


```
In [ ]: #1write a program for the addition of two numbers.
"""a=int(input("enter 1no: "))
b=int(input("enter 2 no: "))
print("a+b:",a+b)

#2write a program to read two numbers and print their quotient and remainder
a=int(float(input("enter 1no: ")))
b=int(float(input("enter 2 no: ")))
print(type(a))
print(type(b))
print("quotient",a//b)
print("remainder",a%b)

#3write a program to find the average of three numbers
a=int(input("enter 1no: "))
b=int(input("enter 2 no: "))
c=int(input("enter 3 no: "))
print("average of these no.are;",(a+b+c)/3)
#4write a program to calculate sum of 5 subjects and find percentage(max mark in

a=int(input("enter 1no: "))
b=int(input("enter 2 no: "))
c=int(input("enter 3 no: "))
d=int(input("enter 4 no: "))
e=int(input("enter 5 no: "))
totalmarks=a+b+c+d+e
avg=(a+b+c+d+e)/5
print("average: ",avg)
percent=(totalmarks/500)*100
print("percent; ",percent)

#5write a program to find gross salary
salary=int(float(input("enter gross salary: ")))
BS=int(float(input("enter your BS: ")))
HRA=int(float(input("enter your HRA: ")))
DA=int(float(input("enter your DA: ")))
TA=int(float(input("enter you TA : ")))
total_salary=salary+BS+HRA+DA+TA
print("*****")
print("Total salary .....",total_salary)
it=int(float(input("enter your IT: ")))
loan=int(float(input("enter your loanpay: ")))
reduction=it+loan
total_payment=total_salary-reduction
print("*****")
print("your total payment will be after reduction....: ",total_payment)

#6WRITE A PROGRAM TO CALCULATE AREA OF CIRCLE
radius=float(input("enter radius: "))
area=3.14*radius
print("area of circle:",area)

#7write a program to calculate area of rectangle
sidea=float(input("enter1side of rec: "))
sideb=float(input("enter 2nd side of rec: "))
```

```
print("area of rectangle:",sidea*sideb,"meter")

#8write a program to calculate are of square
side=float(input("enter side of Square : "))
print("area of square:",side*side)

#9write a program to calculate area and circumference of circle
radius=float(input("enter radius of circle: "))
area=3.14*radius
circum=2*3.14*radius
print("area of circle",area,"circumference",circum)

#10calculate area of scalane triangle
a=float(input("enter 1st side:"))
b=float(input("enter 2nd side: "))
c=float(input("enter 3rd side: "))
s=(a+b+c)/2
area=s*(s-a)*(s-b)*(s-c)**0.5
print("area of scalane triangle:",area)

#11calculate area of right angle triange
base=float(input("enter base of right angle triangle:"))
height=float(input("enter hight of triangle:"))
area=0.5*base*height
print("Area of right angle triangle:",area)

#12 find area of trapezium
sidea=float(input("enter 1st parallel side of trapezium: "))
sideb=float(input("enter 2nd parallel side of trapezium: "))
height=float(input("enter hight of trapezium:"))
area=(sidea+sideb)*0.5*height
print("area of trapezium:",area)

#13 find area of Rhombus
d_1=float(input("enter 1st diagonal of rhombus:"))
d_2=float(input("enter 2nd diagonal of rhombus:"))
print("area of Rhomnus: ",d_1*d_2)

#14 find aera of parallelogram
base=float(input("enter base of parallelogram:"))
height=float(input("enter hight of parallelogram :"))
print("area of parallelogram:",base*height)

# 15 write a program to find the volume and surface area of cube
a=float(input("enter side of cube:"))
print("volume of cube:",a**3,"and surface area of cube:",6*a**2)

# 16 write a program to find the volume and surface area of cuboids
length=float(input("enter length of cuboid:"))
base=float(input("enter base of cuboid:"))
height=float(input("enter height of cuboid:"))
print("volume of cuboid",length*base*height)
print("surface area of cuboid is:",2*(length*base+base*height+height*length))

#17 write a program to find the volume and surface area of cylinder
r=float(input("enter radius of cylinder:"))
h=float(input("enter height of cylinder:"))
```

```

print("volume of cylinder : ",3.14*r**2*h,"and surface area of cylinder is:",(2*pi*r*h)+(2*pi*r**2))

#18 write a program to find surface area and volume of cone
r=float(input("enter radius of cone:"))
h=float(input("enter height of cone:"))
print("surface area of cone : ",3.14*r*(r+(h**2+r**2)**.5),"and volume of cone is",1/3*3.14*r**2*h)

#19 write a program to find surface area and volume of sphe
r=float(input("enter radius of sphere: "))
print("volume of sphere : ",4/3*3.14*r**3,"and surface area of sphere is :",4*pi*r**2)

#20 write a program to find the perimeter of circle,rectangle and triangle.
r=float(input("enter radius of circle:"))
l=float(input("enter length of rectangle:"))
b=float(input("enter breadth of rectangle:"))
a=float(input("enter 1st side of triangle:"))
b=float(input("enter 2nd side of triangle:"))
c=float(input("enter 3rd side of triangle:"))
print("perimeter of circle:",2*pi*r,"perimeter of rectangle:",2*(l+b),"and perimeter of triangle is:",a+b+c)

#21 write a program to compute simple interest
p=float(input("enter principal value:"))
r=float(input("enter rate taken :"))
t=float(input("enter time taken:"))
print("simple interest will be:",p*r*t)

#22 write a program to convert fahrenheit temp to in celcius.
fah=float(input("enter temperature in fahrenheit:"))
print("temperature in celcius:",(fah-32)*5/9)

#23 write a program to find the gravitational force acting b/w two object.
m_1=float(input("enter first mass:"))
m_2=float(input("enter second mass:"))
r=float(input("enter distance b/w m_1 and m_2 r :"))
G=6.67*10**-11
print("gravitational force acting b/w two object is:",(G*m_1*m_2)/r**2)

#24 swap the value of two variable using third variable
a=float(input("enter first value a:"))
b=float(input("enter second value b: "))
t=a
a=b
b=t
print("value of a:",a,"and value of b:",b)

#25 swap the value of two variable without using third variable
a=float(input("enter first value a:"))
b=float(input("enter second value b: "))
a=a+b
b=a-b
a=a-b
print("value of a ",a, "and value of b is :",b)

#26 write a program to copy one variable into another using assignment operator i
var=float(input("enter a number:"))
odd=var
print("another",odd)

