

Lab 09/13

1. Please type the following source code (including all comments) in Dev C++, and make sure the output is the same as the input/output example.

```
/*  
 * 2022.09.13 ICP Course01 *  
 * My first I/O program *  
 */  
  
// include header file of IO functions  
#include<stdio.h>  
  
int main() // enter the program from main function  
{ //opening brace  
  
    // information of course  
    printf("This is NYCU EED TsaiMa's course:\n"); // print message  
    printf("Introduction to Computer and Programming.\n"); // print message  
    printf("\n"); // newline  
  
    int id; // allocation of integer variable  
    printf("Please enter your NYCU student ID: "); // prompt message  
    scanf("%d", &id); // enter your student id  
  
    printf("\n"); // newline  
    //print personal information  
    printf("My id is %d, please give me an Apple Watch Ultra!!!", id);  
  
    return 0;  
} //closing brace
```

Input/Output Example:

```
This is NYCU EED TsaiMa's course:  
Introduction to Computer and Programming.  
  
Please enter your NYCU student ID: 111123123  
  
My id is 111123123, please give me an Apple Watch Ultra!!!  
-----  
Process exited after 10.34 seconds with return value 0  
請按任意鍵繼續 . . .
```

2. Please let user input an integer, a floating number, and a double number.
 - 1) Print out the address of these numbers using %u, %x, and %p.
 - 2) Print out the content of these numbers. In addition, please print out the hexadecimal presentation of the integer.
 - 3) Please follow the format of the input/output example.

Input/Output Example:

```
Please input an integer number x: 987987
Please input a floating number y: 5.43838
Please input a double number z: 2.578788

addr of x => 6684188 (65fe1c, 000000000065FE1C)
addr of y => 6684184 (65fe18, 000000000065FE18)
addr of z => 6684176 (65fe10, 000000000065FE10)

content of x => 987987 (HEX: 0000000000F1353)
content of y => 5.438380
content of z => 2.578788

-----
Process exited after 41.2 seconds with return value 0
請按任意鍵繼續 . . .
```

3. Please use “grade.exe” to check your results of problem 1 and 2 as follows:

```
8467-5786-5985
1. PASS: 1 / 1
2. PASS: 1 / 1
Passed original output:
1:
This is NYCU EED TsaiMa's course:
Introduction to Computer and Programming.

Please enter your NYCU student ID:
My id is 111123123, please give me an Apple Watch Ultra!!!
2:
Please input an integer number x: Please input a floating number y: Please input a double number z:
addr of x => 6684188 (65fe1c, 000000000065FE1C)
addr of y => 6684184 (65fe18, 000000000065FE18)
addr of z => 6684176 (65fe10, 000000000065FE10)

content of x => 987987 (HEX: 00000000000F1353)
content of y => 5.438380
content of z => 2.578788

Press any key to continue...
```