

Assignment:

Program **p06** sorts a list of integers. File **i06.dat** in the class directory **~tt/cs2613/i06.dat** has a list of integers that can be used to test your program. Program **p06** reads from the file containing the list and stores the integers in an array. The list is printed in the order found in the input file (unsorted). *The list may have more than or fewer than twenty integers.* Program **p06** sorts the list and the list is printed in sorted order. Program **p06** employs a selection sort to sort the list. The section titled **Input File** illustrates the format of the input file. The section titled **Display and Keyboard Input** shows the dialog where the user instructs program **p06** to name input and output files. The section title **Output File** depicts how the output is formatted.

Program Files:

Project **p06** consists of files **p06.cpp**, **List06.h**, **List06.cpp**, and **p06make**. Project files must be stored in the root directory of your student account. Failure to store project files in the root directory of your student account will result in a score of **zero (0)** for this project.

File	Description
p06.cpp	File p06.cpp contains functions that process command line arguments and direct the process of reading, sorting, and printing the list.
List06.h	File List06.h defines class <i>List</i> .
List06.cpp	File List06.cpp contains the implementation of member functions in class <i>List</i> .

Command Line:

Project **p06** can be invoked with zero, one, or two program parameters. The first program parameter is the input file name. The second parameter is the output file name. Sample command lines together with corresponding actions by program **p06** are shown below. Boldfaced type indicates data entered at the keyboard by the user.

```
$ p06
Enter the input file name: i06.dat
Enter the output file name: o06.dat
```

```
$ p06 i06.dat
Enter the output file name: o06.dat
```

```
$ p06 i06.dat o06.dat
```

**Display and
Keyboard Input:**

In the dialog below, the user enters text shown in bold.

Input File:

```
-2 3 -5 7 -11 13 -17 19 -23 29 -31 37 41 -43 47 -53 57 -67 -61 5000
```

Note: *The list may have more than or fewer than twenty integers*

Output File

Ten integers are printed on a line. Each integer is printed, right justified, in a field of five spaces.

Specification:

Output File:

Unsorted list:

```

-2      3      -5      7      -11     13     -17     19     -23     29
-31     37     41     -43     47     -53     57     -67     -61    5000
```

Sorted list:

```

-67     -61     -53     -43     -31     -23     -17     -11     -5      -2
 3       7      13      19      29      37      41      47      57     5000
```