```

```
#27 write a program to perform modulo division on a =8,b=3
a=8
b=3
print("modulo division 8%3 is ",a%b)

#28 write a program to perform modulo division on a =-8,b=3
a=-8
b=3
print("modulo division -8%3 is ",a%b)

#29 write a program to perform modulo division on a =8,b=-3
a=8
b=-3
print("modulo division 8% -3 is ",a%b)

#30 write a program to perform modulo division on a =-8,b=-3
a=-8
b=-3
print("modulo division -8% -3 is ",a%b)

#31 write a program to apply greater than operator a =8,b=3
a=8
b=3
print("a>b:",a>b)

#32 write a program to apply less than operator a =8,b=3
a=8
b=3
print("b<a:",b<a)

#33 write a program to apply greater than or equal to operator a =8,b=3
a=8
b=3
print("a>=b:",a>=b)

#34 write a program to apply less than or equal to operator a =8,b=3
a=8
b=3
print("b<=a:",b<=a)

#35 write a program to apply equal to operator on a=8, b=3
a=8
b=3
print("apply equal to operator:",a==b)

##36 write a program to apply not equal to operator on a=8, b=3
a=8
b=3
print("apply not equal to operator:",a!=b)

#37 write a program to apply AND operator on two operands
first=float(input("enter first no : "))
sec=float(input("enter second no : "))
print("first>second:",first>sec and sec<first )

#38 write a program to apply OR operator on two operands
```

```
first=float(input("enter first no : "))
sec=float(input("enter second no : "))
print("first>second:",first>sec or sec>first )

#39 write a program to apply Logical NOT operator on an operands
a=True
b=False
print(not a)
c=False
d=False
print(not d)

#40 write a program to perform Bitwise AND operation on a=15 and b=17
a=15
b=17
print(a &b)

#41 write a program to perform Bitwise OR operation on a=15aand b=17
a=15
b=17
print(a|b)

#42 write a program to perform Bitwise XOR operation on a=15aand b=17
a=15
b=17
print(a ^b)

#43 write a program to perform Bitwise negation operation on a=15
a=15
print(~a)

#44 write a program to swap the contents of two Numbers using bitwise XOR operati
a=int(input("enter first no: "))
b=int(input("enter second no: "))
a=a^b
b=a^b
a=a^b
print("a:",a,"and b",b)

#45 write a program to multiply given number by 4 using Bitwise operator
a=int(input("enter any number:"))
b=a<<2
print(b)

#46. Write a program to find greatest between two numbers.

first=int(input("enter first no:"))
sec=int(input("enter second no:"))
if first>sec:
    print(first,"is greater",sec)
else:print(sec,"is greater",first)

#47. Write a program to Accept two Integers and Check if they are Equal.

first=int(input("enter first no:"))
sec=int(input("enter second no:"))
if first==sec:
```

```

        print(first,"equal to",sec)
else:
    print("both are not equal ")

