

1.Python program to display the multiplication table

```
In [1]: num=9
for i in range(1,11):
    print(num,'*',i,'=',num*i)

9 * 1 = 9
9 * 2 = 18
9 * 3 = 27
9 * 4 = 36
9 * 5 = 45
9 * 6 = 54
9 * 7 = 63
9 * 8 = 72
9 * 9 = 81
9 * 10 = 90
```

2.Pyhton program to print prime number between 1 to 100

```
In [4]: for i in range(2,101):
        for j in range(2,101):
            if i%j == 0:
                break
        if i == j:
            print(i,end=" ")

2,3,5,7,11,13,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,89,97,
```

3. Pattern program

```
In [8]: n = int(input("Enter number of rows:"))
for i in range(1,n+1):
    for j in range(1,i+1):
        print(j,end=" ")
    print()

Enter number of rows:5
1
12
123
1234
12345
```

4. Python program to print the fibonacci sequence

```
In [9]: def Fibonacci(n):
        if n <= 0 :
            return none
        elif n == 1 :
            return 0
        elif n == 2 :
            return 1
        else:
            return Fibonacci(n-1)+Fibonacci(n-2)
nterms = int(input("how many terms?"))

if nterms <= 0 :
    print("Enter a positive integer")
else:
    print("Fibonacci sequence:")
    for i in range(1,nterms+1):
        print(Fibonacci(i))

how many terms?6
Fibonacci sequence:
0
1
1
2
3
5
```

5.Python program to find the factorial of a number

```
In [10]: num = int(input("Enter a number:"))

factorial = 1

if num<0:

    print("Sorry, factorial does not exist for negative numbers")

elif num == 0:

    print("The factorial of 0 is 1")

else:

    for i in range(1,num+1):

        factorial = factorial*i

    print("The factorial of",num,"is",factorial)

Enter a number:8
The factorial of 8 is 40320
```

6.Python program to print all prime numbers in an interval

```
In [11]: start=int(input("Enter the start of the interval:"))
end=int(input("Enter the end of the interval:"))
print("prime numbers between", start, "and", end,"are:" )
for num in range(start,end+1):
    if num>1:
        for i in range(2,num):
            if(num%i)==0:
                break
        else:
            print(num)

Enter the start of the interval:2
Enter the end of the interval:99
prime numbers between 2 and 99 are:
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
53
59
61
67
71
73
79
83
89
97
```

7.Python Program to Check Leap Year

```
In [13]: year=int(input("Enter a year:"))
if (year % 4)==0:
    if (year % 100)==0:
        if (year % 400)==0:
            print("{0} is a leap year".format(year))
        else:
            print("{0} is not a leap year".format(year))
    else:
        print("{0} is a leap year".format(year))
else:
    print("{0} is not a leap year".format(year))

Enter a year:2022
2022 is not a leap year
```

8. Python Program to Check if a Number is Odd or Even

```
In [14]: num=int(input("Enter a number:"))
if num%2==0:
    print("Even")
else:
    print("odd")

Enter a number:6
Even
```

9.Python Program to Check if a Number is Positive, Negative or 0

```
In [15]: num=float(input("Enter a number:"))
if num>0:
    print("positive number")
elif num==0:
    print("zero")
else:
    print("Negative number")

Enter a number:10
positive number
```

10.Python program to calculate the Area of a triangle area=0.5bh, b=base, h=height,take the inputs from the user

```
In [16]: b = float(input("Enter the base of a triangle:"))
h = float(input("Enter the height of a triangle:"))
a = 0.5*b*h
print("\nArea=",a)

Enter the base of a triangle:6
Enter the height of a triangle:3

Area= 9.0
```

11.Python program to generate a random number

```
In [18]: import random
print(random.random())

0.8627002761643014

In [ ]:
```