

TASK:4

User Input: Prompt the user to choose rock, paper, or scissors.

Computer Selection: Generate a random choice (rock, paper, or scissors) for the computer.

Game Logic: Determine the winner based on the user's choice and the computer's choice.

Rock beats scissors, scissors beat paper, and paper beats rock.

Display Result: Show the user's choice and the computer's choice.

Display the result, whether the user wins, loses, or it's a tie.

Score Tracking (Optional): Keep track of the user's and computer's scores for multiple rounds.

Play Again: Ask the user if they want to play another round.

User Interface: Design a user-friendly interface with clear instructions and feedback.

CODE:

```
import random
```

```
print('Winning rules of the game ROCK PAPER SCISSORS are:\n'
```

```
    + "Rock vs Paper -> Paper wins \n"
```

```
    + "Rock vs Scissors -> Rock wins \n"
```

```
    + "Paper vs Scissors -> Scissors wins \n")
```

```
while True:
```

```
print("Enter your choice \n 1 - Rock \n 2 - Paper \n 3 - Scissors \n")
```

```
choice = int(input("Enter your choice: "))
```

```
while choice > 3 or choice < 1:
```

```
    choice = int(input('Enter a valid choice please'))
```

```
if choice == 1:
```

```
    choice_name = 'Rock'
```

```
elif choice == 2:
```

```
    choice_name = 'Paper'
```

```
else:
```

```
    choice_name = 'Scissors'
```

```
print('User choice is:', choice_name)
```

```
print("Now it's Computer's Turn...")
```

```
comp_choice = random.randint(1, 3)
```

```
if comp_choice == 1:
```

```
    comp_choice_name = 'Rock'
```

```
elif comp_choice == 2:
```

```
    comp_choice_name = 'Paper'
```

```
else:
```

```
    comp_choice_name = 'Scissors'
```

```
print("Computer choice is:", comp_choice_name)
```

```
print(choice_name, 'vs', comp_choice_name)
```

```
if choice == comp_choice:
```

```
    result = "its a draw"
```

```
elif (choice == 1 and comp_choice == 2) or (comp_choice == 1 and choice == 2):
```

```
    result = 'Paper'
```

```
elif (choice == 1 and comp_choice == 3) or (comp_choice == 1 and choice == 3):
```

```
    result = 'Rock'
```

```
elif (choice == 2 and comp_choice == 3) or (comp_choice == 2 and choice == 3):
```

```
    result = 'Scissors'
```

```
if result == "its a draw":
```

```
    print("Its a tie!")
```

```
elif result == choice_name:
```

```
    print("User wins!")
```

```
else:
```

```
    print("Computer wins!")
```

```
print("Do you want to play again? (Y/N)")
```

```
ans = input().lower()
```

```
if ans == 'n':
```

```
    break
```

```
print("Thank you for playing!")
```

OUTPUTS:

Output

```
Winning rules of the game ROCK PAPER SCISSORS are:  
Rock vs Paper -> Paper wins  
Rock vs Scissors -> Rock wins  
Paper vs Scissors -> Scissors wins  
  
Enter your choice  
1 - Rock  
2 - Paper  
3 - Scissors  
  
Enter your choice: 1  
User choice is: Rock  
Now it's Computer's Turn...  
Computer choice is: Rock  
Rock vs Rock  
Its a tie!  
Do you want to play again? (Y/N)  
n  
Thank you for playing!  
  
=== Code Execution Successful ===
```

Output

```
Winning rules of the game ROCK PAPER SCISSORS are:  
Rock vs Paper -> Paper wins  
Rock vs Scissors -> Rock wins  
Paper vs Scissors -> Scissors wins  
  
Enter your choice  
1 - Rock  
2 - Paper  
3 - Scissors  
  
Enter your choice: 2  
User choice is: Paper  
Now it's Computer's Turn...  
Computer choice is: Paper  
Paper vs Paper  
Its a tie!  
Do you want to play again? (Y/N)  
Y  
Enter your choice  
1 - Rock  
2 - Paper  
3 - Scissors  
  
Enter your choice: 1  
User choice is: Rock  
Now it's Computer's Turn...
```

```
Enter your choice: 1
User choice is: Rock
Now it's Computer's Turn...
Computer choice is: Scissors
Rock vs Scissors
User wins!
Do you want to play again? (Y/N)
n
Thank you for playing!
```
