

Python Programming Basic Assignment2

#1. *Write a Python program to convert kilometers to miles?*

```
def kms_to_miles():  
    """  
    this function will convert distance from kilometers to miles.  
    """  
    try:  
        kms = float(input("Enter the value in Kms: "))  
        miles = round(kms*0.621371,6)  
        print("\n{} Kms is equal to {} miles.".format(kms,miles))  
    except Exception as e:  
        print("\nSome exception occurred: ",e)
```

kms_to_miles()

Enter the value in Kms: 12.2

12.2 Kms is equal to 7.580726 miles.

In [7]:

#2. *Write a Python program to convert Celsius to Fahrenheit?*

```
def cel_to_fah():  
    """  
    this function will convert the temperature from celsius to fahrenheit.  
    """  
    try:  
        cels = float(input("Enter the temperature in celsius: "))  
        fah = round((cels*9/5)+32,3)  
        print("\n{} celsius temperature is equal to {} fahrenheit.".format(cels,fah))  
    except Exception as e:  
        print("\nSome exception occurred: ",e)
```

cel_to_fah()

Enter the temperature in celsius: 30.5

30.5 celsius temperature is equal to 86.9 fahrenheit.

In [9]:

#3. *Write a Python program to display calendar?*

```
import calendar
```

```
def cal_of_month():
    """
    this function will print the calendar of the given year.
    """
    try:
        year = int(input("Enter the year: "))

        print("\n"+calendar.calendar(year))

    except Exception as e:
        print("\nSome exception occurred: ",e)
```

cal_of_month()

Enter the year: 2022

2022

January							February							March													
Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su							
	1	2					1	2	3	4	5	6	1	2	3	4	5	6									
3	4	5	6	7	8	9	7	8	9	10	11	12	13	7	8	9	10	11	12	13							
10	11	12	13	14	15	16	14	15	16	17	18	19	20	14	15	16	17	18	19	20							
17	18	19	20	21	22	23	21	22	23	24	25	26	27	21	22	23	24	25	26	27							
24	25	26	27	28	29	30	28						28	29	30	31											
31																											

April							May							June													
Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su							
	1	2	3					1					1	2	3	4	5										
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12							
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19							
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26							
25	26	27	28	29	30	23	24	25	26	27	28	29	27	28	29	30											

July							August							September													
Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su							
	1	2	3				1	2	3	4	5	6	7		1	2	3	4									
4	5	6	7	8	9	10	8	9	10	11	12	13	14	5	6	7	8	9	10	11							
11	12	13	14	15	16	17	15	16	17	18	19	20	21	12	13	14	15	16	17	18							
18	19	20	21	22	23	24	22	23	24	25	26	27	28	19	20	21	22	23	24	25							
25	26	27	28	29	30	31	29	30	31					26	27	28	29	30									

October							November							December						
Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su
		1	2				1	2	3	4	5	6		1	2	3	4			
3	4	5	6	7	8	9	7	8	9	10	11	12	13	5	6	7	8	9	10	11
10	11	12	13	14	15	16	14	15	16	17	18	19	20	12	13	14	15	16	17	18
17	18	19	20	21	22	23	21	22	23	24	25	26	27	19	20	21	22	23	24	25
24	25	26	27	28	29	30	28	29	30					26	27	28	29	30	31	
31																				

In [10]:

#4. Write a Python program to solve quadratic equation?

```
import cmath
def solve_quadratic_eqn():
    """
    this function will find the solutions of a quadratic equation.
    """
    try:
        a = int(input("Enter a: "))
        b = int(input("Enter b: "))
        c = int(input("Enter c: "))

        if a==0:
            print("\nThis is not a quadratic eqn.")
        else:
            d = (b**2)-(4*a*c)

            sol1 = (-b-cmath.sqrt(d))/(2*a)
            sol2 = (-b+cmath.sqrt(d))/(2*a)

            print("\nThe solutions of quadratic eqn {}x\u00b2 + {}x + {} = 0 are {} and {}."
                  .format(a,b,c,sol1,sol2))
    except Exception as e:
        print("\nSome exception occurred: ",e)

solve_quadratic_eqn()
```

Enter a: 1

Enter b: 5

Enter c: 6

The solutions of quadratic eqn $1x^2 + 5x + 6 = 0$ are $(-3+0j)$ and $(-2+0j)$.

In [11]:

#5. Write a Python program to swap two variables without temp variable?

```
def swap_without_temp():  
    """  
    this function will swap two variables without using any third variable.  
    """  
    try:  
        a = int(input("Enter a: "))  
        b = int(input("Enter b: "))  
  
        print("\nBefore swapping")  
        print("a={} and b={}".format(a,b))  
  
        a = a+b  
        b = a-b  
        a = a-b  
  
        print("\nAfter swapping")  
        print("a={} and b={}".format(a,b))  
  
    except Exception as e:  
        print("\nSome exception occurred: ",e)  
  
swap_without_temp()
```

Enter a: 20

Enter b: 15

Before swapping

a=20 and b=15

After swapping

a=15 and b=20

In []: