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CS 405 Secure Coding

5-2 Activity: Encryption Coding

The provided code had functions that needed to be implemented for file reading and writing, as well as the XOR encryption/decryption function. We were provided with TODO’s that contained the requirements of what each function needed to do. In the encrypt\_decrypt function I had an assertion failed on (source\_length > 0) because the source string was empty. The function asserts that the source string and the key both be non-empty, so this caused the assertion to fail. The fix I implemented was to check if the source string was empty before calling the function. I used an if statement that looked at source\_length == 0 and returned an empty string. If it was not empty it continued to the function. Another issue that needed to be solved was the program not opening or finding the file, where I fixed this issue by implementing ifstream that would open the file, and getline to read the entire file and turn it into a string before return the data. In the save data file, I implemented ofstream to create files and write information to those files. The information that was written were the student name, date, key, and data.

A screenshot of a computer program

Description automatically generated