```python
print("1.decrement the number by 5 if it is negative ")
n=int(input("enter ur number "))
if n<0:
  n=n-5
print(n)
```

```
    1.decrement the number by 5 if it is negative
    enter ur number -9
    -14
```

```python
print("2.number divisible by 11 or not ")
n=int(input("enter ur number "))
if n%11==0:
  print("divisible by 11")
else:
  print("not divisible by 11")
```

```
    2.number divisible by 11 or not
    enter ur number 121
    divisible by 11
```

```python
print("3.check if 2 numbers are equal or not ")
n=int(input("enter ur number "))
n1=int(input("enter ur 2nd number "))
if n==n1:
  print("they are equal")
else:
  print("they are not equal")
```

```
    3.check if 2 numbers are equal or not
    enter ur number 11
    enter ur 2nd number 11
    they are equal
```

```python
print("4.check eligibilty for voting ")
age=int(input("enter ur age "))
if age>=18:
  print("eligible to vote")
else:
```

```
    print( not eligible need  ,(18-age), more years to vote )
```

        4.check eligibilty for voting
        enter ur age 13
        not eligible need 5 more years to vote

```
print("5.if number is odd or even")
n=int(input("enter ur number "))
if n%2==0:
  print("even")
else:
  print("odd")
```

        5.if number is odd or even
        enter ur number 8
        even

```
print("6.leap year or not")
n=int(input("enter ur year "))
if n%4==0:
  print("leap year")
else:
  print("not a leap year")
```

        6.leap year or not
        enter ur year 2008
        leap year

```
print("7.number is positive or not")
n=int(input("enter ur number "))
if n>=0:
  print("positive")
else:
  print("negative")
```

        7.number is positive or not
        enter ur number -1
        negative

```
print("8.corresponding days of the week ")
n=int(input("enter ur number between 1 to 7"))
```

```python
if n==1:
  print("monday")
if n==2:
  print("tuesday")
if n==3:
  print("wednesday")
if n==4:
  print("thursday")
if n==5:
  print("friday")
if n==6:
  print("saturday")
if n==7:
  print("sunday")
```

```
8.corresponding days of the week
enter ur number between 1 to 75
friday
```

```python
import math
print("9.calculate roots of the equation")
a=int(input("enter value of a"))
b=int(input("enter value of b"))
c=int(input("enter value of c"))
d=(b*b)-(4*a*c)
r1=0.0
r2=0.0
s=math.sqrt(abs(d))
if d>0:
  print("roots real and distinct")
  r1=(-b+s)/(2*a)
  r2=(-b-s)/(2*a)
  print(r1,"\n",r2)
if d==0:
  print("roots are real and equal")
  r1=(-b/(2*a))
  r2=r1
  print(r1,"\n",r2)
if d<0:
  print("roots imaginary")
  r1=(-b/(2*a))
```

```
    r2=r1
    print(r1," +i",s)
    print(r2," -i",s)
```

        9.calculate roots of the equation
        enter value of a1
        enter value of b10
        enter value of c-24
        roots real and distinct
        2.0
         -12.0

```
print("10.grades using if elif if")
c=input("enter ur character")
if c=='O':
  print("outstanding")
elif c=='A':
  print("very good")
elif c=='B':
  print("good")
elif c=='C':
  print("average")
else:
  print("fail")
```

