EAS 230
Lab #1
Fall 2006
DUE DATE: On or before 9/23 midnight

Objective

The objective of this lab is to become familiar with the development environment in the lab (Microsoft Visual C++).

You will start by creating a project, entering, compiling, and running a C++ program. After you close the development program, you'll open the environment again, modify your program, compile and re-run it. The skills you learn in this lab will be used all semester long. They will be especially helpful during the first few weeks of the semester because they will allow you to come to the lab to test the examples used in lecture.

Procedure

1 . Login to the computer and start UBiquity.

Login

Enter your username and password to login to the computer.

Start UBiquity

In the lower left corner of the screen open the main menu and start UBiquity by selecting *UB* → *UB Applications* → *UBiquity*. Once again, you'll be prompted for your username and password. You may also notice a couple login message windows pop up. Simply click on the *OK* button to close them.

2. Create a new project, enter a simple C++ program, and run the program to ensure that it works properly.

a. Open Microsoft Visual C++

Select *Start* → *Programs* → *Microsoft Visual Studio 6.0* → *Microsoft Visual C++ 6.0*.
If a window displaying the *Tip of the Day* appears, simply click on the *Close* button in the lower right.

b. Create new workspace

Select *File*→*New*. Click on Workspace tab in the dialog window that appears. Select Blank Workspace, and type in your class names : EAS230A or EAS230B as workspace name, and click OK.

c. Create a New Project

Select *File* → *New*. Click on the *Projects* tab. Select *Win 32 Console Application*. Enter the name of your project. For this lab, we'll use ***lab1***. Enter the location where your lab is to be stored. We'll store it on the network drive (n:\). Make sure you click on *Add to Workspace* radio button and then click the *OK* button.

The next screen asks what type of application you'd like to create. Select *An Empty Application* and then click *Finish*.

A "*New Project Information*" message box will appear. Click on the *OK* button.

d. Create a Source File

Select *File* → *New*. Click on the *Files* tab. Select *C++ Source File*. Enter the name of your file. For this lab, we'll use *HelloWorld*. Make sure *Add to Project* is selected and your project is selected, then click the *OK* button.

e. Enter a Program

In the window labelled *HelloWorld.cpp* type in the following program.

```
#include <iostream>
using namespace std;
void main()
{
int x;
cout << "Hello everyone!" << endl << "Enter a number: ";
cin >> x;
cout << "The number you entered is " << x << "." << endl;
}
```

f. Compile Your Program

Select *Build* → *Compile HelloWorld.cpp*. The window at the bottom reports the status of the compilation. Fix any errors that might exist from typing in the program. When the program is free of compilation errors, *0 error(s) and 0 warning(s)* will be reported.

g. Build Your Program

Select *Build* → *Build lab1.exe*. The window at the bottom reports the status of the build. The program should be free of build errors (*0 error(s) and 0 warning(s)*).

h. Run Your Program

Select *Build* → *Execute lab1.exe*. The console window will appear and your program will run.

i. Exit Microsoft Visual C++

Select *File* → *Exit*.

3. Now you will open the project that you just created, and modify the C++ program.

a. Open Microsoft Visual C++

Select *Start* → *Programs* → *Microsoft Visual Studio 6.0* → *Microsoft Visual C++ 6.0*.

b. Open Your Project

Select *File* → *Open Workspace*. Select the folder your project is in, then select your project (*lab1.dsw*) and click on *Open*.

c. Open Your Program

Select *File* → *Open*. Select the folder your program is in, then select your program (*HelloWorld.cpp*) and click on *Open*.

d. Modify Your Program

Add the line shown in bold below to your program.

```
#include <iostream>
using namespace std;
void main()
{
int x;
cout << "Hello everyone!" << endl << "Enter a number: ";
cin >> x;
cout << "The number you entered is " << x << "." << endl;
cout << "Goodbye!" << endl;
}
```

e. Save Your Program

Select *File* → *Save*.

f. Compile Your Program

Select *Build* → *Compile HelloWorld.cpp*. The window at the bottom reports the status of the compilation. Fix any errors that might exist from typing in the program. When the program is free of compilation errors, *0 error(s) and 0 warning(s)* will be reported.

g. Build Your Program

Select *Build* → *Build lab1.exe*. The window at the bottom reports the status of the build. The program should be free of build errors (*0 error(s) and 0 warning(s)*).

h. Run Your Program

Select *Build* → *Execute lab1.exe*. The console window will appear and your program will run. Notice how it now displays "Goodbye!" before the program exits.

i. Exit Microsoft Visual C++

Select *File* → *Exit*.

4. ***Add a banner*** to the program that shows title of the program, course and section name, your name, lab number and date. Compile and execute and make sure this addition did not introduce any bugs. Sample banner is shown below. For more details see your text.

```
/************************************************************
* NAME: your name                                           *
*                                                           *
* PROGRAM:  Lab name                                        *
* PURPOSE: 1-2 line summary of the purpose of the lab       *
* DATE: Date of last update                                 *
* PLATFORM: Microsoft Visual C++ 6.0 Pro                    *
* Course & Section:                                         *
************************************************************/
```

***5. Extra exercises*:** After you finish this lab work on exercises 6,7,8,9 and 10 on pages 63-64.

6. Submission

Demonstrate to your TA during your regularly scheduled lab section that you have completed this lab. Failure to do so will result in a grade of zero for this lab. At this your TA will show you how to do an online submission of your lab.