# Assignment-3

**Problem-1:** Write a computer program for Cholesky's decomposition to the symmetric matrix $A=\begin{bmatrix} 4 & 3 & 2 & 1 \\ 3 & 3 & 2 & 1 \\ 2 & 2 & 2 & 1 \\ 1 & 1 & 1 & 1 \end{bmatrix}$. You have to show that $A = \mathcal{L}\mathcal{L}^T$, where $\mathcal{L}$ is a lower triangular matrix.