CSCI 6370 - Final Project - Phase 2

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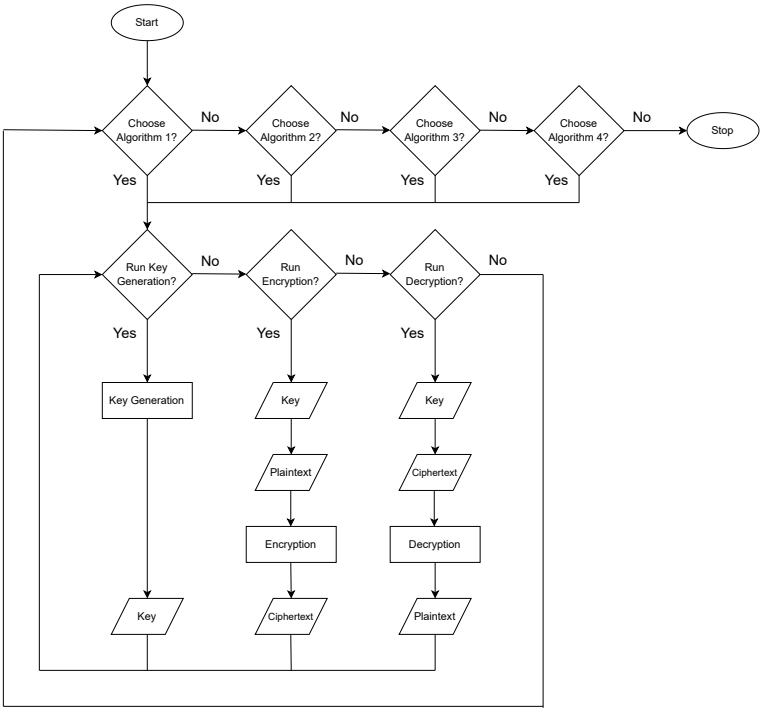
Target: The target audience of our project are cryptographers who are not familiar with the practice of DNA cryptology. Our project thus must aim to provide a comfortable introduction to different DNA cryptography algorithms to our audience. To accomplish that goal, our project will function as a simple demonstration of certain DNA cryptography algorithms, in particular by showing the results from each algorithm's different protocols. It is important to note to our users that our project is only a simple display of the capabilities of DNA cryptography, and should not be seriously used for data protection.

Flow Chart: A flow chart of our project is shown below:



The high level idea of the chart is as follows. First, the user will select a DNA cryptography algorithm of their choice. After a choice is made, the user can now either generate a key, encrypt a plaintext message, or decrypt a ciphertext (the latter two options require a key) using the selected algorithm's protocols. Our program will show the results of these operations to our users, which will vary depending on the algorithm chosen. Once an operation has been performed, the user can either continuing interacting with the chosen DNA cryptography algorithm or return back to select a new algorithm.

Modules: Naturally, our project will require many modules. The main bulk of our modules will be in the DNA cryptography algorithms. We anticipate the inclusion of at least four DNA cryptography algorithms, each of which will demand three separate modules for the random key generation, plaintext encryption, and ciphertext decryption stages. Additionally, we will use other smaller modules for simple menu navigation and mathematical operations.