

Cognifyz

Where Data Meets Intelligence

INTERNSHIP PROGRAM C / C++

Task 9:

Task: Rock-Paper-Scissors Game

Description: Implement a simple rock-paper-scissors game. Prompt the user to choose either rock, paper, or scissors, and generate a random choice for the computer. Determine the winner based on the game rules and display the result.

Skills: Random number generation, user input, conditional statements.

Source Code in C:

```
#include <stdio.h>
#include <stdlib.h>
#include <time.h>
//Function to fetch Computer's Choice
char Get_computer_choice(){
    int random=rand()%3;//randomly generates a no. between 0,1 and 2
    if (random==0)
        return 'r';
    else if(random==1)
        return 'p';
    else
        return 's';
}
// Function to determine winner
void determineWinner(char user, char computer) {
    printf("Computer chose: %c\n", computer);

    if (user == computer) {
        printf("It's a tie!\n");
    } else if ((user == 'r' && computer == 's') ||
               (user == 'p' && computer == 'r') ||
               (user == 's' && computer == 'p')) {
        printf("You win!\n");
    } else {
        printf("Computer wins!\n");
    }
}
//Main method
int main() {
    char u;
    srand(time(0)); // Seed for random number generation
    printf("Enter your choice:\n1.r for Rock\n2.p for Paper\n3.s for Scissors\n ");
    scanf(" %c", &u);
    // Validate input
    if (u != 'r' && u != 'p' && u != 's') {
        printf("Invalid choice! Please enter r, p, or s.\n");
        return 1;
    }
    char computer_Choice = Get_computer_choice();
    determineWinner(u, computer_Choice);
    return 0;
}
```

OUTPUT 1:

```
ayushghosh — Rock_Paper_Scissors_Game — 80x24
Last login: Wed Feb 26 18:25:40 on ttys000
/Users/ayushghosh/Desktop/Cognifyz_C\:\C++\ Programming\ internship_Tasks/TASK\ 9
/Rock_Paper_Scissors_Game ; exit;
ayushghosh@Ayushs-MacBook-Air ~ % /Users/ayushghosh/Desktop/Cognifyz_C\:\C++\ Pro
gramming\ internship_Tasks/TASK\ 9/Rock_Paper_Scissors_Game ; exit;
Enter your choice:
1.r for Rock
2.p for Paper
3.s for Scissors
s
Computer chose: p
You win!

Saving session...
...copying shared history...
...saving history...truncating history files...
...completed.

[Process completed]
```

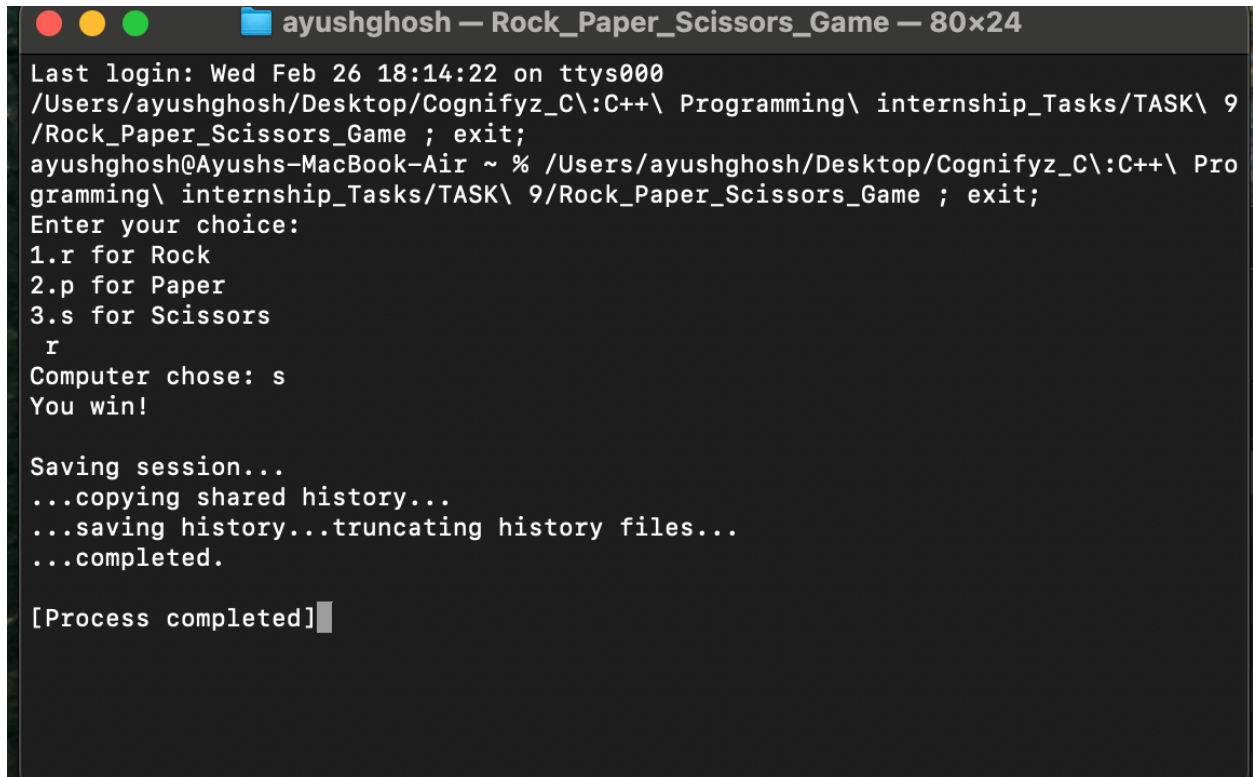
OUTPUT 2:

```
ayushghosh — Rock_Paper_Scissors_Game — 80x24
Last login: Wed Feb 26 18:25:15 on ttys000
/Users/ayushghosh/Desktop/Cognifyz_C\:\C++\ Programming\ internship_Tasks/TASK\ 9
/Rock_Paper_Scissors_Game ; exit;
ayushghosh@Ayushs-MacBook-Air ~ % /Users/ayushghosh/Desktop/Cognifyz_C\:\C++\ Pro
gramming\ internship_Tasks/TASK\ 9/Rock_Paper_Scissors_Game ; exit;
Enter your choice:
1.r for Rock
2.p for Paper
3.s for Scissors
p
Computer chose: s
Computer wins!

Saving session...
...copying shared history...
...saving history...truncating history files...
...completed.

[Process completed]
```

OUTPUT 3:



```
ayushghosh — Rock_Paper_Scissors_Game — 80x24
Last login: Wed Feb 26 18:14:22 on ttys000
/Users/ayushghosh/Desktop/Cognifyz_C\:C++\ Programming\ internship_Tasks\TASK\ 9
/Rock_Paper_Scissors_Game ; exit;
ayushghosh@Ayushs-MacBook-Air ~ % /Users/ayushghosh/Desktop/Cognifyz_C\:C++\ Pro
gramming\ internship_Tasks\TASK\ 9/Rock_Paper_Scissors_Game ; exit;
Enter your choice:
1.r for Rock
2.p for Paper
3.s for Scissors
  r
Computer chose: s
You win!

Saving session...
...copying shared history...
...saving history...truncating history files...
...completed.

[Process completed]
```