**Prog 1. File Encryption:** File encryption is the science of writing the contents of a file in a secret code. Your encryption program should work like a filter reading the contents of one file, modifying each character in the input file into a code, and then writing the coded characters out to a second file. The second file will be a version of the first file but written in a secret code.

In Notepad or something similar, you will create a file with text in it. It should be several lines long. Your program should read the file character by character and make some change to the character before writing that character to a second new encrypted file. See program 13-8 to see how to read and write one character at a time.

You may come up with an encryption technique of your own or use something simple like adding 10 to the ASCII code of each character in the file before it is written to the second file.

**Prog. 2 – File Decryption:**  Write a program that decrypts the file produced by the program in Prog. 1. The decryption program should read the contents of the coded file, restore the information to its original state and write it to another (third) file. Example: If you added 10 to each character in the first program, subtract 10 from each character in this program. (The output file of program 2 should be the same as the input file of program 1)

**Error Checking:** Your program should check the fail bit after each open, read, and write operations. Display an error message if the operation failed. Test your program to make sure that each of these tests works correctly. (Example, use invalid file name to get a file open error).

You should have two programs to turn in (They should be nearly identical except one encrypts and one decrypts).