Gauss ELIMINATION METHOD

**import numpy as np**

**n=int(input("Enter number of unknowns ? " ))**

**col=[]**

**for i in range(0,n):**

**row = []**

**for j in range(0,n+1):**

**print("Enter A" , i , j )**

**temp= float(input())**

**row.append(temp)**

**col.append(row)**

**A=np.matrix(col)**

**print(A)**

**for i in range(0,n):**

**for j in range(i+1,n):**

**print(j)**

**factor=Z[j,i]/Z[i,i]**

**for k in range(0,n+1):**

**Z[j,k]=Z[j,k]-factor\*Z[i,k]**

**print(Z)**

**x=np.zeros(n)**

**x[n-1]=(Z[n-1,n]/Z[n-1,n-1])**

**for i in range(n-2,-1,-1):**

**sum=0**

**for j in range(i+1,n):**

**sum=sum+Z[i,j]\*x[j]**

**x[i]=(Z[i,n]-sum)/Z[i,i]**

**print(x)**

**“OUTPUT”**

**Enter number of unknowns ? 3**

**Enter A 0 0**

**2**

**Enter A 0 1**

**2**

**Enter A 0 2**

**1**

**Enter A 0 3**

**4**

**Enter A 1 0**

**1**

**Enter A 1 1**

**-2**

**Enter A 1 2**

**3**

**Enter A 1 3**

**-1**

**Enter A 2 0**

**2**

**Enter A 2 1**

**1**

**Enter A 2 2**

**5**

**Enter A 2 3**

**3**

**[[ 2. 2. 1. 4.]**

**[ 1. -2. 3. -1.]**

**[ 2. 1. 5. 3.]]**

**1**

**2**

**2**

**[[ 1 -2 3 -1]**

**[ 0 5 -1 5]**

**[ 0 0 -3 0]]**

**[ 1. 1. -0.]**