        10.grades using if elif if
        enter ur characterD
        fail

```
print("11.greatest among 3 numbers")
a=11
b=12
c=13
if a>b:
  if a>c:
    print("a is greatest")
else:
  if b>c:
    print("b is greatest")
  else:
    print("c is greatest")
```

```
        11.greatest among 3 numbers
        c is greatest
```

```python
print("12.check if it is constant or vowel")
c=input("enter ur character ")
c=c.upper()
if ( c=='A'or c=='E'or c=='I'or c=='O'or c=='U'):
  print("vowel")
else:
  print("constant")
```

```
        12.check if it is constant or vowel
        enter ur character e
        vowel
```

```python
print("13.get integer and charcter from user and perform the following calculations ")
n=int(input("enter ur number "))
c=input("enter ur character ")
if n==150 and c=='h':
  print("perfect")
elif n==150 or c=='h':
  print("partial perfect")
else:
  print("imperfect")
```

```
        13.get integer and charcter from user and perform the following calculations
        enter ur number 2
        enter ur character e
        imperfect
```

```python
print("14.no of days in a month")
x = input("Enter a month:")
y = int(input("Enter a year:"))
if x == "January" or x == "March" or x == "May" or x == "July" or x == "August" or x == "October" or x=="november" or x=="december":
  print(x,"has 31 days")
elif y%4 == 0:
 print(x,"has 29 days")
elif y%4 != 0:
 print(x,"has 28 days")
else:
```

```
  print(x,"has 30 days")
```

```
print("15.check if entered character is whitespace or alphabet or digit")
n=input("enter character")
if n.isalpha():
  print("alpahbet")
elif n.isdigit():
  print("digit")
else:
  print("whitespace")
```

```
print("16.print numbers from x to y")
x=int(input("enter number"))
y=int(input("enter number"))
i=x
while i<=y:
  print(i)
  i+=1
```

```
print("17.print numbers backwards with intervals of N")
X=int(input("Enter the ending integer value from descending:"))
Y=int(input("Enter the starting integer:"))
```

```
N=int(input("Enter the interval in which the numbers are displayed:"))
while Y>=X:
 print(Y,end=" ")
 Y=Y-N
print("\nOutside of the while loop")
```

```
      17.print numbers backwards with intervals of N
      Enter the ending integer value from descending:20
      Enter the starting integer:1
      Enter the interval in which the numbers are displayed:10

      Outside of the while loop
```

```
print("18.average of n numbers ")
n=int(input("enter number"))
s=0
i=0
for i in range(0,(n+1)):
   s=s+i
avg=s/n
print(avg)
```

```
      18.average of n numbers
      enter number4
      2.5
```

```
print("19.sum of odd numbers from 1 to 100")
n=int(input("Enter n value:"))
sum=0
for i in range(1,n+1,2):
    sum+=i
print(sum)
```

```
      Enter n value:100
      2500
```

```
print("20.number its square and cube in the interval of 1 to n")
n = int(input("Enter a number:"))
for i in range(1,n+1):
 print(i)
if (i <= n):
```

```
  print(i**i)
else:
 print(i**3)
```

```
      20.number its square and cube in the interval of 1 to n
      Enter a number:5
      1
      2
      3
      4
      5
      3125
```

```python
print("21.check prime or not")
n=int(input("enter ur number "))
i=0
f=0
if n>1:
  for i in range(2,n):
    if n%i==0:
      f=1
      break
else:
  print("neither prime nor composite")
if f==1 and n>1:
  print("not prime")
elif f==0 and n>1:
  print("prime")
```

```
      check prime or not
      enter ur number 4
      not prime
```

```python
print("22.prime factors of a number")
def prime(n):
    if n <= 1:
        return False
    else:
        for i in range(2, n):
            if n % i == 0:
                return False
    return True
```

```
n=int(input("enter ur number "))
i=0
for i in range(1,n+1):
  if n%i==0:
    if  prime(i):
      print(i)
```

        22.prime factors of a number
        enter ur number 22
        2
        11

```
print("23.prints prime number between ranges")
x=int(input("enter lower limit "))
y=int(input("enter higher limit "))
i=0
for i in range(x,y+1):
  if prime(i):
    print(i)
```

        23.prints prime number between ranges
        enter lower limit 1
        enter higher limit 10
        2
        3
        5
        7

```
print("24.print no of digits in a number ")
n=int(input("enter your number "))
stri=str (n)
print(len(stri))
```

