

E:\rock.py

```
1  # import random module
2  import random
3  # print multiline instruction
4  # perform string concatenation of string
5  print('Winning rules of the game ROCK PAPER SCISSORS are :\n'
6        + "Rock vs Paper -> Paper wins \n"
7        + "Rock vs Scissors -> Rock wins \n"
8        + "Paper vs Scissors -> Scissor wins \n")
9
10 while True:
11
12     print("Enter your choice \n 1 - Rock \n 2 - Paper \n 3 - Scissors \n")
13
14     # take the input from user
15
16     choice = int(input("Enter your choice :"))
17
18     # OR is the short-circuit operator
19     # if any one of the condition is true
20     # then it return True value
21
22     # looping until user enter invalid input
23     while choice > 3 or choice < 1:
24         choice = int(input('Enter a valid choice please '))
25
26         # initialize value of choice_name variable
27         # corresponding to the choice value
28         if choice == 1:
29             choice_name = 'Rock'
30         elif choice == 2:
31             choice_name = 'Paper'
32         else:
33             choice_name = 'Scissors'
34
35         # print user choice
36         print('User choice is \n', choice_name)
37         print('Now its Computers Turn....')
38
39         # Computer chooses randomly any number
40         # among 1 , 2 and 3. Using randint method
41         # of random module
42         comp_choice = random.randint(1, 3)
43
44         # looping until comp_choice value
45         # is equal to the choice value
46         while comp_choice == choice:
47             comp_choice = random.randint(1, 3)
48
49         # initialize value of comp_choice_name
50         # variable corresponding to the choice value
51         if comp_choice == 1:
52             comp_choice_name = 'Rock'
53         elif comp_choice == 2:
54             comp_choice_name = 'Paper'
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55     else:
56         comp_choice_name = 'Scissors'
57     print("Computer choice is \n", comp_choice_name)
58     print(choice_name, 'Vs', comp_choice_name)
59     # we need to check of a draw
60     if choice == comp_choice:
61         print('Its a Draw', end="")
62         result = "DRAW"
63     # condition for winning
64     if (choice == 1 and comp_choice == 2):
65         print('paper wins =>', end="")
66         result = 'Paper'
67     elif (choice == 2 and comp_choice == 1):
68         print('paper wins =>', end="")
69         result = 'Paper'
70
71     if (choice == 1 and comp_choice == 3):
72         print('Rock wins =>\n', end="")
73         result = 'Rock'
74     elif (choice == 3 and comp_choice == 1):
75         print('Rock wins =>\n', end="")
76         result = 'Rock'
77
78     if (choice == 2 and comp_choice == 3):
79         print('Scissors wins =>', end="")
80         result = 'Scissors'
81     elif (choice == 3 and comp_choice == 2):
82         print('Scissors wins =>', end="")
83         result = 'Rock'
84     # Printing either user or computer wins or draw
85     if result == 'DRAW':
86         print("<== Its a tie ==>")
87     if result == choice_name:
88         print("<== User wins ==>")
89     else:
90         print("<== Computer wins ==>")
91     print("Do you want to play again? (Y/N)")
92     # if user input n or N then condition is True
93     ans = input().lower()
94     if ans == 'n':
95         break
96 # after coming out of the while loop
97 # we print thanks for playing
98 print("thanks for playing")
99
```