

# **DeepSoft, Inc. Engineering – Programming – Training**

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## **C++ I/O Streams**

C++ I/O streams have changed with the new ANSI standard, consequently some code changes may have to be made for I/O to behave properly. Specifically a new header `<iostream>` replaces the old header `<iostream.h>`. You can still use `<iostream.h>` but in the case of Visual C++ 5 and 6 it has bugs in it and doesn't behave properly. Do not mix the old and new streams – use one or the other exclusively including related headers like `iomanip`.

The following statement is normally used to flush out the input buffer to ensure it doesn't contain carriage returns from previous data entry. These empty CR's would be valid data for single chars or strings, if accepted they do not allow the user to type the real data. The symptom of this problem is a prompt that scrolls up the screen and doesn't stop to allow the user to type their input. This statement is normally inserted after the prompt for user data entry and before the data is captured with `cin` or `cin.getline()`.

```
cin >> ws;
```

### **Older Compilers**

Microsoft Visual C++ <= version 4.2 and Borland C++ <= version 4.5

```
#include <iostream.h>
```

```
// the following works fine and removes white space properly
cout << "Enter your first name";
cin >> ws;
cin >> firstname;
```

### **Newer Compilers**

Microsoft Visual C++ >= version 5.0

```
// the following does not work at all
#include <iostream.h>
cin >> ws;
```

```
// the following works fine and removes white space properly
#include <iostream>
#include <iomanip>
using namespace std;
```

```
cin >> ws;
```

Borland C++ Builder version 5.0

Omitting "cin >> ws" created runtime problems; i.e., the program just dumped all data to the screen and terminated.

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