

## Algorithm

1. Define  $i, j$  as integers.
2. Read the co-efficients in  $a[i][j]$ , for  $i = 1$  to  $n$  and for  $j = 1$  to  $n+1$ .
3. Read the co-efficients in  $b[i]$ , for  $i = 1$  to  $n$  and for  $j = n+1$ .
4. Initialize  $x[i] = 0$  for  $i = 1$  to  $n$ .
5. Take the number of iterations,  $m$ , from the user.
6. Set  $x[i] = b[i] / a[i][i]$  for  $i = 1$  to  $n$ . In the same loop add another loop and set  $x[i] = x[i] - (a[i][j] * x[j]) / a[i][i]$  if  $i$  is not equal to  $j$  for  $j = 1$  to  $n+1$ . Repeat this  $m$  times.
7. Finally print the values of  $x[i]$  for  $i = 1$  to  $n$ .

# Flowchart

