1.Write a program to check whether inputted number is even or odd.

```
In [1]: print("prajwal")
        num=int(input("enter an interger:"))
        if num>0:
            print("num is positive")
        elif num<0:
            print("num is odd")
        else:
            print("num is zero")
```

```
prajwal
enter an interger:-5
num is odd
```

2.Write a program to check whether inputted number is prime or not.

```
In [2]: print("Prajwal")
        num=int(input("enter a number:"))
        count=0
        for i in range(1,num+1):
            if(num%i==0):
                count+=1
        if(count==2):
            print("the given number is prime")
        else:
            print("the given number is not prime")
```

```
Prajwal
enter a number:5
the given number is prime
```

3.Pallindrome function

```
In [3]: print("Prajwal")
        num=int(input("enter a number:"))
        num_str = str(num)
        if num_str == num_str[::-1]:
            print("num is pallindrome")
        else:
            print("num is not a pallindrome")
```

```
Prajwal
enter a number:5
num is pallindrome
```

4.Write a program to find the sum of two numbers

```
In [4]: print("Prajwal")
        a=int(input("enter a num:"))
        b=int(input("enter a num:"))
        sum=a+b
        print(sum)
```

```
Prajwal
enter a num:5
enter a num:7
12
```

5.Write a program to find the maximum of two numbers

```
In [6]: print("Prajwal")
        num1=3
        num2=4
        result=max(num1,num2)
        print("maximum:",result)
```

```
Prajwal
maximum: 4
```

6.Write a program to find the minimum of two numbers

```
In [7]: print("Prajwal")
        num1=5
        num2=2
        result=min(num1,num2)
        print("minimum:",result)
```

```
Prajwal
minimum: 2
```

7.Develop a program to generate fibonacci sequence of length (N).read N from the console

```
In [1]: print("Prajwal")
        num=int(input("enter the fibonacci sequence length:"))
        a=0
        b=1
        print("the fibonacci series of sequence",num,"is;")
        print(a,b,end="")
        for i in range(2,num):
            c=a+b
            print(c,end="")
            a=b
            b=c
```

```
Prajwal
enter the fibonacci sequence length:5
the fibonacci series of sequence 5 is;
0 1123
```

8.Write a function to calculate factorial of a number.

```
In [9]: print("Prajwal")
        n=int(input("enter a number:"))
        f=1
        if(n<0):
            print("not possible:")
        elif(n==0):
            print("the factorial=1")
        else:
            for i in range(1,n+1):
                f=f*1
            print("factorial is:",f)
```

```
Prajwal
enter a number:12
factorial is: 1
```

9.Write a program to swap two numbers

```
In [11]: print("Prajwal")
         a=int(input("a="))
         b=int(input("b="))
         a,b=b,a
         print("after swapping:")
         print("a:",a)
         print("b:",b)
```

```
Prajwal
a=2
b=3
after swapping:
a: 3
b: 2
```

10.Write a program to find the reverse number in a string

```
In [10]: print("Prajwal".center(20,'*'))
         num_str="12345"
         reversed_str=num_str[::-1]
         print("reversed number:",reversed_str)
```

```
******Prajwal*******
reversed number: 54321
```

11.Write a program to find the GCD of two numbers

In [12]:
```
import math
num1=int(input("enter a number"))
num2=int(input("enter a number"))
result=math.gcd(num1,num2)
print("result:",result)
```

```
enter a number2
enter a number3
result: 1
```

12.Write a program to guess the number and to guess whether the number correct or wrong

In [13]:
```
print("Prajwal")
import random
number=random.randint(1,10)
guess=0
while guess!=number:
    guess=int(input("guess a number"))
    if guess<number:
        print("guess a higher number")
    elif guess>number:
        print("guess a lower number")
    else:
        print("you guessed the correctly",number)
```

```
Prajwal
guess a number4
guess a higher number
guess a number5
guess a higher number
guess a number7
you guessed the correctly 7
```

13.Find the sum of two numbers using function

In [5]:
```
print("Prajwal")
def calculate_sum(num1,num2):
    return num1+num2
num1=int(input("enter a number:"))
num2=int(input("enter a number:"))
sum=num1+num2
print("sum:",sum)
```

```
Prajwal
enter a number:5
enter a number:7
sum: 12
```