

Criterion E: Evaluation

CryptoVault Product Evaluation:

Supporting evidence of JanLloyd's (client) feedback located in the Appendix.

Success Criterias Evaluated:

- 1) A personal login: **Requirement Fulfilled.** A login form has been created with a hard-coded username and password as desired by my client.
- 2) 3-6 types of encryptions listed on a drop-down menu from which to choose from: **Requirement Fulfilled.** There is a drop-down list located on the left side of the *CryptoVault* main menu containing 4 ciphers: Morse Code, Caesar Shift, Vigenere Cipher, ZigZag Cipher, and a "None" option for no cipher selection.
- 3) An option for encrypting and decrypting: **Requirement Fulfilled.** An "Encrypt" and "Decrypt" button are available for executing the encryption of a message or a decryption of a message.
- 4) A textbox which to enter the message in order to be encrypted or decrypted: **Requirement Fulfilled.** The input box is located at the top right side of the *CryptoVault* main menu which is what the program uses to process data into the cipher methods.
- 5) A textbox which to display the message either encrypted or decrypted successfully: **Requirement Fulfilled.** The encryption and decryption using the ciphers listed on the drop-down menu function properly and is displayed in an acceptable manner in the output box located at the bottom right side of the *CryptoVault* main menu.
- 6) A neat and presentable GUI: **Requirement Fulfilled.** A login form and main menu form has been developed according to the preferences of my client. The layout of the GUI was acceptable to my client.

The product was a success, but requires many updates that my client and I discussed can be added in future developments.

Recommendations:

JanLloyd and I plan to include the following features in future developments:

An option for adding other ciphers:

JanLloyd had no use for other ciphers at the moment because he hasn't extended his knowledge and understanding of cryptology, but stated that he would like to be able to add ciphers as his understanding of cryptology increases.

Programming your own ciphers:

In addition to being able to add ciphers, thus creating a database, JanLloyd would like to be able to create his own ciphers from scratch and publish them online. This was unattainable due to my lack of programming knowledge and experience. The ability to develop your own ciphers will require the development of a toolkit with a massive amount of mathematical capabilities. The displaying of such data would also require a lot of time and the final product would need to include a large database which I have little knowledge on how to maintain and develop.

An option for changing the username and password:

This was not fulfilled due to the fact that my client desired his username and password to be unchangeable, therefore this is my own personal recommendation for future developments. It would create a secure working environment for my client.

Character use extension:

This may go under programming your own ciphers, but it was brought to my attention that ciphers such as the Caesar Cipher and Vigenere Cipher can be developed to include special characters to further increase the complexity of each encrypted message.

This program is not yet in its fullest capacity. There is a lot of room to develop this cryptographic machine to include full-scale encrypting/decrypting suites with the ability to analyze text in order to break encrypted messages without a key and develop complex algorithms for encrypting messages. As my skills and knowledge continue to grow in this field of computer science shown to me by JanLloyd, I hope to further the security and technology of information.

Word count: 290