Assignment 2: Encrypted "Pipe" Pseudo-Device Driver

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Problems:
Originally, we had the decrypt just return the original message that was encrypted, instead of other inputs that could be called on the method. Thus we had to isolate the two methods isolate the data that is stored.
This introduced the larger problem of data isolation between the encrypter and decrypter devices. We have not solved this problem yet, and it prevents us from dynamically creating devices.

Implementation:
Our main class receives a key which it creates a pair of encrypt and decrypt devices using ioctl. It then receives the input, and either sends it to the encrypt which then can be read to receive the cipher or sends a cipher to the decrypt to receive plain text. We cannot dynamically create or delete device pairs due to an issue with memory.

Cipher Description:
The cipher used in this project is the Vignere Cipher. The way we implemented it for the encrypt was to look at each character of the input, and the corresponding character in the key. Add the ascii value of the key character to the input character, and take the modulo 127 as that is the size of the ascii table in decimal. With decryption, we did the same as encryption, except instead of adding the ascii values, we subtracted the input ascii value by the key.