

```
#include <stdio.h>
#include "libs.h"

//-----
//                                     Exercise 1
//                                     -----
//
// General : The program sort 3 numbers by char.
//
// Input   : 3 numbers and char 'U' or 'D'.
//
// Process : Bubble sort.
//
// Output  : 3 numbers sorted by char.
//
//-----
// Programmer : Cohen Idan
// Student No : None
// Date       : 12.09.2019
//-----
void main(void)
{
    char code;
    short num1,
           num2,
           num3,
           first_num,
           second_num,
           third_num,
           temp_max,
           temp_min;

    printf("Enter code 'U' or 'D': ");
    scanf("%c", &code);
    printf("Enter 3 numbers: ");
    scanf("%hd%hd%hd", &num1, &num2, &num3);

    first_num = num1;
    second_num = num2;
    third_num = num3;

    temp_max = MAX(first_num, second_num);
    temp_min = MIN(first_num, second_num);
    second_num = temp_max;
    first_num = temp_min;
    if (code == 'D')
    {
        second_num = temp_min;
        first_num = temp_max;
    }

    temp_max = MAX(second_num, third_num);
    temp_min = MIN(second_num, third_num);
    third_num = temp_max;
    second_num = temp_min;
    if (code == 'D')
    {
        third_num = temp_min;
        second_num = temp_max;
    }

    temp_max = MAX(first_num, second_num);
    temp_min = MIN(first_num, second_num);
    second_num = temp_max;
    first_num = temp_min;
    if (code == 'D')
    {
        second_num = temp_min;
        first_num = temp_max;
    }

    printf("%hd %hd %hd\n", first_num, second_num, third_num);
}
```