

Hamming coding recap week 3

Each success grants you one token, and a full success run grants you an “S” mark counting towards your final grade.

Your name: _____ Your Coe email: _____

Task 1)

I might or might not have got my **parity checks** wrong, help me find my error.

Hint: there's nothing wrong with my data bits, only the parity bits.

1	0	0	0
1	1	0	1
0	1	0	1
0	1	0	1

Task 2) Help me find which 1 bit get flipped. Show me the step of: i) how you generating the error code; ii) the corresponding brilliant deduction:

1	0	1	1
1	0	1	0
0	0	0	1
1	0	1	1

Task 3)

If I type this in vanilla python (Google Colab), what will be the answer? **Show me your steps:**

3.1) $0xF^{10}$

3.2) $2 \& 1$

Task 4)

I have 2000 bits to be Extended Hamming Coded.

Show me **all the binary index** of the parity bits you needed for this task.

Hint: when we are doing Hamming (16,11), we need 5 parity bits, and the binary index of the total parity check (P0) is: 0000.