

BESANT TECHNOLOGIES PVT.LTD.
Velachery,Chennai-600042

FINAL ASSIGNMENT

Subject: Python Programming

Batch no. : 244

Name: Raghuvaran D

Instructor Name: Gowthami

Coordinator: Akilan

Date: 28-12-2023

Month: November –December 2023

Topic: To create a python game on Rock,Paper and Scissors with loop conditions.

Ex No.1.

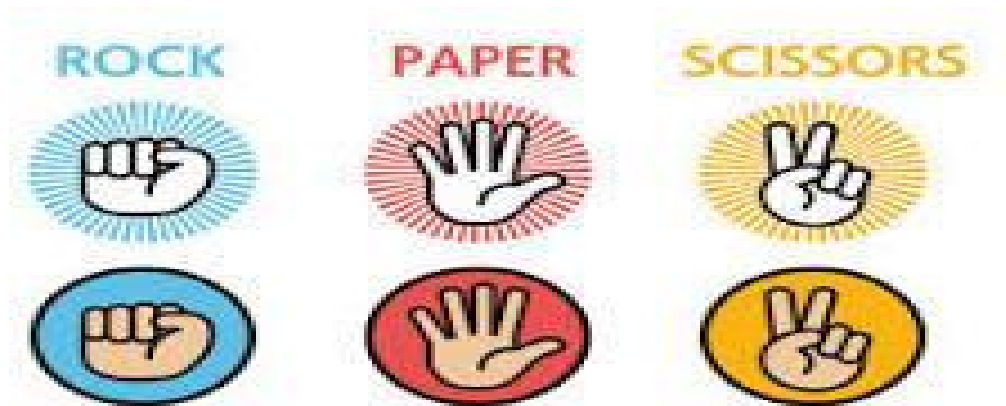
Rock , Paper and Scissors Pygame

Aim:

To create a python game in loop conditions in rock, paper, scissors game.

Problem Objective:

The objective of this program is to create an interactive and dynamic Rock, Paper, Scissors game where the user can play against the computer. The game allows the user to make a choice (rock, paper, or scissors), generates a random choice for the computer, and determines the winner based on the game rules. The program is designed to provide an enjoyable and engaging user experience, encouraging the player to make strategic choices and understand the outcomes of different moves. Additionally, the program aims to demonstrate the use of loops, conditions, functions, and randomization in Python programming, making it a practical example for learning and practicing basic programming concepts.



Program Procedure:

1. Display a welcome message.
2. Enter a loop that continues until the user decides to exit.
3. Inside the loop, ask the user to choose rock, paper, or scissors.
4. Generate a random choice for the computer.
5. Determine the winner based on the choices.
6. Display the result.
7. Ask the user if they want to play again.
8. If yes, repeat the loop; if no, exit the loop and display a farewell message.

Program source :

rock_paper_scissors.py

```
import random
def get_user_choice():
    user_choice = input("Enter your choice (rock/paper/scissors): ").lower()
    while user_choice not in ['rock', 'paper', 'scissors']:
        print("Invalid choice. Please enter rock, paper, or scissors.")
        user_choice = input("Enter your choice (rock/paper/scissors): ").lower()
    return user_choice

def determine_winner(user, computer):
    if user == computer:
        return "It's a tie!"
    elif (user == 'rock' and computer == 'scissors') or \
        (user == 'paper' and computer == 'rock') or \
        (user == 'scissors' and computer == 'paper'):
        return "You win!"
    else:
        return "Computer wins!"

def play_game():
    print("Welcome to Rock, Paper, Scissors Game!")
    while True:
        user_choice = get_user_choice()
        computer_choice = random.choice(['rock', 'paper', 'scissors'])
        print(f"Computer chose: {computer_choice}")
        result = determine_winner(user_choice, computer_choice)
```

```
print(result)
play_again = input("Do you want to play again? (yes/no): ").lower()
if play_again != 'yes':
    print("Thanks for playing! Goodbye.")
    break
if __name__ == "__main__":
    play_game()
```

Output:

```
c:/Users/Raghu/Desktop/rock_paper_scissors.py
Welcome to Rock, Paper, Scissors Game!
Enter your choice (rock/paper/scissors): rock
Computer chose: paper
Computer wins!
Do you want to play again? (yes/no): yes
Enter your choice (rock/paper/scissors): paper
Computer chose: rock
You win!
Do you want to play again? (yes/no): yes
Enter your choice (rock/paper/scissors): scissor
Invalid choice. Please enter rock, paper, or scissors.
Enter your choice (rock/paper/scissors): scissors
Computer chose: rock
Computer wins!
Do you want to play again? (yes/no): no
Thanks for playing! Goodbye.
```

Source Code:

Google Drive:

https://drive.google.com/drive/folders/1grc68_CKEfJHCHwSmHcKRle2IppkZ5kf?usp=sharing

Github:

<https://github.com/Ragnanokbro143/Rps>

Result:

The output of the program in Rock, Paper and Scissors has been verified and executed the program successfully.