

**1GOAL:** 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:

1. open a browser
2. go to <http://www.ecs.csus.edu>
3. scroll below the video/picture
4. click on *ECS Quick Links*
5. click on *Get an ECS Account*
6. 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.

### **LOGGING ON TO Athena:**

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

Labs: RVR-2011, RVR-2013 (when it has no class in it), SCL-1208, SCL-1234.

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**

Create a directory (subfolder) for this class by typing: **mkdir csc60**

Change to the new folder by typing: **cd csc60**

### **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* below.

(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 clarity*

*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.

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

```
[bielr@athena ~/csc60]34> a.out

Lab 1

Hello World
My name is Ruthann Biel.

Be yourself; everyone else is already taken.
- Oscar Wilde

[bielr@athena ~/csc60]35>
```

**Comments:** Your instructor is picky about presentation. There should be an empty line between *a.out* and *Lab 1*, and again at the end before the prompt returns. I expect your output to have empty lines where they show above. Save your creativity for the quote.

**To show your line numbers in VIM:**

1. Press the **Esc** key if you are currently in insert or append mode.
2. Type the **:** (colon). The cursor should reappear at the lower left corner of the screen next to a colon (**:**) 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. !!!

**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: **gcc lab1.c**

to compile the program.

At the prompt, type: **a.out**

to run the program.

After the program run is complete, type: **exit**

to leave the session.

**STEP 7: Turn in your completed session.**

Go to SacCT and turn in your session.

**STEP 8: LOG OFF EVERYTHING.**

Type “**exit**” when you are ready to leave athena.

Close as much as necessary for safety, depending on your location.