Assignment 2 Solutions

1. Write a Python program to convert Kilometers to Miles ?

In [20]:
```
def kmToMiles():
    kiloMeters = float(input("Enter no of kilometers : "))
    print("{} km is Equal to {} miles".format(kiloMeters,kiloMeters*0.621))

kmToMiles()
```

```
Enter no of kilometers : 2
2.0 km is Equal to 1.242 miles
```

2. Write a Python program to convert Celsius to Farenheit ?

In [5]:
```
 def celToFarh():
        celsius = int(input("Enter temperature in celsius : "))
        Farenheit = (celsius*(9/5))+32
        print("{}° Celsius is Equal to {}° Farenheit".format(celsius,Farenheit))

celToFarh()
```

```
Enter temperature in celsius : 100
100° Celsius is Equal to 212.0° Farenheit
```

3. Write a Python program to display calender ?

In [14]:
```
import calendar

def showCalender():
    year = int(input("Enter calender year: "))
    print(calendar.calendar(year))

showCalender()
```

```
Enter calender 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
                       30 31

        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
```

4. Write a Python program to solve quadartic equation ?

In [17]:
```
import cmath
import math

def quadarticEquationRoots(a,b,c):

    discriminant = b*b-4*a*c

    if discriminant == 0:
        r1 = -b/2*a
        r2 = -b/2*a
        print("Roots are Real",r1,r2)
    elif discriminant > 0:
        r1 = (-b-math.sqrt(discriminant))/(2 * a)
        r2 = (-b+math.sqrt(discriminant))/(2 * a)
        print("Roots are Real and different",r1,r2)
    else:
        r1 = (-b-cmath.sqrt(discriminant))/(2 * a)
        r2 = (-b+cmath.sqrt(discriminant))/(2 * a)

a = int(input('Enter a value: '))
b = int(input('Enter b value: '))
c = int(input('Enter c value: '))

quadarticEquationRoots(a,b,c)
```

```
Enter a value: 1
Enter b value: 2
Enter c value: 1
Roots are Real -1.0 -1.0
```

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

In [19]:
```
num_1 = int(input('Enter first number: '))
num_2 = int(input('Enter second number: '))


def swapNumbers(num_1,num_2):
    print('Before Swapping',num_1,num_2)
    num_1 = num_1+num_2
    num_2 = num_1-num_2
    num_1 = num_1-num_2
    print('before Swapping',num_1,num_2)

swapNumbers(num_1,num_2)
```

```
Enter first number: 20
Enter second number: 30
Before Swapping 20 30
before Swapping 30 20
```

In [ ]:
```

```