Ben Frederick

CS 1210H

Final Project Proposal: Sunday Cipher Encryption and Decryption

For this project, I will create two programs; a decrypt program and an encrypt program. The "Sunday Cipher" is a simple encryption method I made up in high school, and I wouldn't be surprised if other people have thought of it. It's essentially looking at all seven days of the week and encrypting messages by assigning each letter a number based on where it occurs in any given day. Naturally, this means it's restricted to messages that contain letters that are present in at least one day of the week. For both programs, the results and outputs will be written to text files for easy access and parsing. For decrypting, I will take the raw results and check them against an English dictionary to filter out the gibberish, and output both of those results. For encrypting, I will just take an input string and generate all possible number combinations that could decrypt to the given word. For both programs, input length will probably be limited to 5 or 6 characters.

Libraries needed:

- Natural language toolkit (nltk): used to get the dictionary to filter decryption results
- sys: used to terminate the program if there are input problems (going to try to make a try-except-finally sequence for one of the programs)

For testing, I will give both programs inputs that are longer than the maximum they can handle and see what happens. For the decrypt program, I will input some strings that are blank or contain letters (attempt to handle these with the try-except-finally mentioned above). For the encryption program, I will give it some words that contain letters not present in any day of the week, as well as blank strings or strings with numbers. I would imagine graders would try mostly the same things, as the cases I mentioned are really the only ones where the program would fail.