```c
#include<stdio.h>
#include<math.h>
int main()
{
float a[11] [11], b[11], x[11],y[11], error=1.e-5;
int n, i,j, flag;
printf("Enter the number of unknown\n") ;
scanf("%d", &n);
printf("Enter the coefficient matrix \n") ;
for (i=1;i<=n; i++)
{
for(j=1;j<=n; j++)
scanf ("%f" , &a[i][j]);
}
printf("\nEnter the constant matrix\n");
for(i=1;i<=n; i++)
scanf("%f", &b [i] );
for(i=1;i<=n;i++)
x[i]=0;
do
{
flag=0;
for(i=1;i<=n; i++)
{
y[i]=b[i];
for (j=1;j<=n;j++)
{
if(j<i)
y[i]=y [i]-a[i] [i]*y[j];
if(j>i)
y[i]=y [i] -a[i] [j ]*x[j];
}
y[i]=y[i]/a [i] [i];
}
for (i=1;i<=n;i++)
{
if(fabs (x[i] -y[i]) >error)
flag=1;
x[i]=y[i];
}
}
while(flag==1) ;
printf("\nThe solution is\n");
for(i=1;i<=n; i++)
printf("x[%d ]=%7.4f\n", i,x[i]) ;
printf (" (correct up to four decimal places) \n");
return 0;
}

//*Output*//
Enter the number of unknown
4
Enter the coefficient matrix
10.07 1.54 1.36 1.41
2.74 11.60 2.56 1.12
1.14 -0.57 10.40 2.07
-0.23 -2.04 -1.59 9.19

Enter the constant matrix
-0.21
```

```
8.61
9.68
0.92

The solution is
x[1 ]=-0.0505
x[2 ]= 0.8094
x[3 ]= 0.3783
x[4 ]=-1.0371
 (correct up to four decimal places)
```