        24.print no of digits in a number
        enter your number 122345
        6

```
print("25.perfect number or not ")
n=int(input("enter ur number "))
i=0
s=0
```

```
for i in range(1,n):
  if n%i==0:
    s=s+i
if s==n:
  print("perfect number")
else:
  print("not a perfect number")
```

```
print("26.armstrong number ")
num = int(input("enter ur number "))
order = len(str(num))
sum = 0
temp = num
while temp > 0:
    digit = temp % 10
    sum += digit ** order
    temp //= 10
if num == sum:
    print(num,"is an Armstrong number")
else:
    print(num,"is not an Armstrong number")
```

```
print("27.palindrome or not")
n=int(input("enter ur number "))
s=str(n)
i=0
l=len(s)
rev=""
c=''
for i in range(0,l):
  c=s[i]
  rev=c+rev
if rev==s:
```

```
    print("palindrome")
else:
  print("not palindrome")
```

```
print("28.display palindrome within range ")
def palin(n):
  s=str(n)
  i=0
  l=len(s)
  rev=""
  c=''
  for i in range(0,l):
    c=s[i]
    rev=c+rev
  if rev==s:
    print(s)

x=int(input("enter lower limit "))
y=int(input("enter higher limit "))
i=0
for i in range(x,y+1):
  palin(i)
```

```
print("29.display largest of numbers entered ")
list=[]
a=int(input("Enter the number of integers you wanna to enter:"))
for i in range(0,a):
 F=int(input("Enter the integer value:"))
 list.append(F)
list.sort()
print("Largest element of your entered integer is :",list[-1])
```

```
29.display largest of numbers entered
Enter the number of integers you wanna to enter:5
Enter the integer value:1
Enter the integer value:2
Enter the integer value:3
Enter the integer value:4
Enter the integer value:5
Largest element of your entered integer is : 5
```

```python
print("30(a).pattern1")
i=0
j=0
for i in range(1,6):
  print()
  for j in range(1,i+1):
    print("*",end="")
```

```
30(a).series 1

*
**
***
****
*****
```

```python
print("30(b).pattern2")
rows = 6
for i in range(1, rows + 1):
    for j in range(1, rows + 1):
        if(j <= rows - i):
            print(' ', end = '  ')
        else:
            print('*', end = '  ')
    print()
```

```
30(b).series2
            *
         *  *
```

```
              *   *   *
            *   *   *   *
          *   *   *   *   *
        *   *   *   *   *   *
```

```python
print("30(c).pattern3")
for i in range(1,6):
    for j in range(6-i):
        print(" ", end="")
    for j in range(i):
        print("*", end=" ")
    print()
```

```
    30(c).series3
        *
       * *
      * * *
     * * * *
    * * * * *
```

```python
print("30(d).pattern4")
c=64
for i in range(1,6):
  print()
  c=c+1
  for j in range(1,i+1):
    print(chr(c),end=" ")
```

```
     30(c).series4

     A
     B B
     C C C
     D D D D
     E E E E E
```

```python
print("30(e).pattern5")
c=1
for i in range(1,6):
  print()
  for j in range(1,i+1):
```

```
    print(c,end=" ")
    c=c+1
```

    30(d).series5

    1
    2 3
    4 5 6
    7 8 9 10
    11 12 13 14 15

```
print("31.sum of series 1")
n=int(input("enter your number "))
s=0.0
for i in range(1,n+1):
  s=s+(i*i)/i
print(s)
```

    31.sum of series 1
    enter your number 2
    3.0

```
import math
print("32.sum of series 2")
x=int(input("enter ur number "))
n=int(input("enter no of elements "))
s=0.0
for i in range(1,n+1):
  if i%2==0:
    s=s+pow(x,i)
  else:
    s=s-pow(x,i)
print(s)
```

    32.sum of series 2
    enter ur number 1
    enter no of elements 3
    -1.0

```
print("33.sum of series 3")
n = int(input("Enter value of n: "))
```

```
sum = n*(n+1)*(2*n+4)/12
print(sum)
```

```
        33.sum of series 3
        Enter value of n: 3
        10.0
```

```python
print("34.sum of series 4")
a = int(input("Enter the number of terms:"))
b = int(input("Enter the X value:"))
c = 1
e = 1
d = 0
r = 1
for i in range(1,a):
 c = c * e
 e = e + 1
 while r+1 == e and r <= a:
  b = (-1 * b)
  d = d + (((b) ** r)/c)
  r = r + 1
d = d + 1
print("The sum of the series is",d)
```

```
        34.sum of series 4
        Enter the number of terms:3
        Enter the X value:1
        The sum of the series is 0.5
```

```python
print("35.display trignometric functions")
a=int(input("Enter the degree in the range 0-360:"))
import math
c=math.sin(math.radians(a))
d=math.cos(math.radians(a))
e=math.tan(math.radians(a))
print("sin(",a,") is ",c,"\ncos(",a,") is ",d,"\ntan(",a,") is ",e)
```

```
    ⤷  36.display trignometric functions
        Enter the degree in the range 0-360:30
        sin( 30 ) is  0.4999999999999994
```

```
cos( 30 ) is  0.8660254037844387
tan( 30 ) is  0.5773502691896257
```

✓ 5s   completed at 4:55 PM