```

#48. Write a program to Check if a given Integer is Positive or Negative.

```

first=int(input("enter first no:"))
if first>0:
    print(first,"is positive no")
else:print(first,"is negetive no")

```

#49. Write a program to Check if a given Integer is Odd or Even.

```

first=int(input("enter first no:"))
if first%2==0:
    print(first,"no is even")
else:
    print(first,"no is odd")

```

#50. Write a program to Check if a given Integer is Divisible by 5 or not.

```

num=int(input("enter first no:"))
if num%5==0:
    print(num,"is divided by 5")
else:
    print(num,"is not diveded by 5")

```

#51. Write a program to Check if a given Integer is Divisible by 7 or not.

```

num=int(input("enter first no:"))
if num%7==0:
    print(num,"is divided by 7")
else:
    print(num,"is not diveded by 7")

```

#53. Write a program to find the greatest of three numbers using else if ladder.

```

a=int(input("enter first no:"))
b=int(input("enter second no:"))
c=int(input("enter third no: "))
if a>b and a>c:
    print(a,"is greater than",b , "and",c)
if b>a and b>c:
    print(b,"is greater than",a, "and",c)
else:
    print(c,"is greater than",a, "and",b)

```

#54. Write a program to find the greatest of three numbers using Nested if.

```

a=int(input("enter first no:"))
b=int(input("enter second no:"))
c=int(input("enter third no: "))
if a>b and a>c:
    print(a,"is greater than",b , "and",c)
else:
    if b>a and b>c:
        print(b,"is greater than",a, "and",c)
    else:

```

```
print(c,"is greater than",a,"and",b)
```

#55. Write a program to convert an Upper case character into lower case and vice-

```
ch=input("enter any character:")
print(ch.upper())
```

#56. Write a program to check weather an entered year is leap year or not.

```
yr=int(input("enter year for check leap year:"))
if yr%4==0 and yr%400==0 or yr%100!=0:
    print(yr,"year is a leap year")
else:
    print(yr,"year is nor a leap year")
```

#57. Write a Program to check whether an alphabet entered by the user is a vowel

```
ch=input("enter any character:")
if ch=='a' or ch=='e'or ch=='i' or ch=='o' or ch=='u' or ch=='A' or ch=='E' or c
    print(ch,"is an vowel")
else:
    print(ch,"is a consonant")
```

