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## BASIC PRE-DEFINED MODULE:

1. Generate a random number between 1 and 10. Ask the user to guess the number and print a message based on whether they get it right or not.

```
import random
random_num=random.randint(1,10)
n=int(input("Enter a number(1-10): "))
if random_num==n:
    print("Your guess is correct")
else:
    print("Your guess is incorrect")
```

```
↵ Enter a number(1-10): 7
    Your guess is incorrect
```

2. Write a program that generates a list of 20 random numbers between 1 and 100. (a) Print the list. (b) Print the average of the elements in the list. (c) Print the largest and smallest values in the list. (d) Print the second largest and second smallest entries in the list (e) Print how many even numbers are in the list.

```
import random
l1=[]
for i in range(20):
    num_i=random.randint(1,100)
    l1.append(num_i)
print("List:",l1)
sum=0
sum1=0
for i in range(len(l1)):
    sum+=l1[i]
    if l1[i]%2==0:
        sum1+=1
print("Average of elements:",(sum/len(l1)))
a=max(l1)
b=min(l1)
print("Largest value:",a)
print("Smallest value:",b)
l1.remove(a)
l1.remove(b)
print("Second largest:",max(l1))
print("Second smallest:",min(l1))
print("Even numbers in the list are:",sum1)
```

```
↵ List: [69, 90, 5, 77, 44, 69, 41, 40, 14, 42, 18, 8, 84, 97, 64, 84, 85, 52, 52, 8]
    Average of elements: 52.15
    Largest value: 97
    Smallest value: 5
    Second largest: 90
    Second smallest: 8
    Even numbers in the list are: 13
```

3. Construct Rock-Paper-Scissor Program using Random Module

```
import random
user=input("Enter you choice: ")
if user in ["rock", "paper", "scissors"]:
    comp=random.choice(["rock", "paper", "scissors"])
    if user==comp:
        print("Computer choice:",comp)
        print("Tie")
    elif (user=="rock" and comp=="scissors")or(user=="paper" and comp=="rock")or(user=="scissors" and comp=="paper"):
        print("Computer choice:",comp)
        print("You Win !!")
    else:
        print("Computer choice:",comp)
        print("You Lose !!")
else:
    print("Enter valid choice")
```

Enter you choice: rock  
Computer choice: rock  
Tie

#### 4. Construct Dice Game Generator using Random Module.

```
import random  
num=random.randint(1,6)  
print("Dice:",num)
```

Dice: 2