)):

Win = True

elif ((computerOutput == Paper) and (playerInput == Rock)):

Win = True

return Win

while True:

print("Player input options:")

print("Rock = r")

print("Paper = p")

print("Scissors = s")

playerInput = input("Enter a player option to continue: ")

computerOutput = makeComputerOutput()

print("Player Move = ", playerInput)

print("Computer Move = ", computerOutput)

if (PlayerWin(playerInput,computerOutput) == True):

print("Congradulations, you have won against the computer.")

elif (computerWin(playerInput,computerOutput) == True):

print("Unfortunately, you have lost against the computer.")

else:

print("There is no winner therefore it is a draw.")

print(" ")

"""

Line 1:

Contains a 'For Loop' that loops the Rock-Paper-Scissors-Game 3 times.

Line 4-6:

Rock is assigned the value 'r', Paper is assigned the value 'p', and Scissors is assigned the value 'p'.

Line 8-15:

Computer makes random move from numbers 0,1,2 in this user defined function. '0' is Rock, '1' is Paper, '2' is Scissors.

Line 17-24:

'Win' is false in this user defined function. If player's move is rock and computer's is scissors, win is true which means the player wins. If player's move is scissors and computer's is paper, 'win' is true which means the player wins. If player's move is scissors and computer's is rock, 'win' is true which means the player wins.

Line 25-26:

If input of player is not Rock, Paper, or Scissors, 'Please enter a valid move to continue' and 'There is no winner therefore it is a draw' get printed to the console output.

Line 29-37:

'Win' is false in this user defined function. If computer's move is rock and player's is scissors, 'win' is true which means the computer wins and the player loses. If computer's move is scissors and player's is paper, 'win' is true which means the computer wins and player loses. If computer's move is scissors and player's is rock, 'win' is true which means the computer wins and player loses.

Line 39-44:

Input options are given to player to type. 'r' is Rock, 'p' is Paper, 's' is Scissors.

Line 45:

computerOutput is assigned the value 'makeComputerOutput'.

Line 46-47:

Selected move of player is printed to console and computer's move is also printed to console output.

Line 49-50:

If any scenario from the 'PlayerWin' user defined function is true, player wins and, 'Congradulations, you have won against the computer' gets printed to the console output.

Line 51-52:

If any scenario from the 'computerWin' user defined function is true, player loses and, 'Unfortunately, you have lost against the computer' gets printed to the console output.

Line 53-55:

If all scenarios of 'PlayerWin' and 'computerWin' fail, 'There is no winner therefore it is a draw' gets printed to the console output.

"""