GOAL: Learn the procedure to enter a program, compile and build it, and get it to work. Most of this will be needed ALL semester for almost every assignment.

STEP 1: GETTING STARTED.

You may need to turn the screen on. Log on with your ECS account.

If you do not have one yet, open a browser, go to http://www.ecs.csus.edu, scroll below the video/picture, click on *ECS Quick Links*, click on *Get an ECS Account*, and follow the directions. You will receive an email when the account is ready. You (with your One Card) can pick up the paperwork from the lab assistant in RVR-2011.

STEP 2a: Turn on an ECS computer & log in to *athena*.

Log in with your account. Lots of windows will scroll by. Wait for them to clear.
Click on the Start Button in the lower left of the screen.
In the Search box, type PuTTY.
Click on PuTTY (in the Programs list).
The PuTTY window will open.
In the box labeled Host Name, type **athena.ecs.csus.edu**
Click on Open (lower right of the window).
You will get a window to **athena** with a prompt to "Log in as".
Enter your User Name.
Enter your Password.
You will now have a prompt such as the one I got**: [bielr@athena ~]>**

STEP 2b: Logging in from home on a Windows machine.

Download PuTTY or another terminal program to your computer.
Open PuTTY.
In the box labeled Host Name, type **athena.ecs.csus.edu**
Click on Open (lower right of the window).
You will get a window to **athena** with a prompt to "Log in as".
Enter your User Name.
Enter your Password.
You will now have a prompt such as the one I got**: [bielr@athena ~]>**

STEP 2c: Logging in from home on a Mac machine.

Download PuTTY or another terminal program to your computer.
Open up a terminal/console window and type one of the following:

ssh yourECSname@athena.ecs.csus.edu

Or

ssh yourECSname@athenal.exc.csus.edu

Press Enter.
When prompted, type "yes" to accept the server's key.
Then enter your password.

STEP 3: GETTING SET UP TO START & DECIDING ON AN EDITOR.

Create a directory (subfolder) for this class by typing: **mkdir csc25**
Change to the new folder by typing: **cd csc25**

STEP 4: START ENTERING YOUR PROGRAM.

At the prompt ">", type **vim lab1.c**
Go into insert mode by typing: **i**
Start typing in your program in this window.
For this Lab1, enter in the program that appears below *inside the box* on the next page.
(PS: You don't have to create the box.)
Type your own full name (both first and last) in all the places needed.
Start typing at the left edge of the screen.
Use the indentation style as shown.

***Teacher Comments**:*

```
/*------------------------*/
/* Your Name Here   */
/* Section X        */
/* Lab 1            */

#include <stdio.h>
#include <stdlib.h>

int main (void)
{
  printf("\nLab 1 \n\n");
  printf("Hi, Your Name \n\n");
  printf("quote \n\n");
  return EXIT_SUCCESS;
}
/*------------------------*/
```

Don't count the dashes. Approximate.
Put Your-Name here, both first & last
Change the "X" to your section number.
"/ */" = comment symbol*

{Preprocessing directives for
{the compiler.

Line required in each program.

Be sure to indent for style
Put your First & Last name here!
Put your quote here instead of the word "quote"
Capitalize EXIT_SUCCESS

STEP 5: SAVE YOUR WORK, COMPILE IT, AND SEE THE RESULTS.

Get out of insert mode by typing: **escape**
To save your work and quit, type: **:wq**
The shell prompt returns.

Type **gcc lab1.c** (This compiles the program and sends the output to a file called **a.out**)
If you have compile errors, they will appear, and they will need to be fixed.
The prompt returns.

➔ more on next page

If you have no errors, type **a.out** and the output of your program will display. Here are the results of my program.

```
[bielr@athena ~/csc25]34> a.out

Lab 1

Hello World
My name is Ruthann Biel.
Turn off the light!

[bielr@athena ~/csc25]35>
```

To show your line numbers in VIM:

1. Press the **Esc** key if you are currently in insert or append mode.
2. Press **:** (the colon). The cursor should reappear at the lower left corner of the screen next to a : prompt.
3. Enter the following command: **set number**.
4. A column of sequential line numbers will then appear at the left side of the screen.

If you have Errors:

If you have errors, it is OK, a normal course of events. Examine the Error Message list. Sometimes the second or third message makes more sense than the first error message. One code error can cause SEVERAL error messages.

Fix your errors, and save your changes. Go back to the top of STEP 5.
Repeat until you have NO ERRORS.

MAJOR REMINDER.

Every time you change the code, you must **redo** the COMPILE (which is the **gcc** line) before you run the program, or you will NOT see any changes when you run the program. !!!

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STEP 6. PREPARE YOUR FILE FOR GRADING.

When all is well and correct, type: **script StudentName_lab1.txt**
[Script will keep a log of your session.]
At the prompt, type: **cat lab1.c** to display the code in your session.
At the prompt, type: **a.out** to run the program
After the program run is complete, type: **exit** to leave the session

STEP 6: Turn in your completed session.

Go to SacCT and turn in your session.
Please remember to enter your section number in the Comment Box. (Points off if you don't.)

STEP 7: LOG OFF EVERYTHING.

Type "**exit**" when you are ready to leave athena.
(Close the window if necessary.)