

SECTION: K20GR

Final Report

ROCK PAPER SCISSOR GAME

GAME DESIGN PYTHON PROGRAMMING (INT 213)

By

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GITHUB LINK:- <https://github.com/Ramant23-2003/python-game.git>

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ACKNOWLEDGEMENT

It is my proud privilege and duty to acknowledge the kind of help and guidance received from several people in preparation of this report. It would not have been possible to prepare this report in this form without their valuable help, cooperation and guidance.

I would like to express my special thanks of gratitude to my teacher of Python Programming Dr Dhanpratap Singh, as well as our fellow teammates who gave their best for the opportunity to do this wonderful project of game designing on the topic of the Rock,Paper,Scissor which also helped us in doing a lot of research and we came to know about so many new things, we learned and explore many things we are thankful to our teacher Dr Dhanpratap singh.

Secondly, we would also like to thank my parents and friends who helped me a lot in finalizing this project within the limited time frame and helped in their hectic schedule.

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INTRODUCTION

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.

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GAME RULES

In this app that we make, you are going to play against your enemy, which is the computer. The rules of the game are listed below:

- If one player chooses the rock, and the other chooses the scissor, rock wins.
- If one player chooses the rock, and the other player chooses paper, paper wins.
- If one player chooses the scissor, and the other player chooses paper, scissor wins.
- If both the choices are the same, then no one will win. Both the user and the computer will not get a point.

Game Winner Condition:

- **Paper and Scissor =>Scissor win**
- **Rock and Scissor =>Rock win**
- **Paper and Rock =>Paper win**