#58. Write a program to Read a Coordinate Point and Determine its Quadrant.

```
x=float(input("enter x point:"))
y=float(input("enter y point:"))
if x>0 and y>0:
    print(x,"and",y,"will be in first quadrant")
elif x<0 and y>0:
    print(x,"and",y,"will be in second quadrant")
elif x<0 and y<0:
    print(x,"and",y,"will be in third quadrant")
else:
    print(x,"and",y,"will be in fourth quadrant")
```

#59. Write a program to Add two Complex Numbers.

```
a=complex(input("enter first Complex number:"))
b=complex(input("enter second complex number:"))
print("value of two Complex Numbers",a+b)
```

##60. Write a Program to find roots of a quadratic expression.

```
a=int(input("enter first no:"))
b=int(input("enter second no:"))
c=int(input("enter third no: "))
d=(b**2)-(4*a*c)
e=(-b+(d**0.5))/2*a
f=(-b-(d**0.5))/2*a
if d>=0 :
    print(e)
else:
    print(f)
```

#61. Write a program to print day according to the day number entered by the user

```

day=int(input("enter no 1 to 7:"))
if day==1:
    print("sunday")
elif day==2:
    print("monday")
elif day==3:
    print("tuesday")
elif day==4:
    print("wednesday")
elif day==5:
    print("thursday")
elif day==6:
    print("friday")
elif day==7:
    print("saturday")
else:
    print("not exist")

```

#62. Write a program to print color name, if user enters the first letter of the

```

clr=input("enter any letter related to color name")
if clr=='r' or clr=='R':
    print(clr,"red , Red")
elif clr=='g' or clr=='G':
    print(clr,"green ,Green")
elif clr=='b' or clr=='B':
    print(clr,"black and Black")
elif clr=='v' or clr=='V':
    print(clr,"vilot and Vilot")
else:
    print("sorry, many color in universe so I can't explain about every color")

```

#63. Write a program to Simulate Arithmetic Calculator.

```

a=float(input("enter any number a;"))
b=float(input("enter any number b;"))
s=input("take any from this ,+,-,*,/,//,% :")
if s=='+':
    print("sum of a and b :",a+b)
elif s=='-':
    print("subtraction of a and b :",a-b)
elif s=='*':
    print("multiplication of a and b :",a*b)
elif s=='/':
    print("divide of a and b :",a/b)
elif s=='//':
    print("quotient of a and b:",a//b)
elif s=='%':
    print("remainder of a and b :",a%b)
else:
    print("please take only among this ,+,-,*,/,//,%")

```

##64. Write a menu driven program for calculating area of different geometrical figures

```

print("1. Area of circle:")
print("2. Area of square:")
print("3. Area of rectangle:")
print("4. Area of triangle: ")

```

```
ch=int(input("enter your choice : "))
if ch==1:
    rad=float(input("enter any radius of circle:"))
    print("area of circle",3.14*rad**2)
elif ch==2:
    si=float(input("enter side of square:"))
    print("area of square",si**2)
elif ch==3:
    leng=float(input("enter any lenght of rectangle:"))
    br=float(input("enter any breadth rectangle:"))
    print("area of rectangle",leng*br)
elif ch==4:
    a=float(input("enter side first triangle:"))
    b=float(input("enter side second of triangle:"))
    c=float(input("enter side third of triangle:"))
    s=(a+b+c)/2
    tri=(s*(s-a)*(s-b)*(s-c))**0.5
    print("area of triangle",tri)
else:
    print("*****")
    print("sorry ,this is valid for only 1 to 4 ")

#65Write a program to display numbers 1 to 10.
for i in range(1,11):
    print(i)

#66. Write a program to display all even numbers from 1 to 20

for i in range(1,21):
    if i%2==0:
        print(i)

#67. Write a program to display all odd numbers from 1 to 20

for i in range(1,21):
    if i%2!=0:
        print(i)

#68. Write a program to print all the Numbers Divisible by 7 from 1 to 100.

for i in range(1,101):
    if i%7==0:
        print(i)"""
#69. Write a program to print table of 2
```

2write a program to read two numbers and print their quotient and remainder

```
In [1]: a=int(float(input("enter 1no: ")))
b=int(float(input("enter 2 no: ")))
print(type(a))
print(type(b))
print("quotient",a//b)
print("remainder",a%b)
```

```
enter 1no: 4
enter 2 no: 58
<class 'int'>
<class 'int'>
quotient 0
remainder 4
```

3write a program to find the average of three numbers

```
In [2]: a=int(input("enter 1no: "))
b=int(input("enter 2 no: "))
c=int(input("enter 3 no: "))
print("average of these no.are;",(a+b+c)/3)
```

```
enter 1no: 5
enter 2 no: 86
enter 3 no: 6
average of these no.are; 32.33333333333336
```

4write a program to calculate sum of 5 subjects and find percentage(max mark in each subject is 100)

```
In [ ]: a=int(input("enter 1no: "))
b=int(input("enter 2 no: "))
c=int(input("enter 3 no: "))
d=int(input("enter 4 no: "))
e=int(input("enter 5 no: "))
totalmarks=a+b+c+d+e
avg=(a+b+c+d+e)/5
print("average: ",avg)
percent=(totalmarks/500)*100
print("percent; ",percent)
```

5write a program to find gross salary

```
In [3]: salary=int(float(input("enter gross salary: ")))
BS=int(float(input("enter your BS: ")))
HRA=int(float(input("enter your HRA: ")))
DA=int(float(input("enter your DA: ")))
TA=int(float(input("enter you TA : ")))
total_salary=salary+BS+HRA+DA+TA
print("*****")
print("Total salary .....",total_salary)
it=int(float(input("enter your IT: ")))
loan=int(float(input("enter your loanpay: ")))
reduction=it+loan
total_payment=total_salary-reduction
print("*****")
print("your total payment will be after reduction....: ",total_payment)
```

```
enter gross salary: 454
enter your BS: 566
enter your HRA:4865
enter your DA: 64
enter you TA : 586
*****
Total salary ..... 6535
enter your IT: 56
enter your loanpay: 466
*****
your total payment will be after reduction....: 6013
```

6 WRITE A PROGRAM TO CALCULATE AREA OF CIRCLE

```
In [ ]: radius=float(input("enter radius: "))
area=3.14*radius
print("area of circle:",area)
#7write a program to calculate area of rectangle
sidea=float(input("enter1side of rec: "))
sideb=float(input("enter 2nd side of rec:"))
print("area of rectangle:",sidea*sideb,"meter")
```

7write a program to calculate area of rectangle

```
In [4]: sidea=float(input("enter1side of rec: "))
sideb=float(input("enter 2nd side of rec:"))
print("area of rectangle:",sidea*sideb,"meter")
```

```
enter1side of rec: 54
enter 2nd side of rec:55
area of rectangle: 2970.0 meter
```

8write a program to calculate are of square

```
In [ ]: #8write a program to calculate are of square
side=float(input("enter side of Square : "))
print("area of square:",side*side)
```

9write a program to calculate area and circumference of circle

```
In [ ]: radius=float(input("enter radius of circle: "))
area=3.14*radius
circum=2*3.14*radius
print("area of circle",area,"circumference",circum)
```

10calculate area of scalane triangle

```
In [ ]: a=float(input("enter 1st side:"))
b=float(input("enter 2nd side: "))
c=float(input("enter 3rd side: "))
s=(a+b+c)/2
area=s*(s-a)*(s-b)*(s-c)**0.5
print("area of scalane triangle:",area)
```

11calculate area of right angle triange

```
In [5]: base=float(input("enter base of right angle triangle:"))
height=float(input("enter hight of triangle:"))
area=0.5*base*height
print("Area of right angle triangle:",area)
```

```
enter base of right angle triangle:5
enter hight of triangle:8
Area of right angle triangle: 20.0
```

