Resumen de fórmulas.

$Ax = b$ se factoriza $A$ de la forma $A = LU$, donde $L$ y $U$ son dos matrices triangulares.

$$Ax = b \Rightarrow LUx = b \Rightarrow \left\{ \begin{array}{l} Lz = b \\ Ux = z \end{array} \right.$$

Los indices $i, j, k = 0, \ldots, n-1$ cuando se programe en C++.

Si $i < j$

$$L_{ij} = 0 \;\; ; \;\; U_{ij} = A_{ij} - \sum_{k=0}^{i-1} L_{ik} U_{kj}$$

Si $i = j$

$$L_{ii} = 1 \;\; ; \;\; U_{ij} = A_{ij} - \sum_{k=0}^{i-1} L_{ik} U_{kj}$$

Si $i > j$

$$U_{ij} = 0 \;\; ; \;\; L_{ij} = \frac{1}{U_{jj}} (A_{ij} - \sum_{k=0}^{j-1} L_{ik} U_{kj}) \;\; ;$$

$$z_0 = b_0 \;\; ; \;\; z_i = b_i - \sum_{j=0}^{i-1} L_{ij} z_j \;\; ; \;\; x_{n-1} = \frac{1}{U_{n-1n-1}} z_{n-1} \;\; ; \;\; x_i = \frac{1}{U_{ii}} (z_i - \sum_{j=i+1}^{n-1} U_{ij} x_j)$$