

Assignment 1

Due: 11:59 PM, 9/18/2022

1. Find the generator matrix of a r -way repetition code.
2. Write the parity check matrix of the Hamming code with $r=4$.
3. Construct a standard array for the binary linear code with generator matrix $G = \begin{bmatrix} 1 & 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 & 0 \end{bmatrix}$. Then decode the words 11111 and 10000.