```c
#include<stdio.h>
int main()
{
float a[11][11], b[11] , x[11], m, sum;
int n,i,j, k;
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(j=1;j<n;j++)
{
for (i=j+1; i<=n; i++)
{
m=-a[i][j]/a[j] [j];
for(k=1;k<=n;k++)
a[i][k]=a[i] [k]+m* a[j][k];
b[i]=b[i]+m*b[j ];
}
}
for (i=n;i>=1; i--)
{
sum=0;
for (j=i+1; j<=n;j++)
sum=sum+a[i][j] *x[j];
x[i]=(b[i] - sum) /a[i] [i];
}
printf("\nThe solution is\n");
for (i=1;i<=n;i++)
printf("x[%d]=%8.5f\n", i, x[i]) ;
printf(" (correct up to five decimal places) \n ") ;
return 0;
}
//*Output*//
Enter the number of unknown
4
Enter the coefficient matrix
4.71   1.13   0.15   0.85
1.13  -3.01  -0.39   0.97
0.15  -0.39  -4.21   1.03
0.85   0.97   1.03    4.91
Enter the constant matrix
1.11
-2.12
3.13
1.23
The solution is
x[1]= 0.00587
x[2]= 0.88203
x[3]=-0.76718
x[4]= 0.23618
    (correct up to five decimal places)
```