STONE PAPER SCISSORS

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Department with Specialization: B-Tech CSE with Specialization in Artificial Intelligence and Machine Learning.

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Course Title : Programming for Problem Solving

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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.

Stone Paper Scissors Project is developed using C programming language. In this game, the user will be asked to make choice and according to the choice of user and computer and then the result will be displayed along with the choices of both computer and user.

ALGORITHM

STEP 1: Input You

STEP 2: Input Computer

STEP 3: If (You= stone) then

STEP 4: If (Computer = stone) goto draw

STEP 5: If (Computer = paper) goto lost

STEP 6: If (Computer = scissors) goto win

STEP 7: If (You= paper) then

STEP 8: If (Computer = stone) goto win

STEP 9: If (Computer = paper) goto draw

STEP 10: If (Computer = scissors) goto lost

STEP 11: If (You = scissors) then

STEP 12: If (Computer = stone) goto lost

STEP 13: If (Computer = paper) goto win

STEP 14: If (Computer = scissors) goto draw

STEP 15: // if we got here, something was wrong with input values

STEP 16: print error message; goto exit

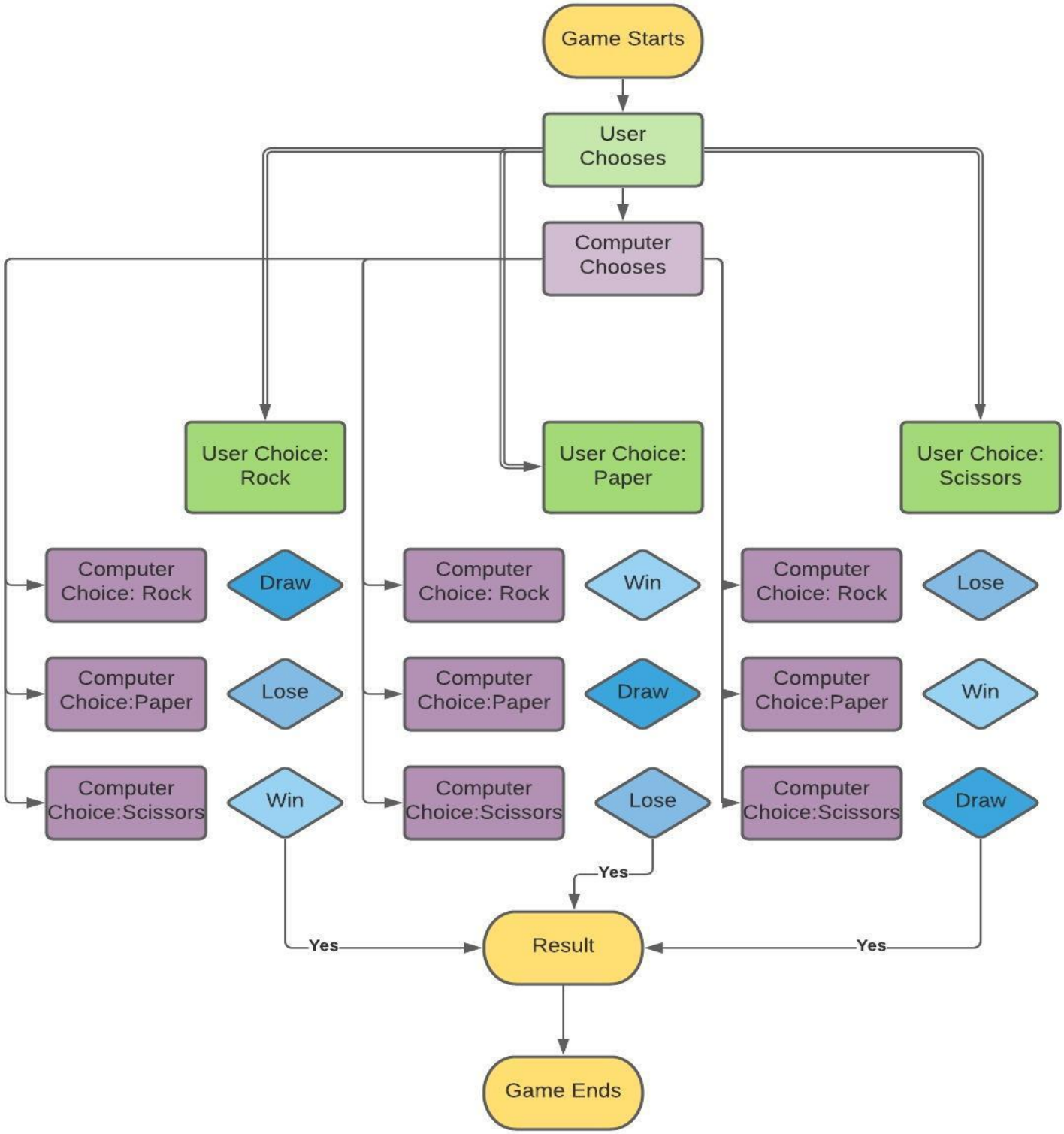
STEP 17: draw: print draw message; goto exit

STEP 18: Lost: print lost message; goto exit

STEP 19: win: print win message; goto exit

STEP 20: exit: exit the program

FLOW CHART


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

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';
```

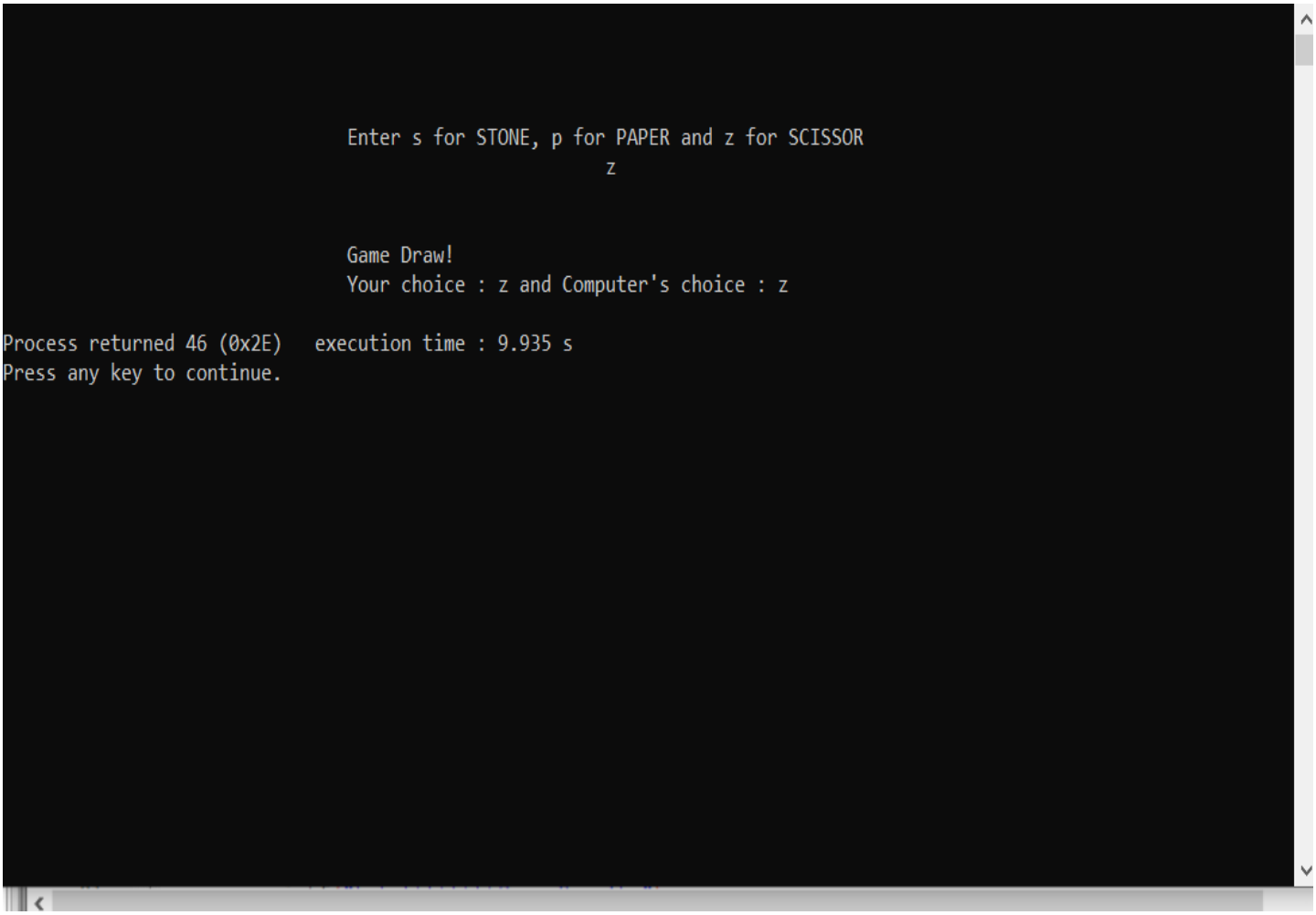
```
printf("\n\n\n\n\t\t\t\tEnter s for STONE, p for PAPER and z for SCISSOR\n\t\t\t\t\t\t\t");


// 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\tYour choice : %c and Computer’s choice :
%c\n",you, computer);


return 0;

}
```

OUTPUT

1.Firstly, the user will be asked about the choice:

2.When the user enters the choice then the result is displayed:



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.