Stone Paper Scissors

A Mini Project in C

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AIM: To create a game that allows users to play STONE PAPER SCISSOR with the computer in a neat and convenient manner.

ABSTRACT: Stone Paper Scissors is a childhood favorite of many, and works similarly on the computer to how it does in person. The player chooses to throw the stone, paper, or scissors, and the computer plays the same on the other side. There is an immediate winner, and the game challenges the player to try to think strategically to try to outsmart the computer.

Algorithm for paper stone scissors

STEP 1: Input V1
STEP 2:Input V2
STEP 3: If (v1 = stone) then
STEP 4: If (v2 = stone) goto draw
STEP 5: If (v2 = paper) goto lost
STEP 6: If (v2 = scissors) goto win

STEP 7: If (v1 = paper) then
STEP 8: If (v2 = stone) goto win
STEP 9:If (v2 = paper) goto draw
STEP 10:If (v2 = scissors) goto lost

STEP 11: If (v1 = scissors) then
STEP 12: If (v2 = stone) goto lost
STEP 13: If (v2 = paper) goto win
STEP 14: If (v2 = scissors) goto draw

STEP 15: // if we got here, something was wrong with input values
STEP 16: print error message; goto exit
STEP 17:draw: print draw message; goto exit
STEP 18: Lost: print lost message; goto exit
STEP 19: win: print win message; goto exit
STEP 20: exit: exit the program

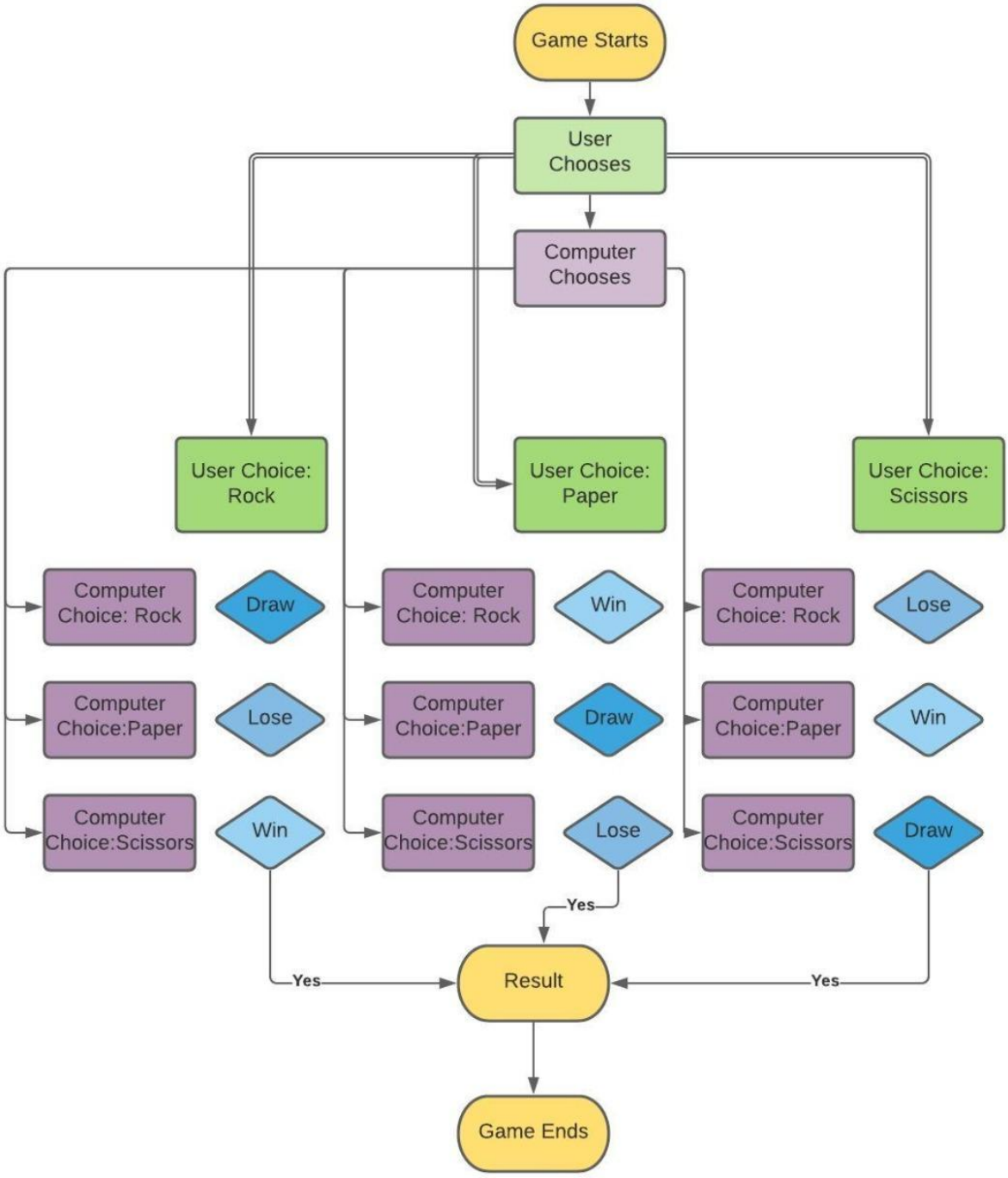
SOURCE CODE

```
// C program for the above approach
#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 chose 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) {
```

