Begin working on the problem to review and evaluate your readiness for this course. During the first Lab session (THIS WEEK, Wednesday and Friday) the assistants will conduct discussion and tutorials for this problem. They will also guide transfer students and others in basic Unix lab usage required in this course.

The assistants may also introduce you to the ddd debugger. To try it yourself first (it’s cool!), run the command ddd Lab1 on your Lab1 executable file after you made it with the commands we specified.

Write in the requested C++ code. If your preparation is in Java, your answer will be right if you pretend it is Java and you use only the given array and the int primitive types.

```c++
#include <iostream>
using namespace std;
int main()
{
    const int Asize = 10;
    int A[Asize];
    int ninput = 0;

    while( ninput < Asize && cin >> A[ninput] )
    {
        ninput++;
    }
    cout << ninput << " integers were inputted." << endl;

    cout << endl;
    cout << "The array contents are:" << endl;
    for ( int i = 0; i < Asize; i++ )
        cout << "A[" << i << "]=" << A[i] << endl;

    int Imax, Imin;
    //Write code here to make Imax contain an index that locates
    //the maximum integer in array A from among the integers input
    //from the user, and also to make Imin contain an
    //index that locates the minimum integer in array A from among
    //the same input:
```
cout << endl;
cout << "The maximum value inputted is " << A[Imax] << endl;
cout << "The maximum value appears in " << "A[" << Imax << "]" << endl;
cout << "The minimum value inputted is " << A[Imin] << endl;
cout << "The minimum value appears in " << "A[" << Imin << "]" << endl;

//Write code here that swaps the data values contained in
//A[Imax] and A[Imin]: (Declare any needed variables.)

cout << endl;
//uncomment this line when you code the swapping:
// cout << "After swapping, ";
cout << "the current array contents are:" << endl;
for ( int i = 0; i < Asize; i++ )
    cout << "A[" << i << "]=" << A[i] << endl;

//Write code here that prints the data in the array that was inputted
//from the user in reverse order:
cout << endl;
cout << "Current inputted array contents, in reverse order, are:" << endl;
//Hint: Use a for loop:

//Uncomment the lines below to activate the output operations.
// {
//     cout << A[i] << " ";
// }
cout << endl;

return 0;
}

Here is example run of the specified program. The first line is input and the rest are the output.

$ Lab1soln
-3 4 -7 18 21 7 21 20
8 integers were inputted.

The array contents are:
A[0]=-3
A[1]=4

The maximum value inputted is 21
The maximum value appears in A[4]
The minimum value inputted is -7
The minimum value appears in A[2]

After swapping, the current array contents are:
A[0]=-3
A[1]=4

Current inputted array contents, in reverse order, are:
20 21 7 -7 18 21 4 -3

Steps to follow:
1. Study the problem statements. Make sure you understand what problem the exercise is asking
   you to solve.
2. On scratch paper, draw an image of the array, think of a solution strategy, write tentative names
   for variables your solution will use, and try out your solution strategy.
3. ONLY AFTER thinking about the problem and a solution strategy, write a draft for the code.
4. Finish the coding.
5. Create a FRESH, EMPTY directory for Lab1.
6. Copy the partial solution file from ~/acsi310/Lab1/Lab1.cxx into your new directory for Lab1.
7. Use the three Unix commands to build and run the program:
g++ -g -c Lab1.cxx
g++ -o Lab1 Lab1.o
Lab1
8. Use preferably emacs to edit your solutions into your copy of Lab1.cxx.
Repeat the steps of 7 to make the compiler find your syntax errors, then fix the syntax errors,
repeat if necessary, and then debug and perfect your solutions.