Assignment 1 - Introduction to Visual Studio, Subversion and C

Assigned:	Monday, August 31
Due:	Thursday, September 10, *before midnight*
Value:	20 points (for successfully submitting a correct program on Canvas before the deadline). Late submissions will receive a 0.

Executive Summary

You will write a program that on execution displays a greeting to your name.

Purpose

- Gain familiarity with Visual Studio: writing, compiling and running a program
- Gain familiarity with version control

Preliminaries

- Download and install Microsoft Visual Studio and/or learn how to use Microsoft Visual Studio in ECJ 1.322. You can download Visual Studio for free from the DreamStark website.
    - https://e5.onthehub.com/WebStore/ProductsByMajorVersionList.aspx?ws=f5fb5ef7-c69b-e011-969d-0030487d8897&vsro=8&JSEnabled=1
    - Select “Visual Studio 2015”
    - Click “Add to Cart”, then click on “Proceed to MSDN AA”. You will be prompted for your UT EID username and password.
    - Go to your cart (make sure Visual Studio was added to your cart) and click “Check out” then proceed to download Visual Studio.
    - When you install Visual Studio, choose the custom installation and make sure you select “Visual C++ support” under “Languages”.

Deliverables

The `HelloToYou.c` program source file.

Steps

Setup

Subversion for Version Control

We will use a hosted SVN service, specifically, Assembla (https://www.assembla.com/subversion/), for Version Control.

1. Create an Assembla account. Use this convention for your log in ID: *utexas_<lower case uteid>* (e.g. utexas_aa123). After registration, create a free **private subversion repo** named *EE312*, this is where all your labs will reside. You should change your url name to *utexas_<lower case uteid>*.

2. Install Subversion.

You can use any SVN client you want, here are some suggestions:

- Windows: TortoiseSVN may be a good choice for you.
- Other: you can use Apache Subversion. Download the binary package and install SVN.

3. For Tortoise. Create or choose a local directory for your code base. Right click on the directory, select TortoiseSVN->create repo here. Then right click the directory again, choose SVN checkout. Paste your url from assembla to the "Url of Repository" line.

4. A folder will be created within the directory you chose named "utexas_<your_eid>". You can save your Visual Studio projects to this folder. Remember to commit your changes to your assembla repository before you log off.

5. Learn basic SVN operation

- Checkout: svn checkout (co) — Check out a working copy from a repository.
- Add: svn add — Add files/directories to the project
- Commit: svn commit (ci) — Send changes from your local copy to the repository.
- Update: svn update (up) — Update your working copy.

6. Share your assembla project with your TA

- Go to the "Team" tab
- On the right, enter the TA's ID and choose 'Member' as the role
- Invite your TA. The TAs' assembla IDs are:
  - Karim: karim.serhan
  - Kirsten: kirsten.lee
  - Sean: stubbs

You have to finish all the above steps for your labs to be graded otherwise you will receive a '0'

Creating The C Program

Create the Visual Studio Project

1. Open Microsoft Visual Studio. If you do not have VS installed on your own machine, log onto one of the ECJ 1.322 lab computers and start Visual Studio. If the "Choose Default Environment Settings" window appears, choose Visual C++ Development Settings and press Start Visual Studio.
2. Select the *File menu* > *New* > *Project...* In the Visual C++ Projects section, select Win32 Console Application. Name the project *Assignment1*, make sure the project directory corresponds to your svn repository created above.
   - Uncheck the "Create directory for solution" option and the "Add to source control"
3. On the wizard screen that appears, select the *Application Settings* tab on the left. Check the box for *Empty Project* and click Finish.
4. If the Solution Explorer pane is not visible, select the View menu > Solution Explorer to show it. Right click the *Assignment1* project (it's the second item, not the solution) and select Add >

Add New Item... From the Visual C++ category, select C++ File (.cpp) in Templates. Name the file **HelloToYou.c** and press Add.

Writing the Program Code

5. Write the header comment for your file (see the Syllabus for a description of what goes in the header comment)
6. Below your header comment, type in C program shown below, filling in your name in the portion denoted by < >.

```
#include <stdio.h>
int main( void )
{
  printf("Hello to: <insert your own name in here>\n");
  /* causes the display to pause until you strike a ENTER */
  getchar();
  return 0;
}
```

Build Your Program

7. Now you'll want to *build* (compile and link) your program. Save your file[1], then select the *Build menu* > *Build Solution*. If an error occurs, make sure you typed the program correctly and try compiling again. (Inspect the error messages carefully; they should give you a good idea as to what the problems are.)

Running Your Program for the First Time

8. Now it's time to run (execute) your program. Select the *Debug menu* > *Start Debugging.* Your program will display a window with your greeting message. Press ENTER to close the window and return to Visual Studio.
9. Congratulations, you have now written a program and ran it to see the output.

Finishing Up and Submitting Your Work

10. When you are done running your program, you can close Visual Studio. You can find the HelloToYou.c file under the directory created for your project at the beginning of this lab (for example, *H:\EE312\Assignment1\HelloToYou.c*). Make sure it is the file that contains the latest version of your C source code.
11. Commit your Assignment1 project to assembla.
    For TortoiseSVN: Go to the Assignment1 folder in the file explorer
    - Right-click on the Assignment1 folder, go to Tortoise SVN → Add, then click OK
    - Right-click again and select SVN Commit, add an optional commit message (recommended) and click OK.

    If you are using command-line SVN, you will need to enter the appropriate add and commit commands as explained above.
12. Submit your finished *HelloToYou.c* source code file via Canvas web page for this course.

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[1] Visual Studio automatically saves your work before compiling; so all changes you have made are included in the compiled program. However, not all text editors will do this, so it is a good habit to always save your work before you try to compile your program.