

Sort 3 Numbers using Functions

This is a **warmup** exercise. It is **not compulsory**, and may be completed **individually or with your lab partner**.

Last week you wrote a program to read in three numbers, sort them, and print them out in ascending (non decreasing) order, one per line. This week, you will write a program called `sort3Functions.c` which does the same thing, using several functions.

You are given a `main` function and function prototypes to implement.

To get started, copy the program `sort3Functions.c` from the course account to your directory by typing (**make sure you type the dot at the end**):

```
$ cp /web/cs1511/17s2/week04/files/sort3Functions.c .
```

The first two functions you will implement work with finding the minimum and maximum of a pair of numbers. The function prototypes are:

```
int min2(int a, int b);
int max2(int a, int b);
```

The `min2` function must return the minimum (smallest) value out of `a` and `b` and the `max2` function must return the maximum (largest) value out of `a` and `b`.

Next you will write three more functions, which work with three numbers instead of two:

```
int min3(int a, int b, int c);
int mid3(int a, int b, int c);
int max3(int a, int b, int c);
```

These functions, in order, return the minimum, middle, and maximum value out of `a` , `b` , and `c` . These three functions **must** call the `min2` and/or `max2` functions which you wrote earlier (as appropriate).

Some Examples

```
Enter 3 numbers: 8 5 9
```

```
5  
8  
9
```

```
Enter 3 numbers: 0 3 5
```

```
0  
3  
5
```

```
Enter 3 numbers: -1 -2 -3
```

```
-3  
-2  
-1
```

```
Enter 3 numbers: 9 8 9
```

```
8  
9  
9
```

```
Enter 3 numbers: 3 2 1
```

```
1  
2  
3
```

To run some simple automated tests:

```
$ 1511 autotest sort3Functions
```

To run Styl-o-matic:

```
$ 1511 stylomatic sort3Functions.c
```

Looks good!

You'll get advice if you need to make changes to your code.

Submit your work with the *give* command, like so:

```
$ give cs1511 wk04_sort3Functions
```

Or, if you are working from home, upload the relevant file(s) to the `wk04_sort3Functions` activity on [Give Online](#).