CSC 1101 – Problem Solving and Programming Laboratory
Warmup Lab 1 (not graded)

For both CSC 1100 and CSC 1101, it is important that you designate some place in your personal storage space to store files. This space may be on your computer, a flash drive, your OneDrive account, a Google Drive account, etc. If you have to use public storage space for this lab, when you complete it, you can zip the folders and files into one file, e-mail it to yourself, and unzip the folder in your personal storage space.

Although this lab assumes you are using Windows and Visual Studio, similar steps may be taken in other operating systems and other development tools.

1-Windows Explorer

This section has you create a folder structure in your personal storage space.

1) Open File Explorer.

2) Create a folder called **CSC1100**.

3) Create three subfolders to CSC1100 called:
- Admin
- Lecture Code
- Homeworks

4) Create a folder called **CSC1101 (**at the same level as folder CSC1100).

5) Create three subfolders to CSC1101 called:
- Projects
- Lab Code
- Labs

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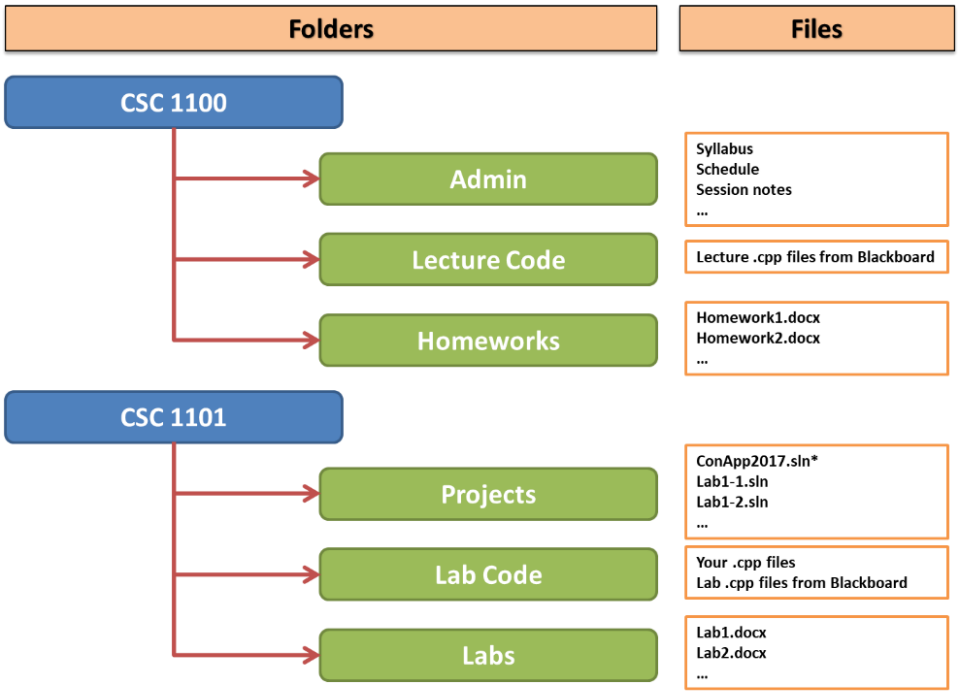
At this point, you have a folder structure that looks like this:



* Only one Visual Studio project is needed for the entire semester.

2-Canvas

This section has you download and save two files in your storage space:

C++Template.cpp
CSC1101-DanO-WarmupLab01b.docx

1) Open the Canvas web site for CSC 1100.

2) Select Canvas item **Home / Lecture Code / C++ template**.

3) Click link **Download C++Template.cpp**.

4) Move the file from your **Downloads** folder to your **CSC 1101 / Lab Code** folder.

5) Copy file **C++Template.cpp** to file **WarmupLab01.cpp**.

6) Select Canvas item **Assignments / Warmup Lab 1**.

7) Click link **CSC1101-DanO-WarmupLab01b.docx**.

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8) Move the file from your **Downloads** folder to your **CSC 1101 / Labs** folder.

3-Visual Studio

This section has you create a C++ console application project, add code to it, edit the code, run the program, and save the program code and output in your lab assignment document (CSC1101-DanO-WarmupLab01b.docx).

1) Open Visual Studio.

2) Close any open solution by clicking **File / Close Solution**.

3) Create a Visual C++ CLR console application:

1) From the Visual Studio screen, select **File / New / Project …**
2) From the New Project screen:
    a) Select **Visual C++ / CLR / CLR Empty Project**.
    b) For a Name, enter **WarmupLab1** (leave Solution Name the same).
    c) For a Location, click **Browse …**, navigate to your folder **CSC 1101 / Projects**, and click **Select Folder**.
    d) Click **OK**.

It may take a few minutes to create the project.

4) Add starting code to the project:

1) From the Visual Studio project screen, Solution Explorer pane, right-click **Source Files**, and select **Add / Existing Item …**
2) From the Add Existing Item screen, navigate to file **WarmupLab01.cpp** (copied earlier from **C++Template.cpp**), and click **Add**.

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5) Edit the header comment per the following code. Replace <name> with your name, and <date> with today's date:

```
//============================================================
//
// Title:      Warmup Lab 1
// Course:     CSC 1101
// Lab Number: Warmup Lab 1
// Author:     <name>
// Date:       <date>
// Description:
//   This C++ program is the code template for CSC 1101.
// Every program created in CSC 1101 starts with this
// code.
//
//============================================================
```

macOS users: you may have to edit/remove one or more of the following statements:

```
#include <conio.h> // For function getch()
#include <cstdlib> // For several general-purpose functions
#include <fstream> // For file handling
#include <iomanip> // For formatted output
#include <iostream> // For cin, cout, and system
#include <string> // For string data type
…
cout << "Press any key to exit ..." << endl;
_getch();
```

6) Run the program by clicking **Local Windows Debugger**. If the following dialog appears, select **Do not show this dialog again**, and then click **Yes**. This will save you time in the future! We always want to build an application after editing!

