Exercise #05

- You don't need to turn in your homework, but you should practice all problems because they may probably appear in the later exam. 作業自己練習不用交，之後考試可能會出現類似題目

Problem 1.

- ☐ (Reversing Digits) Write a function that takes an integer value and returns the number with its digits reversed. For example, given the number 7631, the function should return 1367. It is not limited to 4-digit number.

Problem 2.

- ☐ (Perfect Numbers) An integer number is said to be a perfect number if its factors, including 1 (but not the number itself), sum to the number. For example, 6 is a perfect number because 6 = 1 + 2 + 3.
  Write a function isPerfect that determines whether parameter number is a perfect number. Use this function in a program that determines and prints all the perfect numbers between 1 and 1000. Print the factors of each perfect number to confirm that the number is indeed perfect.

Problem 3.

- ☐ ***(Sum of Digits)*** Write a function that takes an integer and returns the sum of its digits. For example, given the number 7631, the function should return 17.

Problem 4.

- ☐ ***(Displaying a Rectangle of Any Character)*** Write a function that displays a solid rectangle of characters. In the main function, use inputs side1 and side2 of the rectangle and the fillCharacter. Then, pass the side1, side2, and fillCharacter to the function to display a rectangle of the fillCharacter.
- ☐ For example, if the sides are 4 and 5, and fillCharacter is "@", the function displays the following:

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@@@@
@@@@
@@@@
@@@@
@@@@
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