ASSIGNMENT-7-FOR LOOP

In [ ]:
```python
#1Q) For example
# take a random number between  1 to 100
# print it is a even number and odd number
# you need to generate 3 random number
```

In [1]:
```python
import random
def evenodd():
    for i in range(3):
        num=random.randint(1,100)
        if num%2==0:
            print(f"{num} is even number")
        else:
            print(f"{num} is odd number")
evenodd()
```

```
30 is even number
97 is odd number
44 is even number
```

In [ ]:
```python
#2Q) wap ask the user print the number is even or odd between 10 to 20
```

In [12]:
```python
def even_odd():
    for i in range(10,21):
        if i%2==0:
            print(f"{i} is even")
        else:
            print(f"{i} is odd")
even_odd()
```

```
10 is even
11 is odd
12 is even
13 is odd
14 is even
15 is odd
16 is even
17 is odd
18 is even
19 is odd
20 is even
```

In [ ]:
```python
#3Q) wap ask the user print the square of the number between
# 20 to 25
```

In [5]:
```python
def squrr():
    for i in range(20,26):
        value=i*i
        print(f"square of {i} is {value}")
squrr()
```

```
square of 20 is 400
square of 21 is 441
square of 22 is 484
square of 23 is 529
square of 24 is 576
square of 25 is 625
```

In [ ]:
```python
#4Q) WAP ask the user enter number three times find the square of the number
# How many times loop should run
```

In [18]:
```python
def squaree():
    for i in range(3):
        num=eval(input("enter a number:"))
        sq=num*num
        print(f"sqaure of {num} is {sq}")
squaree()
```

```
sqaure of -45 is 2025
sqaure of 2 is 4
sqaure of -76 is 5776
```

In [ ]:
```python
#5Q) Print the 14th table
# ans:    14 x 1 = 14
#         14 x 2 = 28
#         14 x 3 = 42
#
#
#         14 x10 = 140
```

In [22]:
```python
def multiplication_table():
    num=eval(input("enter a number of which table you want to print:"))
    for i in range(1,11):
        value=num*i
        print(f"{num}x{i}={value}")
multiplication_table()
```

```
14x1=14
14x2=28
14x3=42
14x4=56
14x5=70
14x6=84
14x7=98
14x8=112
14x9=126
14x10=140
```

In [ ]:
```python
#6 Q) Find the factors of 75
```

In [7]:
```python
num=eval(input("enter a number:"))
for i in range(1,76):
    if num%i==0:
        print(f"factor of {num} is:",i)
```

```
factor of 75 is: 1
factor of 75 is: 3
factor of 75 is: 5
factor of 75 is: 15
factor of 75 is: 25
factor of 75 is: 75
```

In [ ]:
```python
#7Q) Write the sum of first 10 Natural numbers
# 1 to 10
# 1+2+3+4+5+6+7+8+9+10=55
```

In [45]:
```python
summ=0
for i in range(1,11):
    summ=summ+i
print(f"sum of first 10 natural numbers is = {summ}")
```

```
sum of first 10 natural numbers is = 55
```

In [ ]:
```python
# 8Q) Average first 1 to 10 numbers
# avg= summation of all the numbers/total number
#Wap to find the average of ' N ' numbers in Python.
```

In [49]:
```python
sum=0;
num=eval(input("enter a number:"))
for i in range(1,num+1):
    sum=sum+i
    avg=sum/num
print(f"average of first 1 to 10 numbers = {avg}")
```

```
average of first 1 to 10 numbers = 5.5
```

In [ ]:
```python
#9Q) Find the number of divisors of 75
# ans: 1,3,5,15,25,75
# Number =6
```

In [59]:
```python
n=eval(input("enter a number:"))
count=0
for i in range(1,n+1):
    if n%i==0:
        count=count+1
print(f"the number of divisors of {n} is {count}")
```

```
the number of divisors of 75 is 6
```

In [ ]:
```python
# 10Q)
# Get a random number between  1 to 10 :   num1
# Ask the user enter a number : num2
# if num1 == num2   then print won
# else print fail
#case-1
```

In [63]:
```python
num1=random.randint(1,10)
num2=eval(input("enter num2:"))
if num1==num2:
    print("won")
```

```python
    else:
        print("fail")
```

won

In [ ]:
```python
# 10Q)
# Get a random number between  1 to 10 :   num1
# Ask the user enter a number : num2
# if num1 == num2   then print won
# else print fail
# Give 3 chances

# Case-2: whenever you won the code should stop
```

In [74]:
```python
for i in range(3):
    num1=random.randint(1,10)
    num2=eval(input("enter num2:"))
    if num1==num2:
        print("won")
        break;
    else:
        print("fail")
```

```
fail
fail
fail
```

In [ ]:
```python
# 10Q)
# Get a random number between  1 to 10 :   num1
# Ask the user enter a number : num2
# if num1 == num2   then print won
# else print fail

# Case-3:
# Suppose i want to give 4 chances
# Every time you fail I want to display
#      Number of chances left

# If all the chances are used
#    Try again after 24 hours

# If you are win
```

In [78]:
```python
for i in range(4):
    num1=random.randint(1,10)
    num2=eval(input("enter num2:"))
    if num1==num2:
        print("won")
        break;
    else:
        print("fail")
        print(f"number of chances left are {3-i}")
    if 3-i==0:
        print("Try again after 24 hours")
```

```
fail
number of chances left are 3
```

```
fail
number of chances left are 2
fail
number of chances left are 1
fail
number of chances left are 0
Try again after 24 hours
```

In [ ]:
```python
11q)# wap ask the user get 5 random numbers
# Get it is an even number or odd number
# also count how many even numbers are there
# and  count how many odd numbers are there

# Idea
# take two counters one even and odd count
# For loop 5 times
# each time take the random number
# If condition
#    True counter update
# else
#   Update the counter
```

In [83]:
```python
even_count=0
odd_count=0
for i in range(5):
    num=random.randint(1,10)
    print(f"random numbers are:{num}")
    if num%2==0:
        even_count=even_count+1
    else:
        odd_count=odd_count+1
print(f"count of even numbers are : {even_count}")
print(f"count of odd numbers are : {odd_count}")
```

```
random numbers are:8
random numbers are:9
random numbers are:4
random numbers are:1
random numbers are:9
count of even numbers are : 2
count of odd numbers are : 3
```

In [ ]:
```python
12Q) # wap ask the user get 5 random numbers
# Get it is an even number or odd number
# also count how many even numbers are there
# and  count how many odd numbers are there
# I want summ even numbers
# I want summ odd numbers
```

In [10]:
```python
import random
even_count=0
odd_count=0
even_sum=0
odd_sum=0
for i in range(5):
    num=random.randint(1,10)
```

```
    print(num)
    if num%2==0:
        even_count=even_count+1
        even_sum=even_sum+num

    else:
        odd_count=odd_count+1
        odd_sum=odd_sum+num
print(f"count of even numbers are : {even_count}")
print(f"count of odd numbers are : {odd_count}")
print(f"sum of even numbers are : {even_sum}")
print(f"sum of odd numbers are : {odd_sum}")
```

```
6
1
1
2
10
count of even numbers are : 3
count of odd numbers are : 2
sum of even numbers are : 18
sum of odd numbers are : 2
```

In [ ]: