BVRIT HYDERABAD COLLEGE OF ENGINEERING FOR WOMEN

Department of CSECertified that this is a bonafide record of the work done by:

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Of Class CSE C of Year 1 of Semester 1 in PPS Laboratory

DATE: **SIGNATURE:**

PROBLEM STATEMENT:-

As we all are familiar with the concept of the game. In this game, we have two players. In our program, player 1 will be the user, and player 2 will be the computer. Player 1 selects either rock, paper, or scissor. The computer does not know about what player 1 has selected, so the computer randomly selects any item (rock, paper, or scissor).
In this game, each player has 3 turns. The player who gets the point at least two times will win the game. The following are the rules of the game.
rock vs. scissors -> rock wins
paper vs. scissors -> scissors wins
paper vs. rock -> paper wins

Task:-

You have to write a C program that will:

- Allows the user to play this game three times with a computer.
- Log the scores of the computer and the player.
- Display the name of the winner at the end
-

Note: You have to display the name of the player during the game. Take users name as an input from the user.
This video is a part of the C programming series. If you have not watched the C programming tutorial until now, click on the link below to access the C programming tutorial.

SOURCE CODE

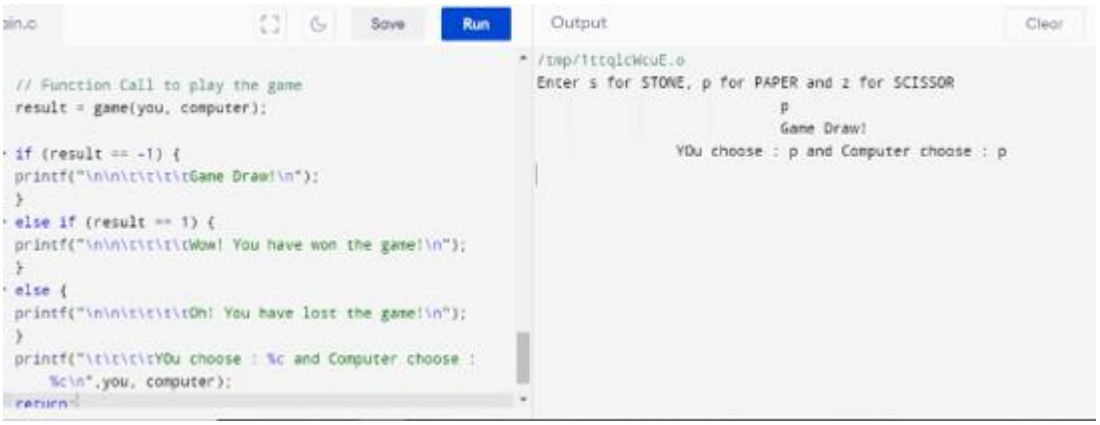
```
#include <math.h>
#include <stdio.h>
#include <stdlib.h>
#include <time.h>

// Function to implement the game
int game(char you, char computer)
{
// If both the user and computer
// has choose the same thing
if (you == computer)
return -1;

// If user's choice is stone and
// computer's choice is paper
if (you == 's' && computer == 'p')
return 0;

// If user's choice is paper and
// computer's choice is stone
else if (you == 'p' && computer == 's') return 1;

// If user's choice is stone and
// computer's choice is scissor
if (you == 's' && computer == 'z')
return 1;

// If user's choice is scissor and
```

```
// computer's choice is stone
else if (you == 'z' && computer == 's')
return 0;

// If user's choice is paper and
// computer's choice is scissor
if (you == 'p' && computer == 'z')
return 0;

// If user's choice is scissor and
// computer's choice is paper
else if (you == 'z' && computer == 'p')
return 1;
}

// Driver Code
int main()
{
// Stores the random number
int n;

char you, computer, result;

// Chooses the random number
// every time
srand(time(NULL));

// Make the random number less
// than 100, divided it by 100
```

```
n = rand() % 100;

// Using simple probability 100 is
// roughly divided among stone,
// paper, and scissor
if (n < 33)

// s is denoting Stone
computer = 's';

else if (n > 33 && n < 66)

// p is denoting Paper
computer = 'p';

// z is denoting Scissor
else
computer = 'z';

printf("\n\n\n\n\t\t\t\tEnter s for STONE, p for PAPER and z for SCISSOR\n\t\t\t\t\t\t\t");

// input from the user
scanf("%c", &you);

// Function Call to play the game
result = game(you, computer);

if (result == -1) {
printf("\n\n\t\t\t\tGame Draw!\n");
```

```
}
else if (result == 1) {
printf("\n\n\t\t\t\tWow! You have won the game!\n");
}
else {
printf("\n\n\t\t\t\tOh! You have lost the game!\n");
}
printf("\t\t\t\tYOu choose : %c and Computer choose : %c\n",you, computer);

return 0;
}
```

OUTPUTS



main.c

Save | Run

```
// Function Call to play the game
result = game(you, computer);

if (result == -1) {
printf("\n\n\t\t\t\tGame Draw!\n");
}
else if (result == 1) {
printf("\n\n\t\t\t\tWow! You have won the game!\n");
}
else {
printf("\n\n\t\t\t\tOh! You have lost the game!\n");
}
printf("\t\t\t\tYOu choose : %c and Computer choose :
    %c\n",you, computer);
return;
```

Output | Clear

```
/tmp/1ttqlcWcuE.o
Enter s for STONE, p for PAPER and z for SCISSOR
                                p
                                Oh! You have lost the game!
                        YOu choose : p and Computer choose : z
```

main.c

Save | Run

```
// Function Call to play the game
result = game(you, computer);

if (result == -1) {
printf("\n\n\t\t\t\tGame Draw!\n");
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}
printf("\t\t\t\tYOu choose : %c and Computer choose :
    %c\n",you, computer);
```

Output | Clear

```
/tmp/1ttqlcWcuE.o
Enter s for STONE, p for PAPER and z for SCISSOR
                                p
                                Game Draw!
                        YOu choose : p and Computer choose : p
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main.c

Save | Run

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// Function Call to play the game
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}
printf("\t\t\t\tYOu choose : %c and Computer choose :
    %c\n",you, computer);
return;
```

Output | Clear

```
/tmp/1ttqlcWcuE.o
Enter s for STONE, p for PAPER and z for SCISSOR
                                z
                                Oh! You have lost the game!
                        YOu choose : z and Computer choose : s
```

main.c

Save | Run

```
// Function Call to play the game
result = game(you, computer);

if (result == -1) {
printf("\n\n\t\t\t\tGame Draw!\n");
}
else if (result == 1) {
printf("\n\n\t\t\t\tWow! You have won the game!\n");
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else {
printf("\n\n\t\t\t\tOh! You have lost the game!\n");
}
printf("\t\t\t\tYOu choose : %c and Computer choose : %c\n",you
    , computer);
return;
}
```

Output | Clear

```
/tmp/1ttqlcWcuE.o
Enter s for STONE, p for PAPER and z for SCISSOR
                                z
                                Wow! You have won the game!
                        YOu choose : z and Computer choose : p
```