1.To check the number is even or not

```
#1.Even number or not
n=int(input())
if n%2==0:
    print("Even number")
else:
    print("Not even number")
```

2. To check the given number is positive or negative or zero

```
#2.Positive or negative or zero
n=int(input())
if n>0:
    print("positive number")
elif n==0:
    print("zero")
else:
    print("negative number")
```

3. To check the given number is prime or not

```
#3.Prime number or not
n=int(input())
if n<=1:
    print("Not prime number")
else:
    c=0
    for i in range(1,n+1):
        if n%i==0:
            c+=1
    if c==2:
        print("Prime number")
    else:
        print("Not prime number")
```

4. To check the given number is Factorial or not

```
#4.Factorial number or not
n=int(input())
fact=1
i=1
while fact<n:
    i=i+1
    fact=fact*i
if fact==n:
    print("Factorial number")
else:
    print("Not factorial number")
```

5. To check the given number is Armstrong or not

```
#5.Armstrong number or not
n=int(input())
temp=n
o=len(str(n))
c=0
while temp>0:
    s=temp%10
    c=c+s**o
    temp//=10
if c==n:
    print("Armstrong number")
else:
    print("Not Armstrong number")
```

6. To check the given number is palindrome or not

```
#6.Palindrome number or not
n=int(input())
temp=n
rev=0
while temp>0:
    d=temp%10
    rev=rev*10+d
    temp//=10
if n==rev:
    print("Palindrome number")
else:
    print("Not palindrome number")
```

7. To print the program of string reverse

```
#7.string reverse
n=input()
print("Reversed:",n[::-1])
```

8.To check the given number is perfect or not

```
#8.perfect number or not
n=int(input())
c=0
for i in range(1,n):
    if n%i==0:
        c+=i
if c==n:
    print("Perfect number")
else:
    print("Not perfect number")
```

9. To print the program of leap year

```
#9.Leap year
year=int(input())
if(year%400==0) or (year%100!=0 and year%4==0):
    print("Leap year")
else:
    print("Not Leap year")
```

10. To check the given number is pronic or not

```
#10.pronic number or not
n=int(input())
f=0
for i in range(n):
    if i*(i + 1)==n:
        f=1
        break
if f==1:
    print("Pronic number")
else:
    print("Not a pronic number")
```

11. To print the program of Fibonacci series

```
#11.Fibonacci series
n = int(input())
a = 0
b = 1
print("Fibonacci Series:")
for i in range(n):
    print(a, end=" ")
    c = a + b
    a = b
    b = c
```

12. To check the given number is strong or not

```
#12.strong number or not
n=int(input())
temp=n
s=0
while temp > 0:
    d=temp % 10
    fact = 1
    for i in range(1,d+ 1):
        fact *= i
    s+=fact
    temp //= 10

if s==n:
    print(n, "is a Strong Number")
else:
    print(n, "is not a Strong Number")
```

13. To print the program of multiplication table

```
#13.Multiplication table
num = int(input())
for i in range(1, 11):
    print(num, "x", i, "=", num * i)
```

14. To print the program of sum of digits

```
#14.Sum of digits
n=int(input())
total=0
while n > 0:
    total += n % 10
    n//= 10
print("Sum of digits:", total)
```

15. To write the program of swap of two numbers

```
#15.Swap two numbers
x=int(input())
y=int(input())
x,y=y,x
print("x=",x,"y=",y)
```

16. To write the program of square root

```
#16.square root
n=float(input())
print("square root:",n**0.5)
```

17. To check the given string is palindrome or not

```
#17.check palindrome string
s=input()
if s.lower()==s.lower()[::-1]:
    print("Palindrome string")
else:
    print("Not palindrome string")
```

18. To print the program of right triangle pattern

```
#18.Right triangle pattern
r=int(input())
for i in range(r,0,-1):
    print("*" * i)
```

19. To print the program of pyramid pattern

```
#19.Pyramid pattern
r=int(input())
for i in range(1,r+1):
    print(" " * (r-i) + "*" * (2*i-1))
```

20. To print the program of number pattern

```
#20.Number pattern
n=int(input())
for i in range(1,n+1):
    for j in range(1,i+1):
        print(j,end=" ")
    print()
```