Python-Assignment 1

Q1. Write a python program to calculate the area of a circle. Print area with 2 decimal places

```
import math
r = float(input("Enter the radius of the circle"))
Area = math.pi*(r**2)
print(f"Area of the circle is :{Area:.2f}")
```

```
Enter the radius of the circle 4
Area of the circle is :50.27
```

Q2 Write a Python program to calculate area and perimeter of a rectangle

```
import math
l=float(input("Enter the length"))
w=float(input("Enter the width"))
A = float(l*w)
print("Area of the rectangle :",A)
Per =float(2*(l+w))
print(f"Perimeter of the rectangle :", Per)
```

```
Enter the length 5
Enter the width 6
Area of the rectangle : 30.0
Perimeter of the rectangle : 22.0
```

Q3. Write a python program to read your name from keyboard as first name

and last name and display as “Hi Full name”

```
fn = input("Enter the First Name")
ln = input("Enter the Last Name")
FullName =(fn + " " + ln)
print("Hi",FullName)
```

```
Enter the First Name Rajshree
Enter the Last Name Athawale
Hi Rajshree Athawale
```

Q4. Python Program to Convert Kilometers to Miles

```
km = int(input("Enter the diastance in kilometers"))
mile =float(km * 0.621371)
print(km,"km in mile conversion is :",mile)
```

```
Enter the diastance in kilometers 2
2 km in mile conversion is : 1.242742
```

Q5 Python Program to Convert Celsius To Fahrenheit

```
c=float(input("Enter the degree in celcius"))
Fahr =float((c*9/5)+32)
print(c,"in Fahrenhite is :",Fahr)
```

```
Enter the degree in celcius 30
30.0 in Fahrenhite is : 86.0
```

Q6. Python Program to Find the Square Root(use math.sqrt function/ exponentiation)

```
import math
n = int(input("Enter some value"))
sq_root = float(n**0.5)
print("Square root of ",n,"is :",sq_root)
```

```
Enter some value 650
Square root of  650 is : 25.495097567963924
```

Q7 Write a python program to display working of all arithmetic operations.

```
a = int(input("Enter a number"))
b = int(input("Enter a number"))
add =int(a + b)
sub =int(a - b)
mult =int(a * b)
div =float(a/2)
mod =int(a%b)
print("Addition :",add)
print("Subtraction :",sub)
print("Multiplication :",mult)
print("division :",div)
print("modulus :",mod)
```

```
Enter a number 60
Enter a number 26
Addition : 86
Subtraction : 34
Multiplication : 1560
division : 30.0
modulus : 8
```

Q8. Write Python Program to Generate a Random Number(Use random.randint function)

```
import random
r_no=random.randint(1,20)
print(r_no,"is a random number")
```

```
11 is a random number
```

Q9. Write Python Program to Solve Quadratic Equation (Use cmath.sqrt function)

```
import cmath
a =int(input("Enter first number"))
b =int(input("Enter second number"))
c =int(input("Enter third number"))
d = cmath.sqrt(b**2 - 4*a*c)
r1 = (-b + d)/(2*a)
r2 = (-b - d)/(2*b)
print(f"The solutions to quadratic equations are : ",r1 ,"and",r2)
```

```
Enter first number 2
Enter second number 6
Enter third number 8
The solutions to quadratic equations are :  (-1.5+1.3228756555322954j) and (-0.5-0.44095855184409843j)
```

Q10. A store charges Rs 120 per item if you buy less than 10 items. If you buy between 10 and 99 items, the cost is Rs 100 per item.If you buy 100 or more items, the cost is Rs 70 per item. Write a program that asks the user how many items they are buying and the total cost

```
item =int(input("Enter the number of items buying :"))
if item < 10 :
   cost = 120
elif 10<= item < 100 :
    cost = 100
else :
    cost = 70
total_cost = float(item * cost)
print("The total price of the baught items :",total_cost)
```

```
Enter the number of items buying : 20
The total price of the baught items : 2000.0
```

Q11. Write a Python Program to Check if a Number is Positive, Negative or

```
a =int(input("Enter a number"))
if a > 0 :
    print(a,"is POSITIVE")
elif a < 0 :
    print(a,"is NEGATIVE")
else :
    print(a,"is ZERO")
```

```
Enter a number 3
3 is POSITIVE
```