# CSE 333 13su Exercise 11

**out:** Friday, July 26, 2013
**due:** Wednesday, July 31, 2013 by **9:00 am**.

Write a C++ program that prompts the user to type in 10 doubles, reads those doubles into a std::vector of doubles, sorts the vector using std::sort, and then prints out the sorted vector. You should factor out a helper function, called `ReadValue`, that uses templates to abstract away the type returned; i.e., it should have the following function prototype:

```
template <class T> T ReadValue(istream& in);
```

As well, `ReadValue` should detect conversion and EOF conditions, and in such cases, `exit(EXIT_FAILURE)` after printing out a helpful error message.

Altogether, your program should match the following transcript as closely as you can:

```
bash$ g++ -Wall -g -std=gnu++11 -o ex11 ex11.cc
bash$ ./ex11
Input 10 doubles:
5.0
3.1
4.4
10.1
10.6
10.5
3
5.0
12
1.441
Your sorted doubles are:
1.441
3
3.1
4.4
5
5
10.1
10.5
10.6
12
bash$
```

---

Your code must:

- be contained in a single file called ex11.cc and compile without errors or warnings on CSE Linux machines (lab workstations, attu, or CSE home VM) using the command

  ```
  g++ -Wall -g -std=gnu++11 -o ex11 ex11.cc
  ```

- have no crashes, memory leaks, or memory errors on CSE linux machines
- be pretty: the formatting, modularization, variable and function names, and so on must make us smile rather than cry. (cpplint can help locate problems)

- be robust: you should think about handling bogus input from the user, and you should handle hard-to-handle cases (if there are any) gracefully.
- have a comment at the top of the source file with your name, student number, and CSE or UW email address.

You should submit your exercise using the assignment dropbox linked on the main course web page.

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