A screenshot of a computer

AI-generated content may be incorrect.

Encryption & Decryption Process Summary

This program successfully implements XOR-based encryption and decryption on a text file. Initially, I encountered an issue where the program couldn't locate the input file (inputdatafile.txt). After troubleshooting, I realized the file needed to be placed in the same directory as the source files rather than the Debug folder. Once the file was in the correct location, the program was able to read, encrypt, and decrypt the contents properly.

The program follows these steps:

1. Reads the input file and extracts the student's name.
2. Encrypts the file contents using an XOR cipher with a key.
3. Saves the encrypted data to encrypteddatafile.txt.
4. Decrypts the encrypted file back to its original content.
5. Saves the decrypted data to decrypteddatafile.txt for verification.

The encryption function correctly modifies each character based on the key, ensuring secure transformation. Testing confirmed that the decrypted file matches the original input, verifying that the encryption and decryption processes work as intended.