

Lab 0: In-Lab Procedure:

0. Pick up a checkoff sheet from the front of the room and fill it in *before* calling over a TA. (normally you will need to bring a checkoff sheet to lab).
1. **Demonstrate your X^N function** to one of the TAs. [**checkoff**]
2. **Object Lifecycle Program** –
 - 2.0. Download the lifecycle.cpp file from the labs web page. Create a VS (Visual Studio .net 2003) project and compile and execute the program. [**checkoff**]
 - 2.1. Break lifecycle.cpp into multiple files. It may be helpful to look at slides 54-59 from lecture on 1-24-05. (these are linked from the cs216 web page under C++ help “C ++ for Java Programmers Slides from 1-24-05”) Compile and run this. [**checkoff**]
 - 2.2. Comment out the prototype for getMaxMyObj. Recompile. What happens and why? [write this on checkoff sheet] (now un-comment the prototype)
 - 2.3. Look at the output of lifecycle.cpp. Write at least one question about something in this program on your checkoff sheet. (Each partner should come up with their own question.) [write this on checkoff sheet]
3. **Using C++ vector container class with strings** –
 - 3.0. There are 3 files on the lab site that demonstrate the use of multi-file programs and the use of the vector collection class in C++. This class is something like the ArrayList class in the Java standard library (or Java’s own vector class). Create a VS project, and then download these three files (svtest.cpp, svutil.h, svutil.cpp) into the folder. Add the .cpp files to your Source files folder in the project, and then the .h file to the Header Files folder in your project. Build the program and run it. [**checkoff**]
 - 3.1. Comment out the #include <string> preprocessor directive in the file svtest.cpp, and then rebuild the program. Was there an error? Have an explanation ready to give the TA about what error occurred and why, or if not error occurred then why one didn’t. (No check off until the next step.)
 - 3.2. Now undo what you did in the previous step, and comment out the “using namespace std” in svtest.cpp, and then rebuild the program. Was there an error? Have an explanation ready to give the TA about what error occurred and why, or if not error occurred then why one didn’t. (No check off until the next step.)
 - 3.3. Now undo what you did in the previous step, but now comment out the “using namespace std” in svutil.h, and rebuild the program. What objects are now undeclared and why? Explain this and what you found in previous two steps to the TA. [**checkoff**]
 - 3.4. Now undo what you did in the previous step, and comment out the #include <string> statement in svutil.h. Rebuild the program and look at the errors. Can you understand them? Answer: No! Errors with templates in C++ produce very ugly error messages that are quite hard to figure out. Be careful!
 - 3.5. Write at least one question about something in this program on your checkoff sheet. (Each partner should come up with their own question.) This question might be about parameter passing, or the use of vectors, or anything else you don’t understand completely. [write this on checkoff sheet]

4. Go to the SurveySuite page and enter your two questions. Let the TA see the “thank you” web page after you have submitted. [**checkoff**]
5. Be sure to LEAVE your checkoff sheet with the head TA before leaving lab.