Unit-1 Introduction to Python and Jupyter Notebooks

QB Solution

In [7]:
```
# Write a Python Program to add 2 numbers with user input.

A=int(input("Enter First no.: "))
B=int(input("Enter Second no.: "))

print("Sum is: " ,A+B)
```

```
Enter First no.: 5
Enter Second no.: 15
Sum is:  20
```

In [8]:
```
# Write a Python Program to find area of circle.

import math
radius=float(input("Enter radius: "))
cir_area=math.pi*(radius**2)

print("Area of circle is: ",cir_area)
```

```
Enter radius: 2.5
Area of circle is:  19.634954084936208
```

In [9]:
```
#Write a Python Program to find area of triangle.

height= float(input("Enter height: "))
base= float(input("Enter base: "))

tri_area=(height*base)/2

print("Area of Triangle is: ",tri_area)
```

```
Enter height: 5
Enter base: 5
Area of Triangle is:  12.5
```

In [10]:
```
#Write a Python Program to find area of trapazoid.

height= float(input("Enter height: "))
base1= float(input("Enter base-1: "))
base2= float(input("Enter base-2: "))
trap_area=((base1+base2)/2)*height

print("Area of Trapazoid is: ",trap_area)
```

```
Enter height: 5
Enter base-1: 10
Enter base-2: 15
Area of Trapazoid is:  62.5
```

In [11]:
```
#Write a Python program to calculate surface volume and area of a cylinder

import math
r=float(input("Enter Radius: "))
h=float(input("Enter height: "))
volume=math.pi*h*r**2
surface_area=2*math.pi*r*(h+r)

print("Volume of cylinder is: ",volume)
print("Sarface area of cylinder is: ",surface_area)
```

```
Enter Radius: 3
Enter height: 5
Volume of cylinder is:  141.3716694115407
Sarface area of cylinder is:  150.79644737231007
```

In [12]:
```
#Write a Python program to convert Fahrenheit to Celsius and vice versa.

cel=float(input("Enter temperature in celcius: "))
fahr=float(input("Enter temperature in Fahrenheit: "))

new_fahr=(cel*9/5)+32
new_cel=(fahr-32)*5/9

print("Temperature from Celcius to Fahrenheit is:",new_fahr)
print("Temperature from Fahrenheit to celcius is:",new_cel)
```

```
Enter temperature in celcius: 10
Enter temperature in Fahrenheit: 10
Temperature from Celcius to Fahrenheit is: 50.0
Temperature from Fahrenheit to celcius is: -12.222222222222221
```

In [13]:
```
#Write a Python program to calculate the square root of a positive number.

num=int(input("Enter a positive number: "))
sq_root=num**0.5

print("The square root of number is:",sq_root)
```

```
Enter a positive number: 25
The square root of number is: 5.0
```

In [16]:
```
#Write a Python program to convert degree to radian and vice versa.

import math
degree = float(input("Input degrees: "))
radian = float(input("Input radian: "))

new_radian = degree*(math.pi/180)
new_degree = radian*(180/math.pi)

print(new_radian)
print(new_degree)
```

```
Input degrees: 180
Input radian: 2
3.141592653589793
114.59155902616465
```

In [17]:
```
# Write a python code to demonstrate calculator functionality.

N1 = float(input("Enter 1st Number: "))
N2 = float(input("Enter 2nd Number: "))

print("Addition is:", N1+N2)
print("Subtraction is:", N1-N2)
print("Multiplication is:", N1*N2)
print("Division is:", N1/N2)
print("Floor division is:", N1//N2)
print("Modulo is:", N1%N2)
print("Power is:", N1**N2)
```

```
Enter 1st Number: 15
Enter 2nd Number: 5
Addition is: 20.0
Subtraction is: 10.0
Multiplication is: 75.0
Division is: 3.0
Floor division is: 3.0
Modulo is: 0.0
Power is: 759375.0
```

In [18]:
```
#Write a python program to convert Days into Years, Months and Days.
#(Ex: if input of Days = 370 then output will be, years=1, months=0 and days =

Days = int(input("Enter number of days: "))

Y = Days // 365
M = (Days - Y *365) // 30
D = (Days - Y * 365 - M*30)

print("Years = ", Y)
print("Months = ", M)
print("Days = ", D)
```

```
Enter number of days: 900
Years =  2
Months =  5
Days =  20
```

In [20]:
```
#Write a Python program to convert hours into minutes and seconds
#(Ex : input of hours = 6 then output will be, minutes = 360 and seconds = 2160

H = float(input("Enter number of Hours: "))

print("Minutes=", H*60)
print("Seconds=",H*3600)
```

```
Enter number of Hours: 2.5
Minutes= 150.0
Seconds= 9000.0
```

In [6]:
```
# Write a Python program to find an integer exponent x such that a^x = n.
# Input: a =  2 : n =  1024
# Output:10

a = int(input("A: "))
n = int(input("N: "))

n1=1
x=0
while n1!=n:
    n1 *= a
    x+=1
print("Exponent is: ", x)
```

```
A: 2
N: 32
Exponent is:  5
```