考試規定

* 使用Dev-C++ 考試，我們會以Dev-C++ 作為批改標準。
* 請將每題撰寫不同檔案中，並以「學號\_題號.c」的方式命名。
* 題目共有五題，單一題目的分數僅有全拿與零分兩種。
* 交卷時將五題一起上傳到網大的作業繳交區，無須壓縮。

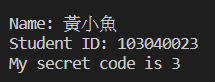
1. Self Introduction **(20%)**

Design a program to print your name and student ID (Exclude the first letter).

Then print your secret code.

secret code : Sum up all digits in your student ID, then take the remainder of 10.

The output should look like below:



1. Single Number **(20%)**

Input an array nums, every element appears *twice* except for one. The maximum size of array is 100. Let user continuously input until user input -1.

Find that single one.

Example 1:

Input: 2 2 1 -1

Output: 1

Example 2:

Input: 4 1 2 1 2 -1

Output: 4

Example 3:

Input: 1 -1

Output: 1

1. **Palindrome Number (20%)**

Input an integer, output true if it is palindrome integer.

An integer is a **palindrome** when it reads the same backward as forward.

For example, 121 is a palindrome while 123 is not.

**Example 1:**

**Input:** 121

**Output:** true

**Explanation:** 121 reads as 121 from left to right and from right to left.

**Example 2:**

**Input:** -121

**Output:** false

**Explanation:** From left to right, it reads -121. From right to left, it becomes 121-. Therefore it is not a palindrome.

**Example 3:**

**Input:** 10

**Output:** false

**Explanation:** Reads 01 from right to left. Therefore it is not a palindrome.

1. **Majority Element (20%)**

Input an array nums. The maximum size of array is 100. Let user continuously input until user input -1.

Output the majority element.

The majority element is the element that appears more than ⌊n / 2⌋ times. You may assume that the majority element always exists in the array.

**Example 1:**

**Input:** 3 2 3 -1

**Output:** 3

**Example 2:**

**Input:** 2 2 1 1 1 2 2 -1

**Output:** 2

1. **Move Zeroes (20%)**

Input an array nums. The maximum size of array is 100. Let user continuously input until user input -1. Move all 0's to the end of it while maintaining the relative order of the non-zero elements.

**Note** that you must do this in-place without making a copy of the array.

**Example 1:**

**Input:** 0 1 0 3 12 -1

**Output:** [1,3,12,0,0]

**Example 2:**

**Input:** 0 -1

**Output:** [0]