PROGRAM

```python
#factorial
n=int(input("Enter a number:"))
f=1
if n==0:
    print("factorial of ",n," is ",f)
else:
    for i in range(1,n+1):
        f=f*i
print("factorial of ",n," is ",f)
```

OUTPUT

```
Enter a number:
5
factorial of  5  is  120
```

PROGRAM

```python
#prime or not
n=int(input ("Enter a number :"))
count=0
for i in range(1,n+1):
    if n%i==0:
        count=count+1
if count==2:
    print(n," is a prime number")
else:
    print(n," is not a prime number")
```

OUTPUT

Enter a number : 4
4 is not a prime number

Enter a number : 23
23 is a prime number

PROGRAM

```
#fibinocci
n=int(input ("Enter the limit :"))
a,b=0,1
if n==1:
    print(a)
else:
    print(a)
    print(b)
    for i in range(3,n+1):
        c=a+b
        a=b
        b=c
        print(c)
```

OUTPUT

```
Enter the limit : 5
0
1
1
2
3
```

PROGRAM

```
#armstrong
n=int(input ("Enter a number :"))
rev=0
x=n
while n>0:
    r=n%10
    rev=rev+(r*r*r)
    n=n//10
if rev==x:
    print(x," is armstrong")
else:
    print(x," is not armstrong")
```

OUTPUT

```
Enter a number : 153
153  is armstrong

Enter a number : 234
234  is not armstrong
```

PROGRAM

```python
#n prime numbers
n=int(input ("Enter the limit :"))
for i in range(1,n+1):
    count=0
    for j in range(1,n+1):
        if i%j==0:
            count+=1
    if count==2:
        print (i)
```

OUTPUT

Enter the limit : 10
2
3
5
7

PROGRAM

```python
#perfect or not
n=int(input ("Enter a number :"))
s=0
for i in range(1,n):
    if n%i==0:
        s=s+i
if s==n:
    print(n," is a perfect number")
else:
    print(n," is not a perfect number")
```

OUTPUT

Enter a number : 6
6 is a perfect number

Enter a number : 9
9 is not a perfect number

PROGRAM

```python
str=input("Enter a string:")
vowel,con,digt=0,0,0
for ch in str:
    if ch in "aeiouAEIOU":
        vowel+=1
    if ch in "BbCcDdFfGgHhJjKkLlMmNnPpQqRrSsTtVvWwXxYyZz":
        con=con+1
    if ch in "0123456789":
        digt+=1
print("No.of vowels=",vowel)
print("No.of consonants=",con)
print("No.of digits=",digt)
```

OUTPUT

```
Enter a string: Welcome2023
No.of vowels= 3
No.of consonants= 4
No.of digits= 4
```