

In [5]:

```
#Question 3:
#Use Cholesky decomposition to solve the equation  $A \cdot x = b$  where,

#A =10.0 1.0 0.0 2.5
    #1.0 12.0 -0.3 1.1
    #0.0 -0.3 9.5 0.0
    #2.5 1.1 0.0 6.0

#and b =#2.20
        #2.85
        #2.79
        #2.87

from My_Lib import *

#Calling the in a readable form
list_C=[]
with open("matrix3.txt") as matC:
    for k in matC:
        list_C.append(list(map(float, k.split()))))

#Printing the solutions due to cholesky's condition
x =Cholesky_Solver(list_C)
print("x_1 = %.2f" %x[0])
print("x_2 = %.2f" %x[1])
print("x_3 = %.2f" %x[2])
print("x_4 = %.2f" %x[3])
```

The solutions of the system of linear equations by Cholesky's method is

```
x_1 = 0.10
x_2 = 0.20
x_3 = 0.30
x_4 = 0.40
```