12 find area of trapezium

```
In [ ]: sidea=float(input("enter 1st parallel side of trapezium: "))
sideb=float(input("enter 2nd parallel side of trapezium: "))
hight=float(input("enter hight of trapezium:"))
area=(sidea+sideb)*0.5*hight
print("area of trapezium:",area)
```

13 find area of Rhombus

```
In [ ]: d_1=float(input("enter 1st diagonal of rhombus:"))
d_2=float(input("enter 2nd diagonal of rhombus:"))
print("area of Rhomnus: ",d_1*d_2)
```

14 find area of parallelogram

```
In [ ]: base=float(input("enter base of parallelogram:"))
hight=float(input("enter hight of parallelogram :"))
print("area of parallelogram:",base*hight)
```

15 write a program to find the volume and surface area of cube

```
In [ ]: a=float(input("enter side of cube:"))
print("volume of cube:",a**3,"and surface area of cube:",6*a**2)
```

16 write a program to find the volume and surface area of cuboids

```
In [ ]: lengh=float(input("enter lengh of cuboid:"))
base=float(input("enter base of cuboid:"))
height=float(input("enter height of cuboid:"))
print("volume of cuboid",lengh*base*height)
print("surface area of cuboid is:",2*(lengh*base+base*height+height*lengh))
```

17 write a program to find the volume and surface area of cylinder

```
In [ ]: r=float(input("enter radius of cylinder:"))
h=float(input("enter height of cylinder:"))
print("volume of cylinder : ",3.14*r**2*h,"and surface area of cylinder is:",(2*3.
```

18 write a program to find surface area and volume of cone

```
In [ ]: r=float(input("enter radius of cone:"))
h=float(input("enter height of cone:"))
print("surface area of cone : ",3.14*r*(r+(h**2+r**2)**.5),"and volume of cone is
```

19 write a program to find surface area and volume of sphesre

```
In [ ]: r=float(input("enter radius of sphere: "))
print("volume of sphere : ",4/3*3.14*r**3,"and surface area of sphere is : ",4*3.14
```

20 write a program to find the perimeter of circle,rectangle and triangle.

```
In [ ]: r=float(input("enter radius of circle:"))
l=float(input("enter length of rectangle:"))
b=float(input("enter breadth of rectangle:"))
a=float(input("enter 1st side of triangle:"))
b=float(input("enter 2nd side of triangle:"))
c=float(input("enter 3rd side of triangle:"))
print("perimeter of circle:",2*3.14*r,"perimeter of rectangle:",2*(l+b),"and peri
```

21 write a program to compute simple interest

```
In [ ]: p=float(input("enter principal value:"))
r=float(input("enter rate taken :"))
t=float(input("enter time taken:"))
print("simple interest will be:",p*r*t)
```

22 write a program to convert fahrenheit temp to in celcius.

```
In [ ]: fah=float(input("enter temperature in fahrenheit:"))
print("temperature in celcius:",(fah-32)*5/9)
```

23 write a program to find the gravitational force acting b/w two object.

```
In [ ]: m_1=float(input("enter first mass:"))
m_2=float(input("enter second mass:"))
r=float(input("enter distance b/w m_1 and m_2 r :"))
G=6.67*10**-11
print("gravitational force acting b/w two object is:",(G*m_1*m_2)/r**2)
```

24 swap the value of two variable using third variable

```
In [ ]: a=float(input("enter first value a:"))
b=float(input("enter second vlaue b: "))
t=a
a=b
b=t
print("value of a:",a,"and value of b:",b)
```

25 swap the value of two variable without using third variable

```
In [ ]: a=float(input("enter first value a:"))
b=float(input("enter second vlaue b: "))
a=a+b
b=a-b
a=a-b
print("value of a ",a, "and value of b is :",b)
```

