Error Correcting Code Lab: Instructions

Help Center

In this lab, you will be implementing and playing with the Hamming code, an error-correcting code over `GF(2)`.

This assignment will require the classes `Mat` and `Vec`. Please make sure that they are completed before attempting this assignment. When using `Vec` and `Mat`, please make sure you are using operators such as `+` and `[ ]`, and not procedures such as `add` and `getitem`.

To complete this assignment, please carefully follow the following instructions:

1. Download the detailed instructions for this assignment, ecc_lab.pdf
2. Download the stencil, `ecc_lab.py`, for this assignment, and move it into your `matrix` folder.
3. You do not need to submit anything marked *ungraded*.
4. Support code and data resources can be found at the Coding the Matrix Resources page. Here, you may find `matutil.py`, and `bitutil.py`.
5. If you would like to use resources not specified in the stencil, please make sure to import them. For example:

```
from matutil import *
from vecutil import *
from GF2 import *
from bitutil import bits2mat, str2bits, noise
```

6. For each problem/task,
    1. Test out your solution in the Python REPL;
    2. Copy your solution into the stencil file `ecc_lab.py`;
    3. Submit your solution by opening a console window, navigating using `cd` to the `matrix` folder, and entering the command `python3 coursera_submit ecc_lab.py`. The script will ask for your username and password. They are located on the assignments page.

You can use the submit command to submit solutions for as many tasks as you like at one time.

Have fun!