## 1)Python program to demonstrate math functions

import math

fact\_value=math.sqrt(16)

print("Square root of 16 is %i "%fact\_value)

exp\_value=math.exp(0.5)

print("Exponential value is %f "%exp\_value)

abs\_value=math.fabs(-4)

print("Absolute value of -4 is %i "%abs\_value)

factt\_value=math.factorial(4)

print("Factorial of 4 is %i "%fact\_value)

ceil\_value=math.ceil(4.35)

print("ceil value of 4.35 is %i "%ceil\_value)

log\_base2=math.log2(5.2345)

print("The natural log of 5.2345 is %f "%log\_base2)

log\_base10=math.log10(5.2345)

print("The logarithmic value of 5.2345 to the base 10 is %f "%log\_base10)

gcd\_value=math.gcd(6,69)

print("The GCD of 6 and 64 is %i "%gcd\_value)

#parameters inside min and max functions should be of same data type.

min\_value=min(25,89,10,60) #No need of math module.

print("The minimum value is %i "%min\_value)

max\_value=max("kajol","rani","priti","aishwarya","tapasee")

print("The maximum value is %s "%max\_value)

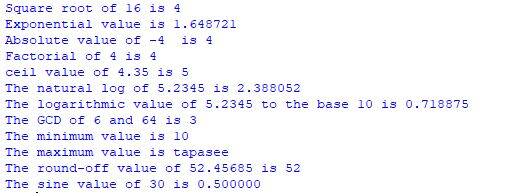
roundoff\_value=round(52.45685) #only one digit is considered after decimal

print("The round-off value of 52.45685 is %i" %roundoff\_value)

sin\_value=math.sin(math.radians(30)) #sin function accepts value in radian by default,

#so to convert it into degrees use math.radians()

print("The sine value of 30 is %f "%sin\_value)



## 2)Python program to demonstrate data type conversions.

value=0x3a

value\_in\_int=int(value)

value\_in\_bin=bin(value)

value\_in\_oct=oct(value)

print("The values in int, binary, octal and hexadecimal are as follows")

#sep is used to separate individual values by a comma or space.

print(value\_in\_int, value\_in\_bin, value\_in\_oct, sep=",")



## 3)Python program to demonstrate evaluation of expression

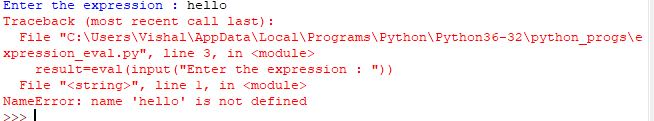
## 

result=eval(input("Enter the expression : "))

#eval functions doesn’t accept string input.

print("Result is %f" %result)





## 4)Python program to demonstrate variable declaration.

my\_var1=5

print("Data type of my\_var1 is ", type(my\_var1))

my\_var2="hello"

print("Data type of my\_var1 is ", type(my\_var2))

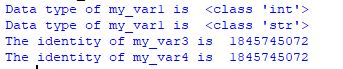
my\_var3=25

my\_var4=25

#id() is used to print the identity of an object (like memory address in C)

print("The identity of my\_var3 is ", id(my\_var3))

print("The identity of my\_var4 is ", id(my\_var4))

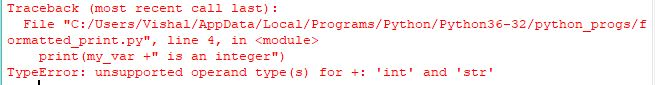


## **5)P**ython program to demonstrate formatted print

my\_var=25

print(my\_var +" is an integer")

#Concatenation operator accepts everything in string.



my\_var=25

print(str(my\_var) +" is an integer")



print("Welcome", end=" ")

print("to Python")



name="Linda"

print("Hello %20s" %name)



my\_var1,my\_var2,my\_var3=1,2,3

print("1st variable={0}, 2nd variable={1}, 3rd variable={2}".format(my\_var2, my\_var3, my\_var1))



## 6)Python program to calculate area of circle

## 

import math

radius=float(input("Enter the value of radius : "))

area=radius\*\*2\*math.pi

print("Area of circle is %f" %area)



**Conclusion :**

Various math operations can be performed by just importing math module, expressions can be simplified by using eval(), variables need not be declared explicitly.