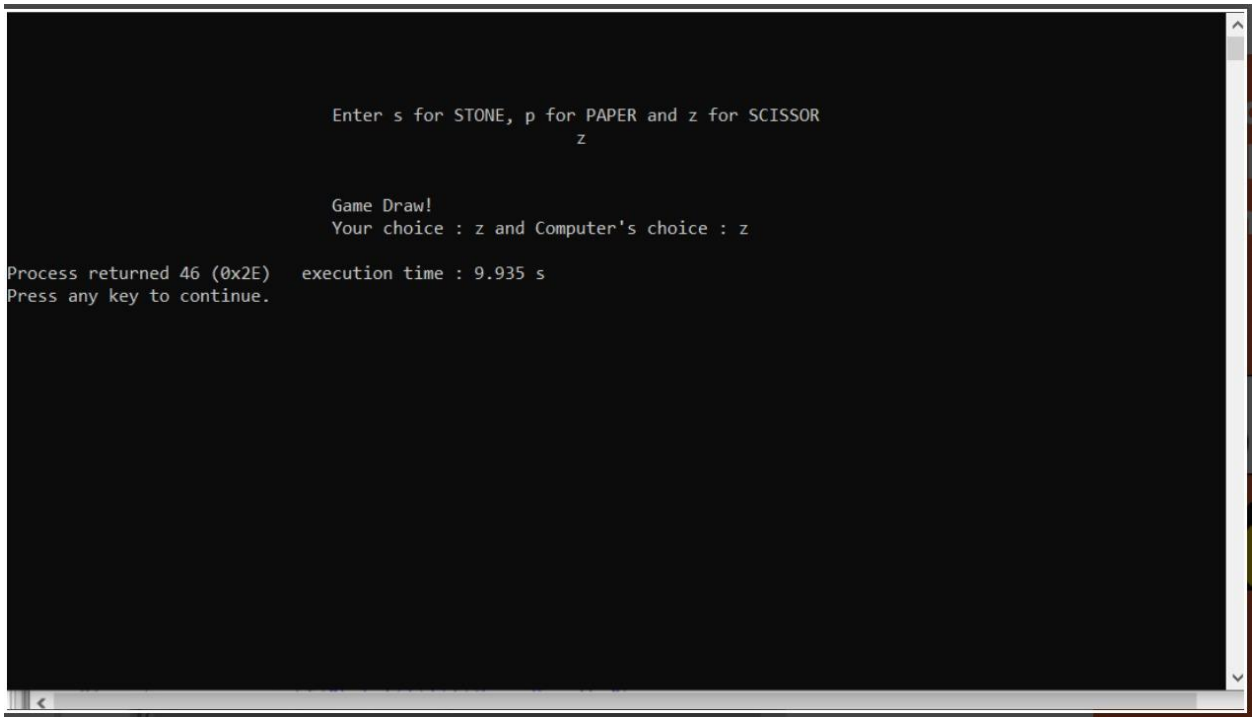
```
printf("\n\n\t\t\t\tGame Draw!\n");
}
else if (result == 1) {
printf("\n\n\t\t\t\tWow! You have won the game!\n");
}
else {
printf("\n\n\t\t\t\tOh! You have lost the game!\n");
}
printf("\t\t\t\tYOu choose : %c and Computer choose : %c\n",you,
computer);
return 0;
}
```

FLOWCHART


Game Starts
User Chooses
Computer Chooses
User Choice: Rock
User Choice: Paper
User Choice: Scissors
Computer Choice: Rock
Draw
Computer Choice: Rock
Win
Computer Choice: Rock
Lose
Computer Choice:Paper
Lose
Computer Choice:Paper
Draw
Computer Choice:Paper
Win
Computer Choice:Scissors
Win
Computer Choice:Scissors
Lose
Computer Choice:Scissors
Draw
Yes
Yes
Yes
Result
Game Ends

OUTPUT


Enter s for STONE, p for PAPER and z for SCISSOR


Enter s for STONE, p for PAPER and z for SCISSOR
z
Game Draw!
Your choice : z and Computer's choice : z
Process returned 46 (0x2E) execution time : 9.935 s
Press any key to continue.

RESULT

Our project Stone Paper Scissor provides easy access to a formatted game. Our project has succeeded in managing the data and providing the best output.

CONCLUSION:

Stone Paper Scissors has been a hit with all age groups tested. It is a classic game that is enhanced through picture animations. However, in the future, these images could be programmed to look nicer rather than showing as a plain figure window. Also, different versions of the game could be added so the user could choose which version they would like to play.