Exercise 4: Sorting Algorithm

This exercise requires you to use template type to generalize the function used to sort values in an array in ascending order

We'll cover the following

Problem Statement

In this part, you will put the codes from exercise 2 and exercise 3 to use. Both these codes are already prepended (hence not visible to you) in the code widget below. You only need to call them with appropriate parameters where required.

In the code widget below, **two** functions both called `sort` are declared. One finds **sorts** values for `int` type array inputs and the other for `double` type.

In this exercise, you need to define a **Template Class type** function called `sort` that will generalize the function such that it **sorts** values for both `int` and `double` type input values.

> **IMPORTANT NOTE:** Remove both the `int` and `double` type `sort` functions and then write the code for the **Template Class type** `sort` function there.

In the following exercise:

- The function `sort` will take as input:
  - **Array**
  - **Array size**
- The function should be able to `sort` the given *array* in **ascending order**.

> **Hint:** Use the functions from previous examples given in code widget below to implement the `sort` algorithm.

Down below is what the *expected output* should look like.

Input 1:

```
int a[10] = {9,8,7,6,5,1,2,3,0,4},
double b[5] = {5.5,4.4,1.1,3.3,2.2};
```

The function should sort both these arrays.

Expected Output:

The expected output will be displayed as a `string` with the sorted `int` array appended first and sorted `double` array appended after.

```
0 1 2 3 4 5 6 7 8 9 1.1 2.2 3.3 4.4 5.5
```

Write your code below. It is recommended that you try solving the exercise yourself before viewing the solution.

Good Luck!

```
//define your template type function sort here

void sort(int a[], int size)
{
    //body of code
}

void sort(double a[], int size)
{
    //body of code
}

//Testing code. You don't need to make any changes here
string test(int a[], double b[]) {

    string str="";
    sort(a,5);
    sort(b,5);

    for (int i=0; i<5; i++){
      str += to_string(a[i]) + " ";
   }

    for (int i=0; i<5; i++){
      str += to_string(b[i]) + " ";
    }

  return str;

}
```