



SESSION - 6

ROCK PAPER AND SCISSOR



Learning Outcomes:

- **Remember:** The students will recall about REPEAT loops , WHILE loops and FOR loops .
- **Understand:** They will focus on understanding NESTED LOOPS & NESTED LOGICAL OPERATORS
- **Apply:** They will learn to apply the concept of NESTED LOOP to code a game - Rock-Paper-Scissors that gives a condition based win to the player.
- **Analyze:** They will check their understanding by developing a code .
- **Create:** They will create the code in EduBlocks

ACTIVITY DESCRIPTION

Remember & Understanding

- Project is based on conventional Rock-Paper-Scissor.
- User will have to play against the computer, When user starts the game a random number will be generated which will determine the option.
- Same way computer's choice will be generated randomly and then will be compared and winner will be displayed.

Apply & Create

TASK 01:-

**</> WRITE A CODE TO CREATE A ROCK PAPER
SCISSOR GAME**

Program

- Import the random and time libraries
- Print the welcome message
- Add a delay of 0.5 seconds

```
# Start code here
import random
import time
print( "Hello, Welcome to Rock,Paper and Scissor game." )
time.sleep( 0.5 )
```

Program

Print the rules with delay of 0.5 seconds between each message

```
time.sleep( 0.5 )
```

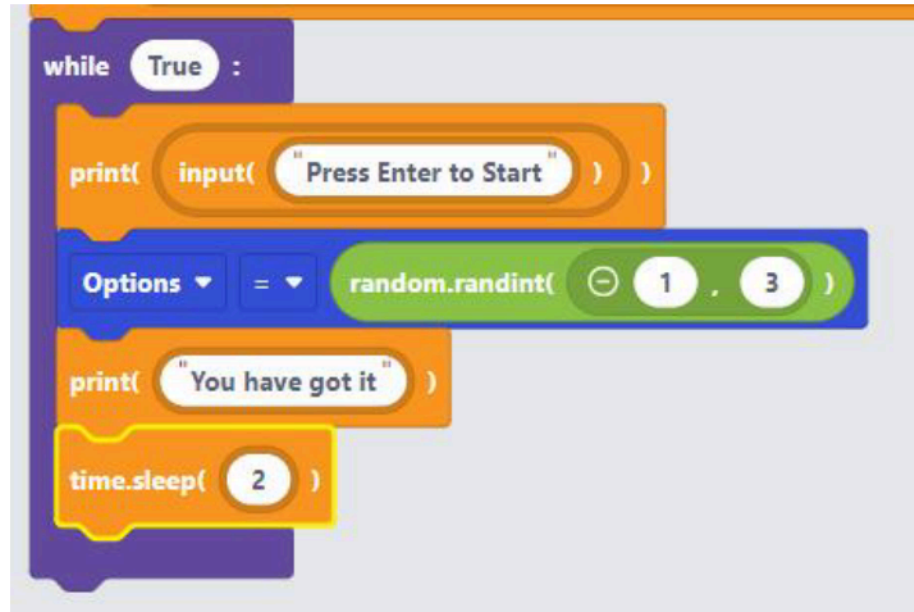
```
print( "You will be playing against the computer" )
```

```
time.sleep( 0.5 )
```

```
print( "Rules are same: Rock crushes the scissor,Scissors crushes the paper,Paper crushes the rock." )
```

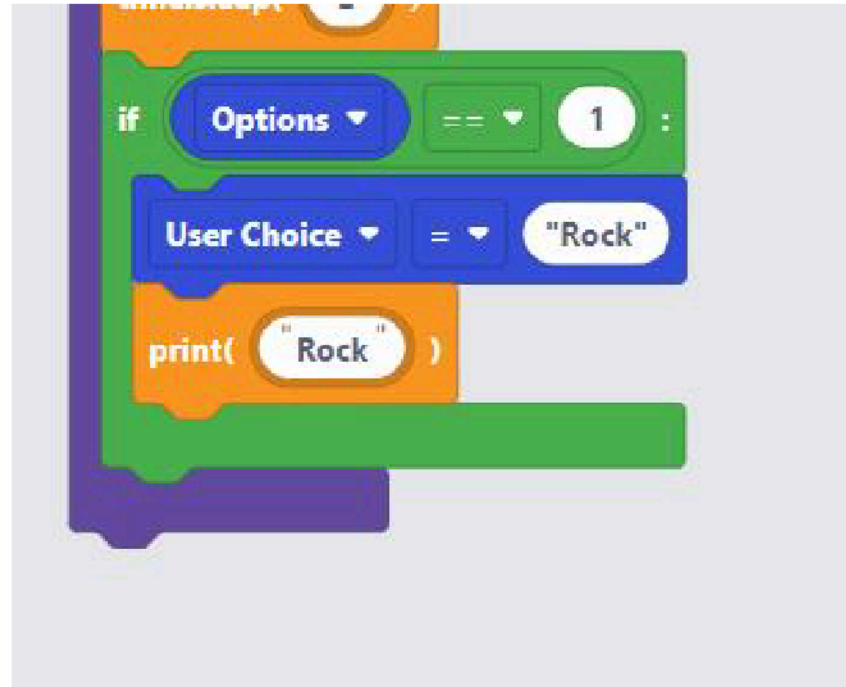
Program

- Add while loop to repeat the game
- Ask user to press enter to start
- Variable 'options' will choose a random number in range 1-3
- Choice will be printed with delay of 2 seconds



Program

- Condition to check what user has got
- If the random number generated is '1', User has got 'Rock'



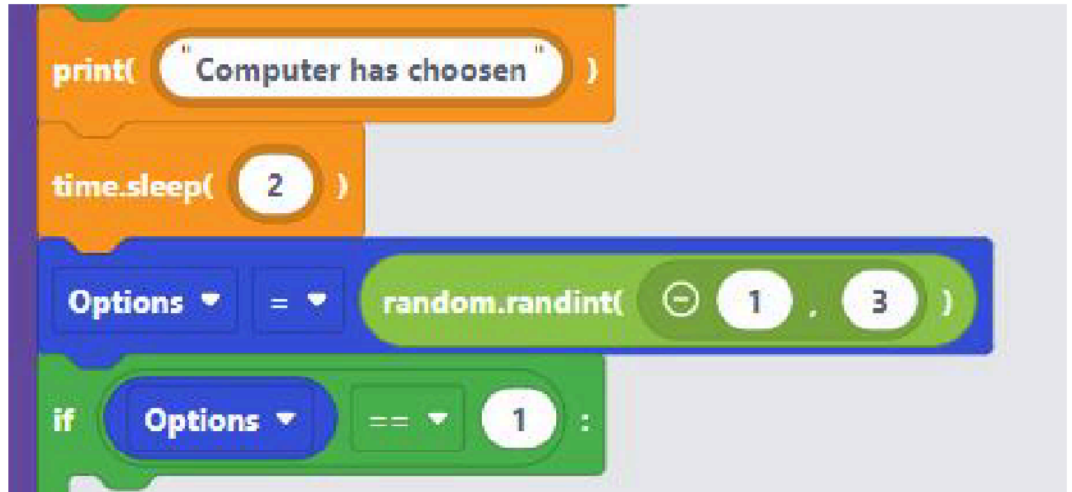
Program

- Condition to check what user has got
- If the random number generated is '2', User has got 'Paper'
- If the random number generated is '3', User has got 'Scissor'



Program

- Options variable again to choose for computer



Program

- Same conditions to be followed as user choice for Computer choice



Program

- Conditions to compare and check the winner



Program

Announce the winner



Syntax

```

1 #Start code here
2 import random
3 import time
4 print("Hello, Welcome to Rock,Paper and Scissor game.")
5 time.sleep(0.5)
6 print("You will be playing against the computer")
7 time.sleep(0.5)
8 print("Rules are same: Rock crushes the scissor,Scissors crushes the paper,Paper crushes the rock.")
9 v while True:
10     print(input("Press Enter to Start"))
11     Options = random.randint(1, 3)
12     print("You have got it")
13     time.sleep(2)
14 v     if Options == 1:
15         User_Choice = "Rock"
16         print("Rock")
17 v     elif Options == 2:
18         User_Choice = "Paper"
19         print("Paper")
20 v     elif Options == 3:
21         User_Choice = "Scissor"

```

Syntax

```

21     User_Choice = "Scissor"
22     print("Scissor")
23     print("Computer has choosen")
24     time.sleep(2)
25     Options = random.randint(1, 3)
26 v   if Options == 1:
27       Comps_choice = "Rock"
28       print("Rock")
29 v   elif Options == 2:
30       Comps_choice = "Paper"
31       print("Paper")
32 v   elif Options == 3:
33       Comps_choice = "Scissor"
34       print("Scissor")
35     time.sleep(2)
36     if Comps_choice == "Scissor" and User_Choice == "Paper" or Comps_choice == "Paper and User_Choice == "Rock or Comps_choice == "Rock"
37         print("Print  Computer wins")
38     elif User_Choice == "Scissor" and Comps_choice == "Paper" or User_Choice == "Paper and Comps_choice == "Rock or User_Choice == "Rock"
39         print("Print User wins")
40 v   else:
41       print("Its a Tie")
42     print("Thank you ")

```

