

Semester Project Guidelines

Your project submission must include the following:

- A novel Python program of your choosing
- Tests for your functions and/or program (i.e., unit and integration tests)
- A README file documenting the program, how to run it, and how to test it. This file must be in either Markdown <https://www.markdownguide.org/basic-syntax> or AsciiDoctor <https://asciidoctor.org/docs/asciidoc-syntax-quick-reference> format. A PDF version generated from the text format would be nice.
- Any needed input files for testing or demonstration

Your program can do anything at all, but it must respond to some form of input like command-line arguments or input data. That is, the program must in some way behave differently given different inputs

- Mutate some text provided on the command line or from a file, e.g., encryption
- Generate a song or poem
- Play a game such Rock, Paper, Scissors

Your program's test must use multiple inputs to verify that your program responds correctly. For example, if your program uses the "ROT13" encryption to mutate input text, your tests should include more than one input value and verify that each input is encrypted correctly. You should review all the tests I've provided both in the `test.py` files as well as the `test_` functions that I've included in program files.

You might find one of these more advanced problems inspiring:

https://github.com/kyclark/more_tiny_python_projects

Here is a (Node/JS) program that sends a random joke:

<https://github.com/InconceivableDuck/joke-sender>

Consider writing a program to solve one of the challenges at <http://rosalind.info>.