26 write a program to copy one variable into another using assignment operator in python

```
In [ ]: var=float(input("enter a number:"))
odd=var
print("another",odd)
```

27 write a program to perform modulo division on a =8,b=3

```
In [ ]: a=8
b=3
print("modulo division 8%3 is ",a%b)
```

28 write a program to perform modulo division on a =-8,b=3

```
In [ ]: a=-8
b=3
print("modulo division -8%3 is ",a%b)
```

29 write a program to perform modulo division on a =8,b=-3

```
In [7]: a=8
b=-3
print("modulo division 8% -3 is ",a%b)
```

modulo division 8% -3 is -1

30 write a program to perform modulo division on a =-8,b=-3

In [13]:

```
a=8  
b=3  
print("modulo division -8%-3 is ",a%b)
```

```
modulo division -8%-3 is -2
```

```
a=-8 b=-3 print("modulo division -8%-3 is ",a%b)
```

31 write a program to apply greater than operator a =8,b=3

In [8]:

```
a=8  
b=3  
print("a>b:",a>b)
```

```
a>b: True
```

32 write a program to apply less than operator a =8,b=3

In []:

```
a=8  
b=3  
print("b<a:",b<a)
```

33 write a program to apply greater than or equal to operator a =8,b=3

In [9]:

```
a=8  
b=3  
print("a>=b:",a>=b)
```

```
a>=b: True
```

34 write a program to apply less than or equal to operator a =8,b=3

```
In [10]: a=8  
b=3  
print("b<=a:",b<=a)
```

b<=a: True

35 write a program to apply equal to operator on a=8, b=3

```
In [11]: a=8  
b=3  
print("apply equal to operator:",a==b)
```

apply equal to operator: False

36 write a program to apply not equal to operator on a=8, b=3

```
In [12]: a=8  
b=3  
print("apply not equal to operator:",a!=b)
```

apply not equal to operator: True

37 write a program to apply AND operator on two operands

```
In [ ]: first=float(input("enter first no : "))  
sec=float(input("enter second no : "))  
print("first>second:",first>sec and sec<first )
```

38 write a program to apply OR operator on two operands

```
In [18]: first=float(input("enter first no : "))
sec=float(input("enter second no : "))
if first>sec:
    print("first>second :",first>sec )
else:
    print("sec > first :", sec>first)
```

```
enter first no : 45
enter second no : 78
sec > first : True
```

39 write a program to apply Logical NOT operator on an operands

```
In [15]: a=True
b=False
print(not a)
c=False
d=False
print(not d)
```

```
False
True
```

40 write a program to perform Bitwise AND operation on a=15 and b=17

```
In [14]: a=15
b=17
print(a &b)
```

```
1
```

41 write a program to perform Bitwise OR operation on a=15 and b=17

```
In [ ]: a=15
b=17
print(a|b)
```

42 write a program to perform Bitwise XOR operation on a=15 and b=17

```
In [ ]: a=15  
b=17  
print(a ^b)
```

43 write a program to perform Bitwise negation operation on a=15

```
In [ ]: a=15  
print(~a)
```

44 write a program to swap the contents of two Numbers using bitwise XOR operation.

```
In [ ]: a=int(input("enter first no: "))  
b=int(input("enter second no: "))  
a=a^b  
b=a^b  
a=a^b  
print("a:",a,"and b:",b)
```

45 write a program to multiply given number by 4 using Bitwise operator

```
In [ ]: a=int(input("enter any number:"))  
b=a<<2  
print(b)
```

46. Write a program to find greatest between two numbers.

```
In [19]: first=int(input("enter first no:"))
sec=int(input("enter second no:"))
if first>sec:
    print(first,"is greater",sec)
else:print(sec,"is greater",first)
```

```
enter first no:45
enter second no:78
78 is greater 45
```

