# Implementing an interface ( IComparer<double> )

**The goal for this exercise** is try creating a small class that implements an existing, standard interface.

Your job is to fill in the implementation of the AbsValComparer class so that the class implements the generic IComparer interface, specialized for comparing doubles.

The return values for the AbsValComparer.Compare(double x, double y) method are summarized in this table:

|  |  |  |
| --- | --- | --- |
| If this is true: | | Then return this |
| Absolute value of the parameter x  is less than  the absolute value of the parameter y |  | -1 |
| Absolute value of the parameter y is less than  the absolute value of the parameter x |  | +1 |
| If x and y have the same absolute value  AND x is negative and y is positive | | -1 |
| If x and y have the same absolute value  AND y is negative and x is positive | | +1 |
| If x and y have the  same exact value |  | 0 |

**What you need to do for this exercise:**

1. In the starter solution, in the **PCE\_Starter** project you'll find a class named AbsValComparer. You need to implement this class, as described above.
2. There’s some test code provided to you in the Basic\_AbsValComparer\_Test\_Code class. Your code should work with the provided test code (i.e., the test code should compile and run with your completed code). Your code should cause the provided test code to produce the following output:

|  |
| --- |
| Before sorting:  20.4  -20.4  -10.3  3.1  -4.2  After sorting  3.1  -4.2  -10.3  -20.4  20.4  Found 3.1 at location 0  Found -4.2 at location 1  Found -20.4 at location 3  Did not find 999 |