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PROJECT PREREQUISITES

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
```

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PROJECT FILE STRUCTURE

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

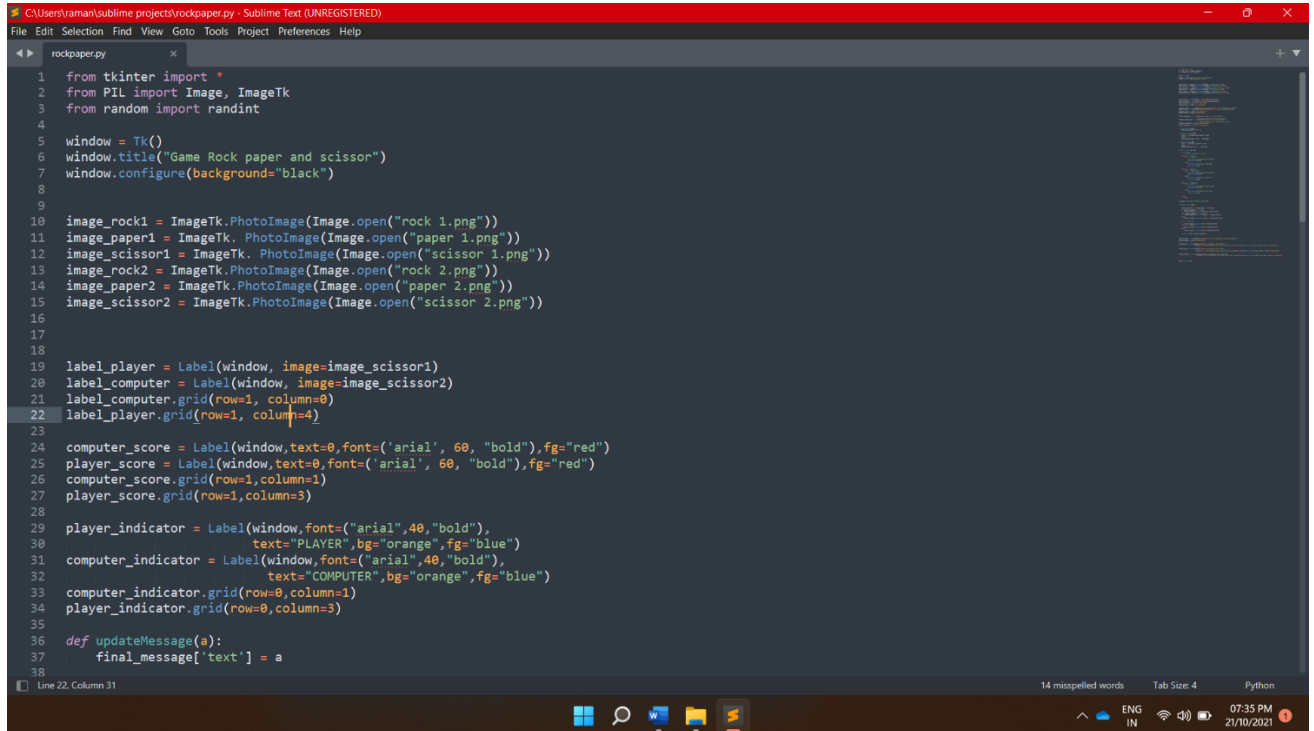
- Import required libraries
- Initialize window
- Code for user choice
- Code for computer choice
- Define functions
- Define buttons

GUI Implementation Steps (Add Button, Label, Frame)

- Create a head label that will show the title of the game, set its font and properties
- Below the head, label create a user label that will show the hand sign selected by the user
- Create a computer label that will show hand sign picked by the computer
- In between the user and the computer label create a label to show the text “vs”
- Create a result label to show the result set font and other properties to it
- Create three pushbuttons for rock, paper, and scissor respectively
- Create a reset button to reset the game

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SOURCE CODE

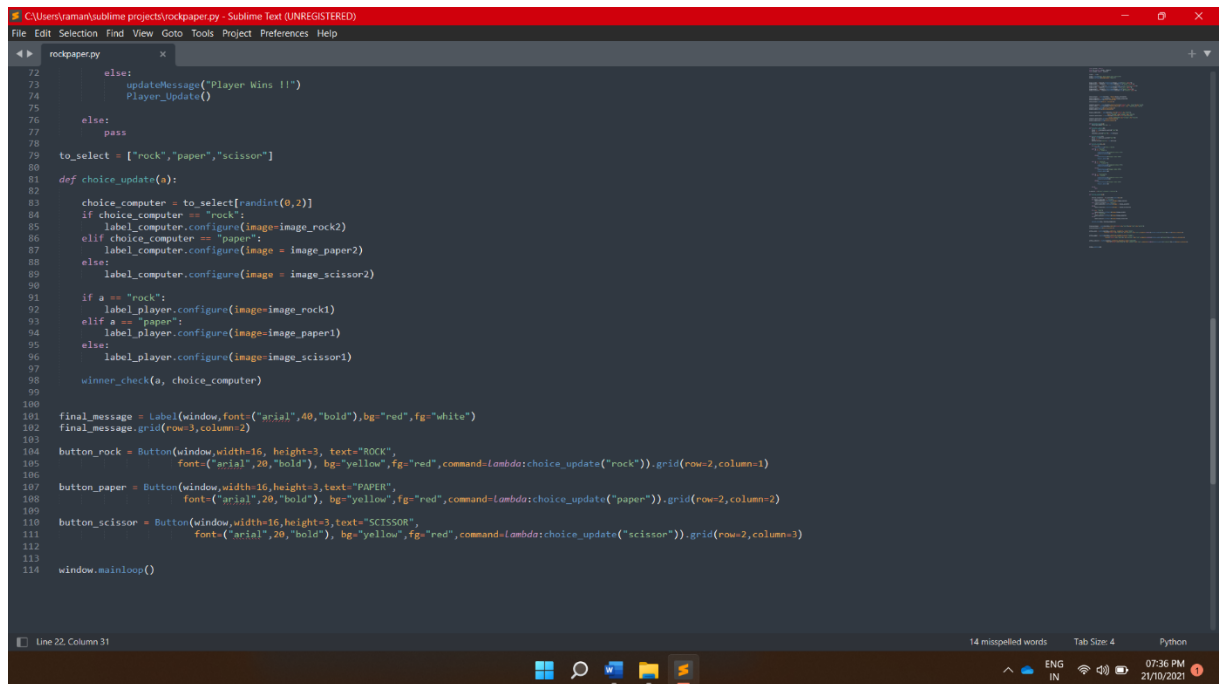
1st screenshot

```
C:\Users\raman\sublime projects\rockpaper.py - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

rockpaper.py
1 from tkinter import *
2 from PIL import Image, ImageTk
3 from random import randint
4
5 window = Tk()
6 window.title("Game Rock paper and scissor")
7 window.configure(background="black")
8
9
10 image_rock1 = ImageTk.PhotoImage(Image.open("rock 1.png"))
11 image_paper1 = ImageTk.PhotoImage(Image.open("paper 1.png"))
12 image_scissor1 = ImageTk.PhotoImage(Image.open("scissor 1.png"))
13 image_rock2 = ImageTk.PhotoImage(Image.open("rock 2.png"))
14 image_paper2 = ImageTk.PhotoImage(Image.open("paper 2.png"))
15 image_scissor2 = ImageTk.PhotoImage(Image.open("scissor 2.png"))
16
17
18
19 label_player = Label(window, image=image_scissor1)
20 label_computer = Label(window, image=image_scissor2)
21 label_computer.grid(row=1, column=0)
22 label_player.grid(row=1, column=4)
23
24 computer_score = Label(window, text=0, font=('arial', 60, "bold"), fg="red")
25 player_score = Label(window, text=0, font=('arial', 60, "bold"), fg="red")
26 computer_score.grid(row=1, column=1)
27 player_score.grid(row=1, column=3)
28
29 player_indicator = Label(window, font=('arial', 40, "bold"),
30                           text="PLAYER", bg="orange", fg="blue")
31 computer_indicator = Label(window, font=('arial', 40, "bold"),
32                             text="COMPUTER", bg="orange", fg="blue")
33 computer_indicator.grid(row=0, column=1)
34 player_indicator.grid(row=0, column=3)
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36 def updateMessage(a):
37     final_message['text'] = a
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SECTION: K20GR

