TASK 4:-Rock-Paper-Scissors Game

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.

Ans:-

import random

# Function to determine the winner of a round

def determine\_winner(user\_choice, computer\_choice):

if user\_choice == computer\_choice:

return "Tie"

elif (

(user\_choice == "rock" and computer\_choice == "scissors")

or (user\_choice == "scissors" and computer\_choice == "paper")

or (user\_choice == "paper" and computer\_choice == "rock")

):

return "User"

else:

return "Computer"

# Function to display the game result

def display\_result(user\_choice, computer\_choice, winner):

print(f"User chose {user\_choice}")

print(f"Computer chose {computer\_choice}")

if winner == "Tie":

print("It's a tie!")

else:

print(f"{winner} wins!")

# Initialize scores

user\_score = 0

computer\_score = 0

# Main game loop

while True:

print("Rock, Paper, Scissors Game")

user\_choice = input("Choose rock, paper, or scissors (q to quit): ").lower()

if user\_choice == "q":

break

if user\_choice not in ["rock", "paper", "scissors"]:

print("Invalid choice. Please choose rock, paper, or scissors.")

continue

computer\_choice = random.choice(["rock", "paper", "scissors"])

winner = determine\_winner(user\_choice, computer\_choice)

display\_result(user\_choice, computer\_choice, winner)

if winner == "User":

user\_score += 1

elif winner == "Computer":

computer\_score += 1

print(f"User Score: {user\_score}")

print(f"Computer Score: {computer\_score}")

# Display the final score

print("Game over!")

print(f"User Score: {user\_score}")

print(f"Computer Score: {computer\_score}")