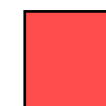
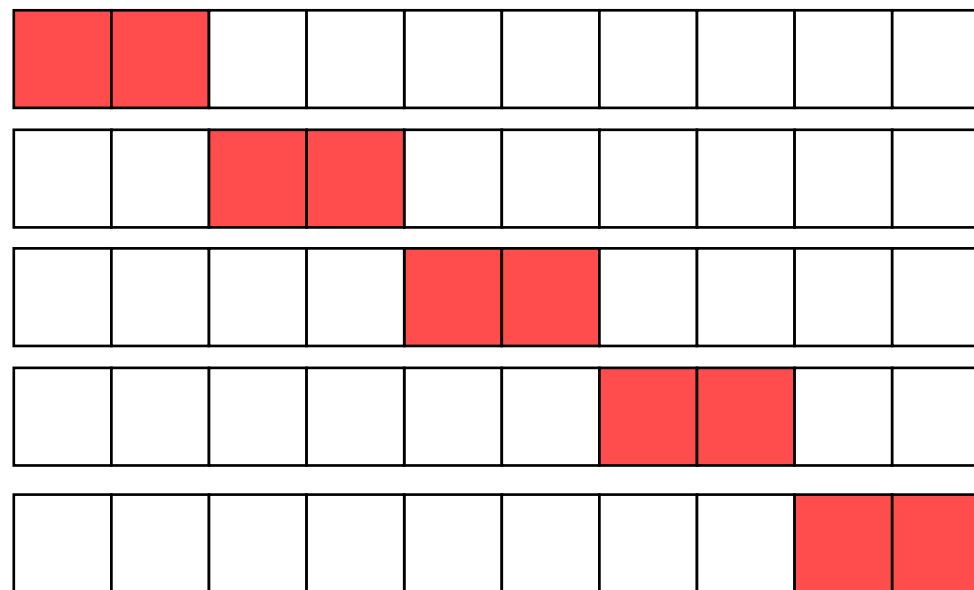


# ECC 1<sup>st</sup> homework

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# [10, 6] Code

- Condition 1: Convert systematic codes, e.g.,  $[1,1,1,1,1,1]$  to  $[1,1,1,1,1,1,1,1,0,0]$ .
- Condition 2: Must be able to correct all single-bit errors.
- Condition 3: Must be able to correct the following two-bit error patterns.



Location of error

# [10, 6] Codes

- Provided code files: `code.py`, `main.py`.
- Place both files in the same directory and run the command `python 'main.py'` to check the execution results.

```
Case #57 : Message [1 1 1 0 0 1] >>>>>>>> Pass 16 / 16
Case #58 : Message [1 1 1 0 1 0] >>>>>>>> Pass 16 / 16
Case #59 : Message [1 1 1 0 1 1] >>>>>>>> Pass 16 / 16
Case #60 : Message [1 1 1 1 0 0] >>>>>>>> Pass 16 / 16
Case #61 : Message [1 1 1 1 0 1] >>>>>>>> Pass 16 / 16
Case #62 : Message [1 1 1 1 1 0] >>>>>>>> Pass 16 / 16
Case #63 : Message [1 1 1 1 1 1] >>>>>>>> Pass 16 / 16
Your code passes all the test cases!!
```

Correct result

```
Case #59 : Message [1 1 1 0 1 1] >>>>>>>> Fail 0 / 16
Case #60 : Message [1 1 1 1 0 0] >>>>>>>> Pass 16 / 16
Case #61 : Message [1 1 1 1 0 1] >>>>>>>> Pass 16 / 16
Case #62 : Message [1 1 1 1 1 0] >>>>>>>> Fail 0 / 16
Case #63 : Message [1 1 1 1 1 1] >>>>>>>> Fail 0 / 16
Your code is not systematic, please check it again
Your code doesn't pass all the test cases!!
```

Wrong result