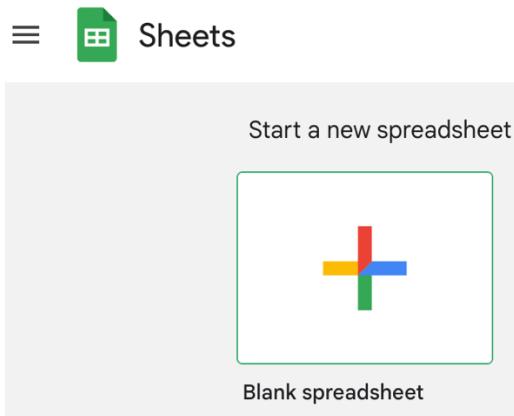


ENR145 Google sheets cheat sheet for Hamming

Step 1: start a new spreadsheet



Step 2: fill 11 binary number into cells

The image shows a screenshot of a Google Sheets spreadsheet. The first row is labeled "A" and contains the number "1". Rows 2 through 11 contain binary digits: 0, 1, 0, 1, 1, 1, 1, 1, 0, 0. A blue rectangular selection highlights the first cell in the first row. A blue dot at the bottom right corner of the selection indicates it's selected. To the right of the selection, the text "This is a cell" is written. A large black brace on the right side of the table groups all 11 rows and is labeled "This will be your input data".

	A
1	1
2	0
3	1
4	0
5	1
6	1
7	1
8	1
9	1
10	0
11	0

Step 3: Find a 4x4 spot, create your extended hamming code

	A	B	C	D	E	F	G	H	I	J
1	1									
2	0									
3	1									
4	0									
5	1									
6	1									
7	1									
8	1									
9	1									
10	0									
11	0									
12										

1. DoubleClick any cell (I7 in this case)
 2. Type "="
 3. Then left click the cell (A1 in this case), press "Enter"
 4. ... and assign A1's value over there

	A	B	C	D	E	F	G	H	I	J
1	1									
2	0									
3	1									
4	0									
5	1									
6	1									
7	1									
8	1									
9	1									
10	0									
11	0									
12										

Magic!

Step 4: figure out how to do Boolean operation in spread sheet

XOR is XOR

		A XOR B
A	B	
1	1	=xor(E17, F17)
1	1	FALSE

Instead of 0 and 1, you will get FALSE and True

A	B	A XOR B	A AND B
1	1	FALSE	? =AND(E17,F17)

AND is AND

A	B	A XOR B	A AND B
1	1	FALSE	TRUE

Instead of 0 and 1, you will get FALSE and True

But you can turn Boolean into 0 and 1 with the following trick: *1

A XOR B	A AND B	Turn FALSE to 0	Turn FALSE to 0
FALSE	TRUE	? =G17*1	0

A AND B	Turn FALSE to 0	Trun TRUE to 1	Trun TRUE to 1
TRUE		? =H17*1	1

For more detailed support, check:

https://support.google.com/docs/topic/9054603?hl=en&ref_topic=1382883&sjid=16522112893785578103-NC