# Assignment 2

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

***Answer:***

**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 : 1  
1.0 km is Equal to 0.621 miles

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

***Answer:***

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 ?

***Answer:***

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

Enter calender year: 2021  
 2021  
  
 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 3 1 2 3 4 5 6 7 1 2 3 4 5 6 7  
 4 5 6 7 8 9 10 8 9 10 11 12 13 14 8 9 10 11 12 13 14  
11 12 13 14 15 16 17 15 16 17 18 19 20 21 15 16 17 18 19 20 21  
18 19 20 21 22 23 24 22 23 24 25 26 27 28 22 23 24 25 26 27 28  
25 26 27 28 29 30 31 29 30 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 4 1 2 1 2 3 4 5 6  
 5 6 7 8 9 10 11 3 4 5 6 7 8 9 7 8 9 10 11 12 13  
12 13 14 15 16 17 18 10 11 12 13 14 15 16 14 15 16 17 18 19 20  
19 20 21 22 23 24 25 17 18 19 20 21 22 23 21 22 23 24 25 26 27  
26 27 28 29 30 24 25 26 27 28 29 30 28 29 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 4 1 1 2 3 4 5  
 5 6 7 8 9 10 11 2 3 4 5 6 7 8 6 7 8 9 10 11 12  
12 13 14 15 16 17 18 9 10 11 12 13 14 15 13 14 15 16 17 18 19  
19 20 21 22 23 24 25 16 17 18 19 20 21 22 20 21 22 23 24 25 26  
26 27 28 29 30 31 23 24 25 26 27 28 29 27 28 29 30  
 30 31  
  
 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 3 1 2 3 4 5 6 7 1 2 3 4 5  
 4 5 6 7 8 9 10 8 9 10 11 12 13 14 6 7 8 9 10 11 12  
11 12 13 14 15 16 17 15 16 17 18 19 20 21 13 14 15 16 17 18 19  
18 19 20 21 22 23 24 22 23 24 25 26 27 28 20 21 22 23 24 25 26  
25 26 27 28 29 30 31 29 30 27 28 29 30 31

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

***Answer:***

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)  
 print("Roots are Imaginary",r1,r2)  
  
  
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 ?

***Answer:***

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: 15  
Enter second number: 30  
Before Swapping 15 30  
before Swapping 30 15