3rd screenshot


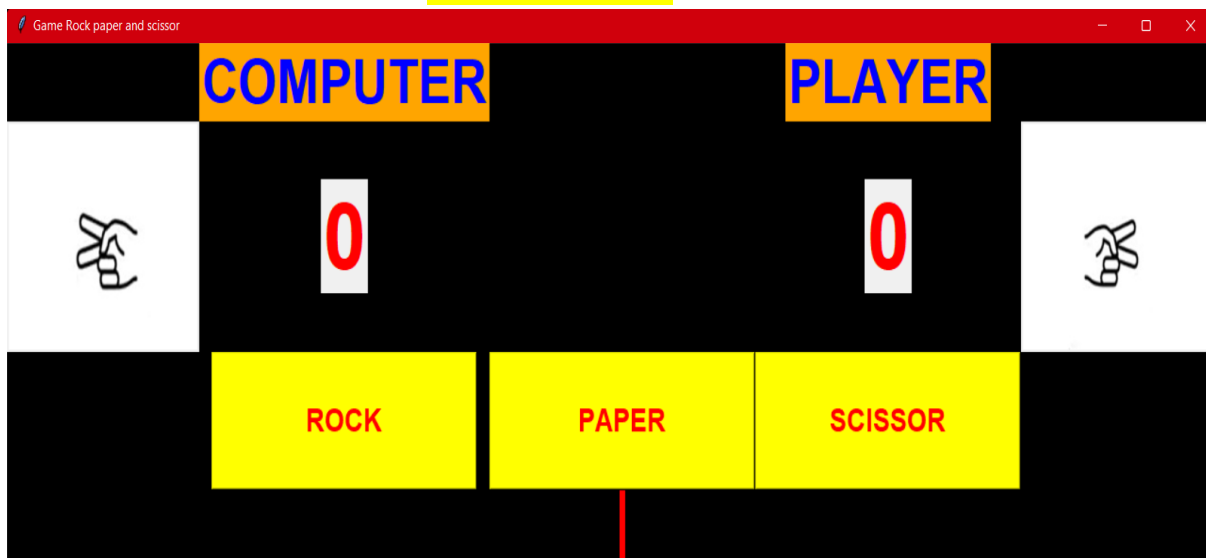
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rockpaper.py
72         else:
73             updateMessage("Player Wins !!")
74             Player_Update()
75         else:
76             pass
77     to_select = ["rock","paper","scissor"]
78
79     def choice_update(a):
80         choice_computer = to_select[randint(0,2)]
81         if choice_computer == "rock":
82             label_computer.configure(image=image_rock2)
83         elif choice_computer == "paper":
84             label_computer.configure(image = image_paper2)
85         else:
86             label_computer.configure(image = image_scissor2)
87         if a == "rock":
88             label_player.configure(image=image_rock1)
89         elif a == "paper":
90             label_player.configure(image=image_paper1)
91         else:
92             label_player.configure(image=image_scissor1)
93         winner_check(a, choice_computer)
94
95     final_message = Label(window,font=("arial",40,"bold"),bg="red",fg="white")
96     final_message.grid(row=3,column=2)
97
98     button_rock = Button(window,width=16, height=3, text="ROCK",
99                         font=("arial",20,"bold"), bg="yellow",fg="red",command=lambda:choice_update("rock")).grid(row=2,column=1)
100
101     button_paper = Button(window,width=16,height=3,text="PAPER",
102                         font=("arial",20,"bold"), bg="yellow",fg="red",command=lambda:choice_update("paper")).grid(row=2,column=2)
103
104     button_scissor = Button(window,width=16,height=3,text="SCISSOR",
105                         font=("arial",20,"bold"), bg="yellow",fg="red",command=lambda:choice_update("scissor")).grid(row=2,column=3)
106
107     window.mainloop()
108
109
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Line 22, Column 31
14 misspelled words Tab Size: 4 Python
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```

OUTPUT



SECTION: K20GR

SUMMARY

we have successfully developed the rock-paper-scissors game using python. We used Tkinter library for rendering graphics. We use a random module to generate random choices. We learn how to create button widget. We also learn how to call the function using button. In this way, we created a rock-paper-scissors python game.