2/a $A = \begin{bmatrix} 0 & 1 \\ 1 & 1 \end{bmatrix}$

$A = LU = E^{-1}_1 E_1 A \longrightarrow E_1 = I - m_1 e^T ; E^{-1} = I + m_1 e^T$

$$LU = \begin{bmatrix} 1 & 0 \\ m_{21} & 1 \end{bmatrix} \begin{bmatrix} 1 & 0 \\ -m_{21} & 1 \end{bmatrix} \begin{bmatrix} 0 & 1 \\ 1 & 1 \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ m_{21} & 1 \end{bmatrix} \underbrace{\begin{bmatrix} 0 & 1 \\ 1 & 1 - m_{21} \end{bmatrix}}$$

NOT UPPER-TRIANGULAR
NO VALUE OF m_{21} MAKES THIS SO