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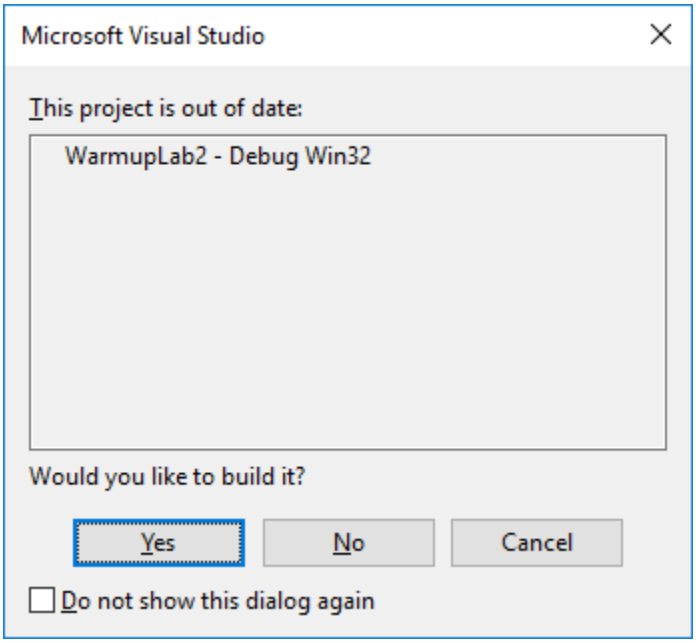
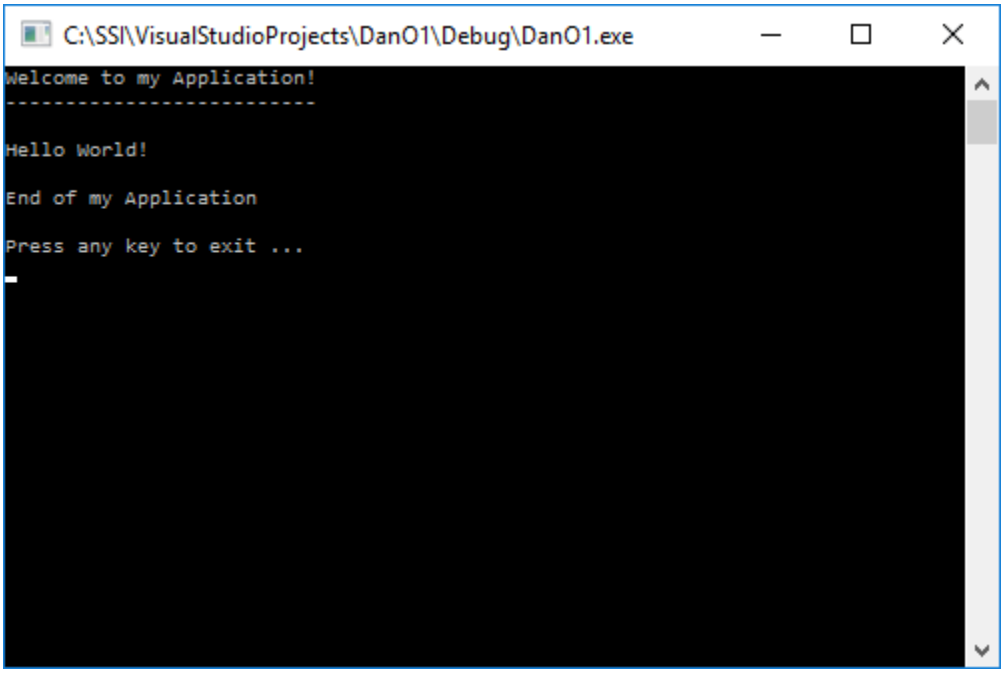


It may take a few minutes to run the program the first time. The following screen appears:



7) End the program by pressing any key.

8) Open your lab assignment document **CSC 1101 / Labs / CSC1101-DanO-WarmupLab01b.docx**.

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9) Copy-and-paste the *program code* to your lab assignment document:
1) Click anywhere within the program.
2) Press **CTRL-A** (select all) and then press **CTRL-C** (copy).
3) Within the document, locate the line:
[your program code here]
4) Just after that line, press **CTRL-V** (paste).

10) Copy-and-paste the *program output* to your lab assignment document:
1) From the Visual Studio project screen, click **Local Windows Debugger**.
2) From the output window, press **ALT-PrintScreen** (copy active window).
3**)** End the program by pressing any key.
4) Within the document, locate the line:
[your program output here]
5) Just after that line, press **CTRL-V** (paste).

11) Save and close your lab assignment document.

12) Close Visual Studio.

4-Canvas

This section has you submit your lab assignment document (CSC1101-DanO-WarmupLab01b.docx) to your TA for grading (but this one won't be graded).

1) Open the Canvas web site for CSC 1100. For graded labs starting September 11, you will open the Canvas web site for CSC 1101.

2) Select Canvas item **Assignments / Warmup Lab 1**.

3) Click **Submit Assignment** (or **Re-submit Assignment**).

4) Click **Choose File**, navigate to and select document **CSC1101-DanO-WarmupLab01b.docx**, check on the original work check box, and click **Submit Assignment**.

Note that you may:
- Only submit documents with an extension of **doc** or **docx**.
- Submit multiple times for any lab but only the last one will be graded.