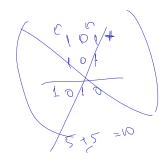
Exercises Week 10: Lineour

$$[G] = \begin{bmatrix} 1 & 0 & 0 & 0 & 1 & 1 & 0 \\ 0 & 1 & 0 & 0 & 1 & 1 & 1 \\ 0 & 0 & 1 & 0 & 1 & 0 & 1 \\ 0 & 0 & 0 & 1 & 0 & 1 & 1 \end{bmatrix}$$

$$[G] = \begin{bmatrix} 1 & 0 & 0 & 0 & 1 & 1 & 0 \\ 0 & 1 & 0 & 0 & 1 & 1 & 1 \\ 0 & 0 & 1 & 0 & 1 & 0 & 1 \\ 0 & 0 & 0 & 1 & 0 & 1 & 1 \end{bmatrix}$$

$$\alpha) \quad i = [10 \ 11]$$



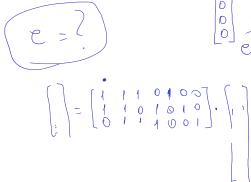
$$\begin{bmatrix}
1 & 0 & 0 & 0 & 1 & 1 & 1 & 0 \\
0 & 1 & 0 & 0 & 1 & 1 & 1 & 1 \\
0 & 0 & 1 & 0 & 1 & 0 & 1 & 1 \\
0 & 0 & 0 & 1 & 0 & 1 & 1 & 1 \\
0 & 0 & 0 & 1 & 0 & 1 & 1 & 1
\end{bmatrix}$$

$$4 \times 7$$

$$6 \quad ^{\circ}$$

 $^{\prime}(+)$

Free correction



=> there is our error on 4 position in your received word! Me forma 6 = [0001000

$$\mathcal{T} = \left[\begin{array}{ccc} 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{array} \right] = 0 \quad C = \left[\begin{array}{ccc} 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{array} \right] = 0$$

$$2 = \begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix} = \begin{bmatrix} 1 & 1 & 1 & 0 & 0 & 0 \\ 1 & 1 & 0 & 1 & 0 & 1 \\ 0 & 1 & 1 & 0 & 0 & 1 \end{bmatrix}, \begin{bmatrix} 1 \\ 0 \\ 1 \\ 0 \end{bmatrix}$$
 $\neq 0 = \sum \text{Errors odd circled}$

100000	
061000 0100000	
0001000	
(0000100 100)	

=> corrar on 5th position!