47. Write a program to Accept two Integers and Check if they are Equal.

```
In [ ]: first=int(input("enter first no:"))
sec=int(input("enter second no:"))
if first==sec:
    print(first,"equal to",sec)
else:
    print("both are not equal ")
```

48. Write a program to Check if a given Integer is Positive or Negative.

```
In [ ]: first=int(input("enter first no:"))
if first>0:
    print(first,"is positive no")
else:print(first,"is negative no")
```

49. Write a program to Check if a given Integer is Odd or Even.

```
In [ ]: first=int(input("enter first no:"))
if first%2==0:
    print(first,"no is even")
else:
    print(first,"no is odd")
```

50. Write a program to Check if a given Integer is Divisible by 5 or not.

In []:

```
num=int(input("enter first no:"))
if num%5==0:
    print(num,"is divided by 5")
else:
    print(num,"is not diveded by 5")
```

51. Write a program to Check if a given Integer is Divisible by 7 or not.

In []:

```
num=int(input("enter first no:"))
if num%7==0:
    print(num,"is divided by 7")
else:
    print(num,"is not diveded by 7")
```

53. Write a program to find the greatest of three numbers using else if ladder.

In [20]:

```
a=int(input("enter first no:"))
b=int(input("enter second no:"))
c=int(input("enter third no: "))
if a>b and a>c:
    print(a,"is greater than",b , "and",c)
if b>a and b>c:
    print(b,"is greater than",a, "and",c)
else:
    print(c,"is greater than",a, "and",b)
```

```
enter first no:5
enter second no:8
enter third no: 7
8 is greater than 5 and 7
```

54. Write a program to find the greatest of three numbers using Nested if.

```
In [ ]: a=int(input("enter first no:"))
b=int(input("enter second no:"))
c=int(input("enter third no: "))
if a>b and a>c:
    print(a,"is greater than",b , "and",c)
else:
    if b>a and b>c:
        print(b,"is greater than",a, "and",c)
    else:
        print(c,"is greater than",a, "and",b)
```

55. Write a program to convert an Upper case character into lower case and vice-versa.

```
In [22]: ch=input("enter any character:")
print(ch.upper())
```

enter any character:f
F

56. Write a program to check weather an entered year is leap year or not.

```
In [29]: yr=int(input("enter year for check leap year:"))
if yr%4==0 and yr%400==0 or yr%100!=0:
    print(yr,"year is a leap year")
else:
    print(yr,"year is not a leap year")
```

enter year for check leap year:2029
2029 year is a leap year

57. Write a Program to check whether an alphabet entered by the user is a vowel or a constant.

```
In [ ]: ch=input("enter any character:")
if ch=='a' or ch=='e' or ch=='i' or ch=='o' or ch=='u' or ch=='A' or ch=='E' or ch=='I' or ch=='O' or ch=='U':
    print(ch,"is an vowel")
else:
    print(ch,"is a consonant")
```

58. Write a program to Read a Coordinate Point and Determine its Quadrant.

x=float(input("enter x point:"))

y=float(input("enter y point:")) if x>0 and y>0: print(x,"and",y,"will be in first quadrant") elif x<0 and y>0: print(x,"and",y,"will be in second quadrant") elif x<0 and y<0: print(x,"and",y,"will be in third quadrant") else: print(x,"and",y,"will be in fourth quadrant")

59. Write a program to Add two Complex Numbers.

```
In [ ]: a=complex(input("enter first Complex number:"))
b=complex(input("enter second complex number:"))
print("value of two Complex Numbers",a+b)
```

60. Write a Program to find roots of a quadratic expression.

```
In [1]: a=int(input("enter first no:"))
b=int(input("enter second no:"))
c=int(input("enter third no: "))
d=(b**2)-(4*a*c)
e=(-b+(d**0.5))/2*a
f=(-b-(d**0.5))/2*a
if d>=0 :
    print(e)
else:
    print(f)
```

```
enter first no:5
enter second no:8
enter third no: 7
(-20-21.79449471770337j)
```

In []: