TABLE OF CONTENTS

ABOUT THE GAME:

Rock paper scissors game is also known as stone paper scissors. It is a hand game that is usually played between 2 people, each player can randomly form any one of three from their hand.

A player who chooses rock will win by another player who chooses scissors but loose by the player who chooses paper; a player with paper will loose by the player with the scissors.

If both players choose the same then the game is tied. Rock paper scissors game is mainly played among kids.

INTRODUCTION:

Rock paper scissors is a hand game usually played between two people, in which each player simultaneously forms one of three shapes with an outstretched hand. But here v are using a computer where a single player can play wit a computer alone.

So the method of playing this game is If both players choose the same shape, the game is tied and is usually immediately replayed to break the tie. The type of game originated in China and spread with increased contact with East Asia, while developing different variants in signs over time.

Rock paper scissors is often used as a fair choosing method between two people, similar to coin flipping, drawing straws, or throwing dice

OBJECTIVE:

So this game is usually played it with a computer in order to settle a dispute or make an unbiased group decision. Unlike truly random selection methods, however, rock paper scissors can be played with a degree of skill by recognizing and exploiting non-random behavior in opponents when u play it with hands. but in computer even a disabled people can also play it without using any hand gesture

Design Methodology

These are the step to build a rock-paper-scissors game using python:

- **Import required libraries**
- **Initialize window**
- **Code for user choice**
- **Code for computer choice**
- **Define functions**
- **Define buttons**

1. Importing Libraries

```
from tkinter import *

import random
```

The first step is to import libraries. Here, we required two modules so we need to import Tkinter and random modules.

2. Initialize Window

```
root = Tk()
root.geometry('400x400')
root.resizable(0,0)
root.title('DataFlair-Rock,Paper,Scissors')
root.config(bg ='seashell3')
```

- Tk() use to initialized Tkinter to create window
- geometry() sets the window width and height
- resizable(0,0) by this command we can fix the size of the window
- title() used to set the title of the window
- bg = ‘’ use to set the color of the background

- Label() widget used when we want to display text that users can’t modify.

3.For User Choice

- user_take is a string type variable that stores the choice that the user enters.
- Entry() widget used when we want to create an input text field.

4. For Computer Choice

random.randint() function will randomly take any number from the given number.

Here we give the if-else() condition to play rock paper scissors

- If the computer choose 1 then the rock will set to comp_pick variable
- If the computer choose 2 then the paper will set to comp_pick variable
- If the computer choose 3 then scissors will set to comp_pick variable

```
comp_pick = random.randint(1,3)
if comp_pick == 1:
    comp_pick = 'rock'
elif comp_pick ==2:
    comp_pick = 'paper'
else:
    comp_pick = 'scissors'
```

REQUIREMENTS

Hardware Requirements:

Our computer architecture consists from CPU (Central Processing Unit), registers and Random Access Memory RAM, where part of the memory is being used as a stack. The size of each word in memory is 16 bits. Arithmetics is to be carried by the '2 complement' method. Our computer machine can only handle integers (Positives or negatives), it doesn't handle real numbers.

Software Requirements:

- Python

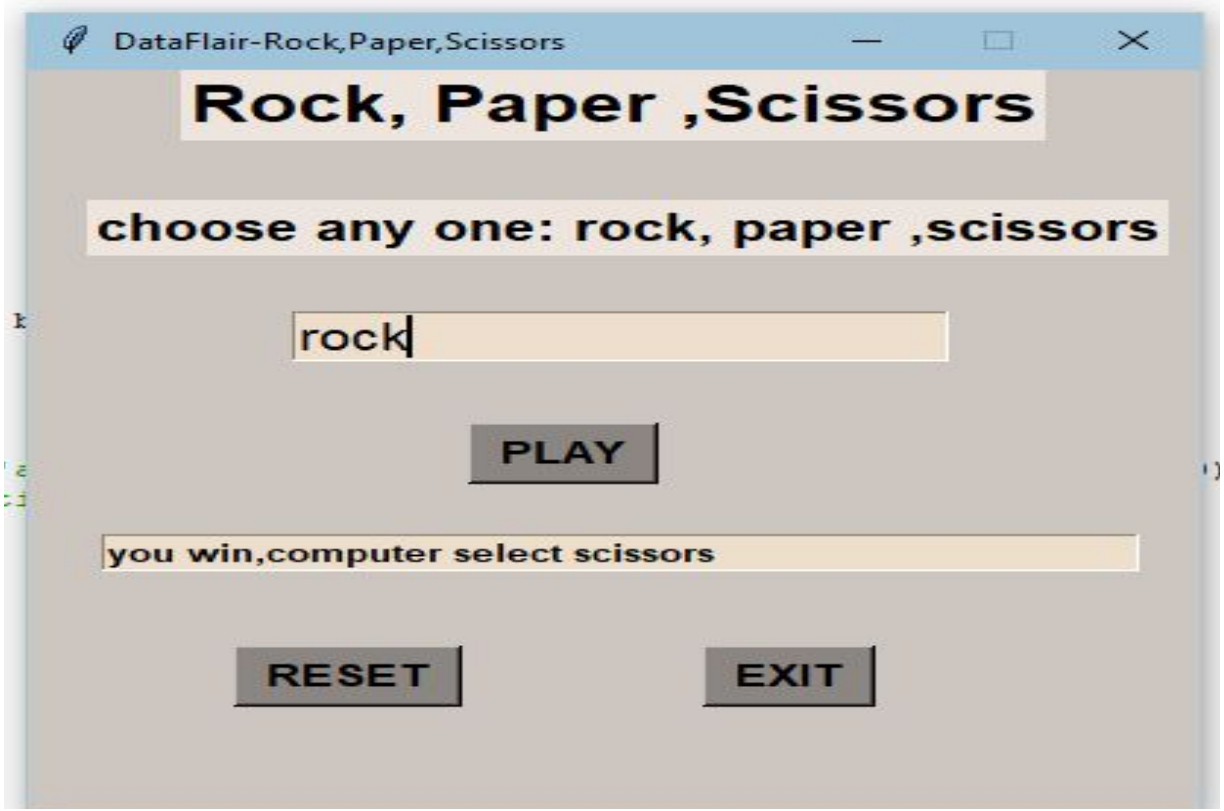
To implement this python rock paper scissors project we will use the basic concept of python with tkinter and random module.

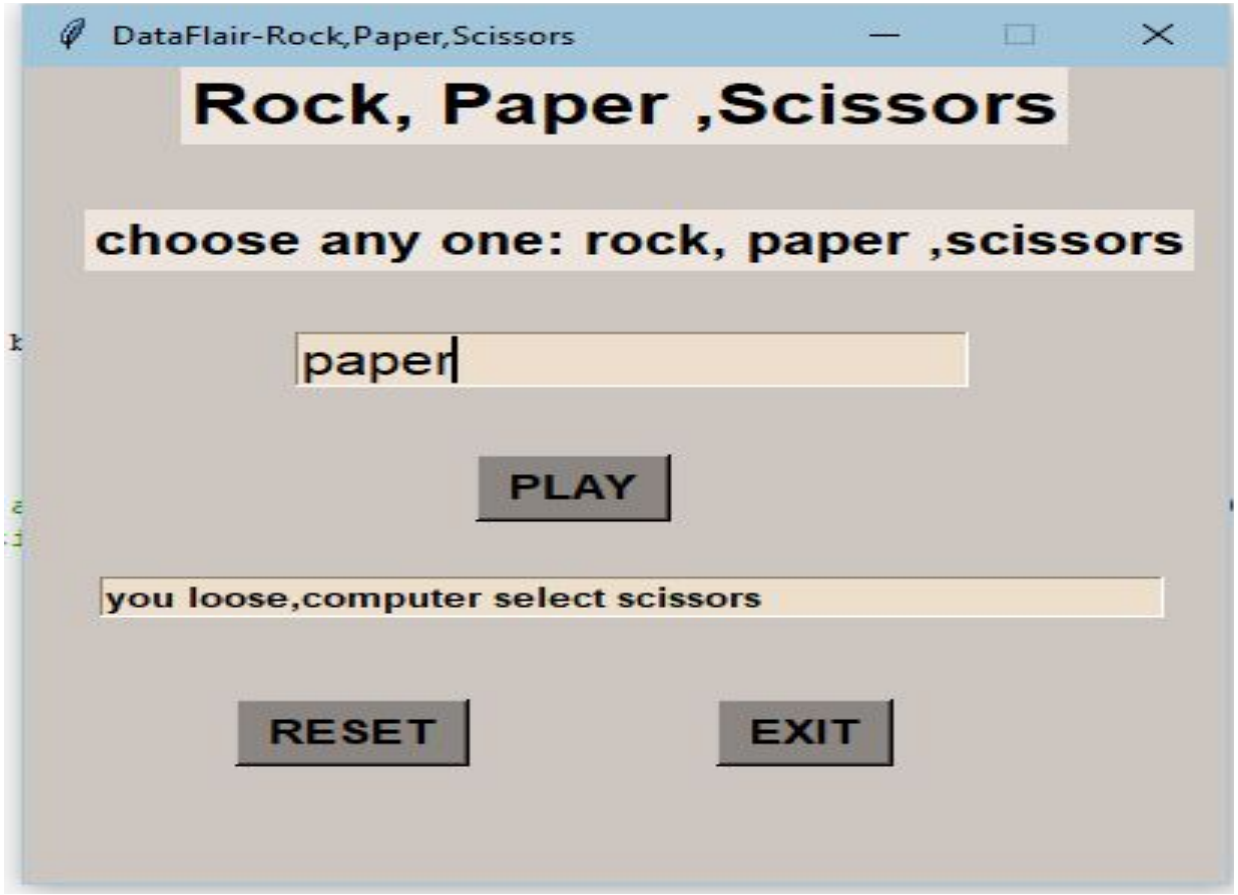
- Tkinter is a standard GUI library which is one of the easiest ways to build a GUI application.
- random module use to generate random numbers

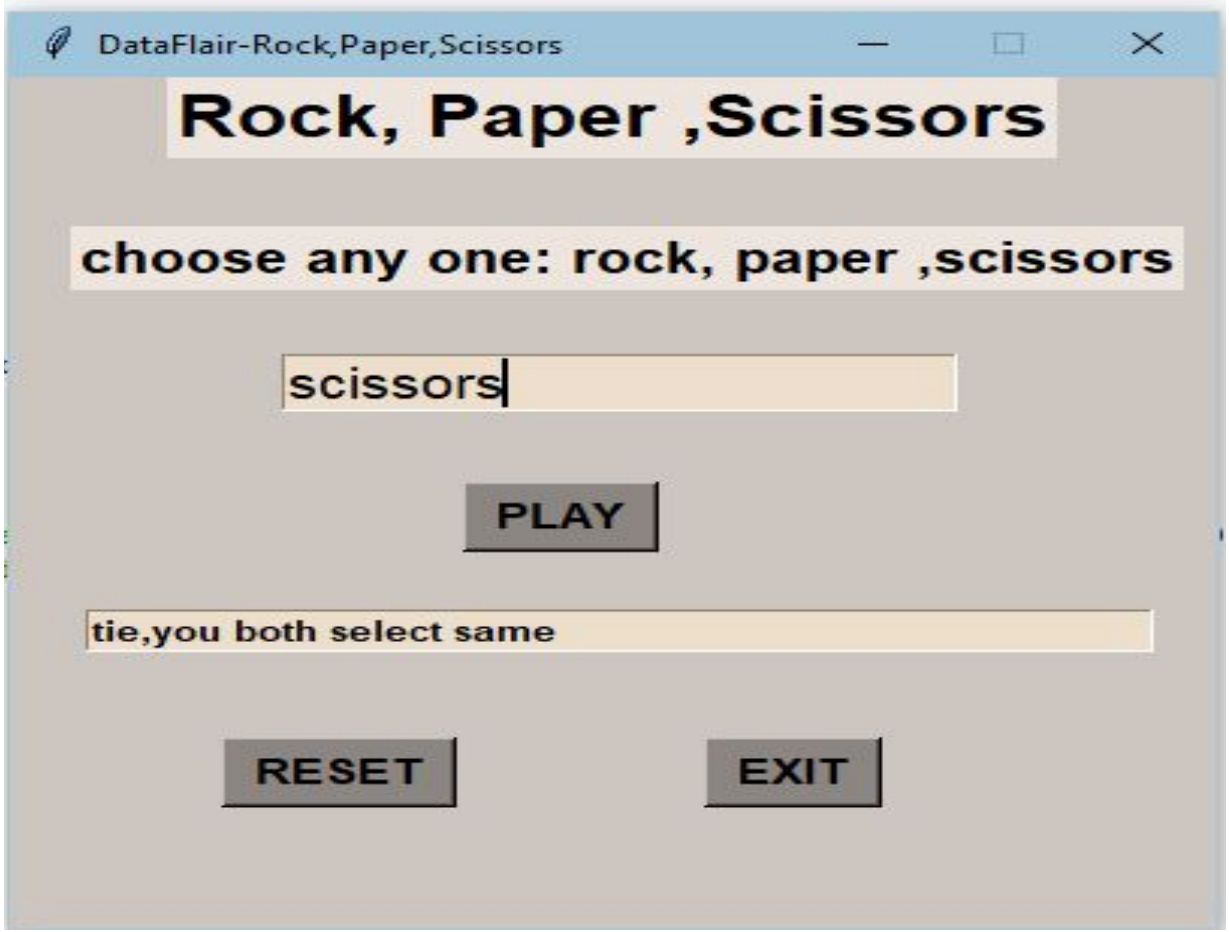
To install the libraries we can use the pip installer command on the command prompt:

```
pip install tkinter
pip install random
```

Results

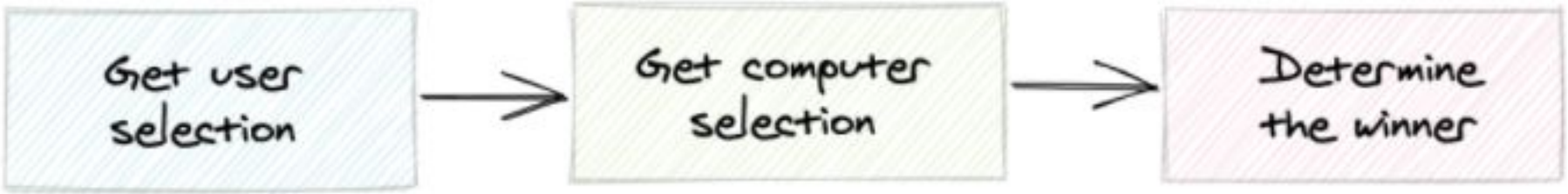

DataFlair-Rock,Paper,Scissors
Rock, Paper ,Scissors
choose any one: rock, paper ,scissors
rock
PLAY
you win,computer select scissors
RESET
EXIT


DataFlair-Rock,Paper,Scissors
Rock, Paper ,Scissors
choose any one: rock, paper ,scissors
paper
PLAY
you loose,computer select scissors
RESET
EXIT


DataFlair-Rock,Paper,Scissors
Rock, Paper ,Scissors
choose any one: rock, paper ,scissors
scissors
PLAY
tie,you both select same
RESET
EXIT

Implementation

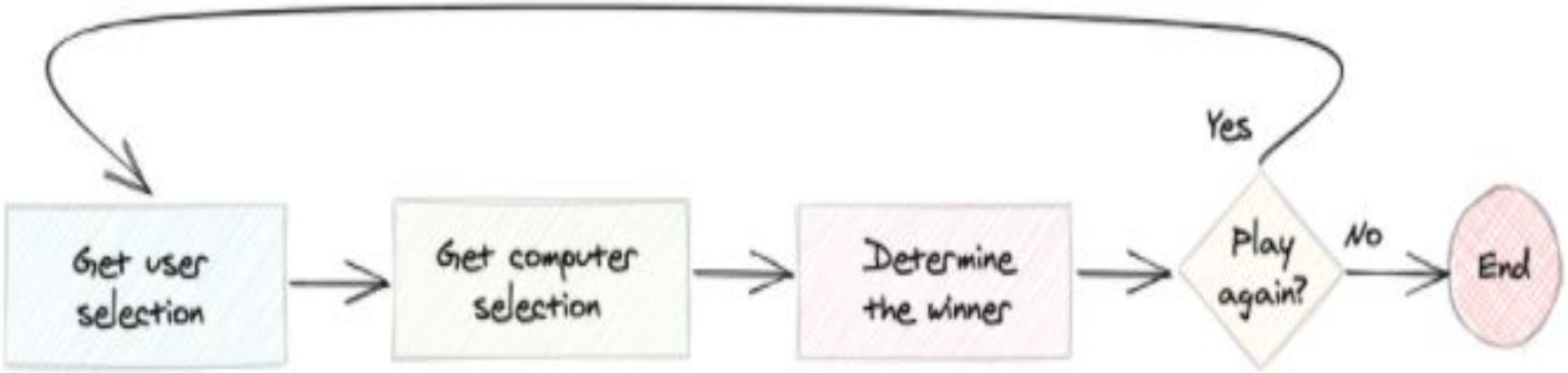
- Take User Input
- Make the computer choose
- Determine the winner



Each player selects an action and then a winner is determined. This flowchart is accurate for a single game as you've coded it, but it's not necessarily accurate for real-life games. In real life, the players select their actions simultaneously rather than one at a time like the flowchart suggests.

In the coded version, however, this works because the player's choice is hidden from the computer, and the computer's choice is hidden from the player. The two players can make their choices at different times without affecting the fairness of the game.

Flowcharts help you catch possible mistakes early on and also let you see if you want to add more functionality. For example, here's a flowchart that describes how to play games repeatedly until the user decides to stop:



Conclusion

When the user selects one of the objects, our program will randomly select one object. Then, it will go through the set of rules to declare whether the user won, lost or drew the game. The result will be displayed on the second row of our application.

When the user presses the reset button, the game will restart.

And if we press on the exit button which exits the game.

Player has a place to write whichever option he or she wants to play with.

THANK YOU