

# An Example

Ex:

$$A = \begin{bmatrix} 2 & -1 & 0 & 0 \\ -1 & 2 & -1 & 0 \\ 0 & -1 & 2 & -1 \\ 0 & 0 & -1 & 2 \end{bmatrix} \Rightarrow$$

$$C_{11} = (-1)^{1+1} \begin{vmatrix} 2 & -1 & 0 \\ -1 & 2 & -1 \\ 0 & -1 & 2 \end{vmatrix} = \frac{2}{1} \frac{3}{2} \frac{4}{3} = 4$$

$$C_{12} = (-1)^{1+2} \begin{vmatrix} -1 & -1 & 0 \\ 0 & 2 & -1 \\ 0 & -1 & 2 \end{vmatrix} = - \begin{vmatrix} -1 & -1 & 0 \\ 0 & 2 & -1 \\ 0 & & \frac{3}{2} \end{vmatrix} = 3$$

$$|A| = 2C_{11} + (-1)C_{12} + 0C_{13} + 0C_{14} = 2(4) - 3 = 5$$