

```
1  // Matthew Bowker, CS3060-001, Assignment #1 Problem 4.26 decryption
2
3  #include <iostream>
4
5  using namespace std;
6
7  int decrypt(int value) {
8      value = value + 20;
9      value = value - 7;
10     value = value % 10;
11     return value;
12 }
13
14 int swapNumbers(int value1, int value2, int value3, int value4) {
15     return (value3 * 1000) + (value4 * 100) + (value1 * 10) + value2;
16 }
17
18 int main()
19 {
20     int number;
21     int thousands;
22     int hundreds;
23     int tens;
24
25     cout << "Welcome to the decryption program!" << endl;
26     cout << "Enter the number to decrypt here: ";
27     cin >> number;
28
29     if (number < 1000 || number > 9999) {
30         cout << "That's not a number that I can process!" << endl;
31         return 1;
32     }
33
34     // Split out the 1000s
35     thousands = number / 1000;
36     number = number % 1000;
37
38
39     // Split out the 100s
40     hundreds = number / 100;
41     number = number % 100;
42
43
44     // Split out the 10s
45     tens = number / 10;
46     number = number % 10;
47
48     thousands = decrypt(thousands);
49     hundreds = decrypt(hundreds);
50     tens = decrypt(tens);
51     number = decrypt(number);
52
53     cout << "Here is your encrypted number: " << swapNumbers(thousands, hundreds, tens,
    number) << endl;
```

```
54     return 0;  
55 }  
56
```