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Java File Encryption – Project Proposal

The purpose of this project is to create a Java program which serves to provide file encryption. The current plan is to operate the program via a Windows command line or macOS/linux terminal. Should we learn how to create dialogs and GUIs, I may attempt to create a GUI through which the program can be controlled. The program will have simple, straightforward abilities such as requiring a password to access a file or folder, as well as decrypting said files and folders. The program could have additional functionalities such as creating encrypted compressed folders, as many types of compression files support being encrypted and password-protected.

This project will require additional information which will be learned both in class and through outside research. Java libraries which provide useful functions may also be implemented, assuming rights to use them can be acquired and the author is credited. Open source libraries can be modified to work better with the program, or provide certain code

snippets to help solve more complex problems (again, assuming proper rights can be acquired and the original author is credited).

I anticipate that the most difficult part of this project will be learning about encryption and how to implement it. While there are hundreds of thousands of helpful resources on the internet, it is important that this project is also an educational learning experience. Security and encryption has always been an interest of mine, especially in a world where it is becoming increasingly important by the day. As someone who, in addition to a computer science major, is pursuing a cybersecurity minor, I think this project would be a useful introduction to security, encryption, and the other abilities that Java has in this field. While this project will likely be difficult, I believe that it will have a great payoff.