C Program

A company wants to transmit data over the telephone, but they are concerned that their phones may be tapped. All of their data is transmitted as four-digit integers. They have asked you to write a program that will encrypt their data so that it may be transmitted more securely.

Your program should read a four-digit integer and encrypt it as follows: Replace each digit by the remainder after the sum of that digit plus 7 is divided by 10. Then swap the first digit with the third, and swap the second digit with the fourth. Then print the encrypted integer. Write a separate program that will encrypt a four-digit integer and decrypt it to form the original number. You can use '0000' to terminate the program.

Example Output:

Enter a four-digit number to be encrypted: 5678
Encrypted number is 4523
Enter a four-digit encrypted number: 4523
Decrypted number is 5678