

UNVIERSITY OF VICTORIA

Manual Eclipse CDT Linux

Installation & Demonstration Guide

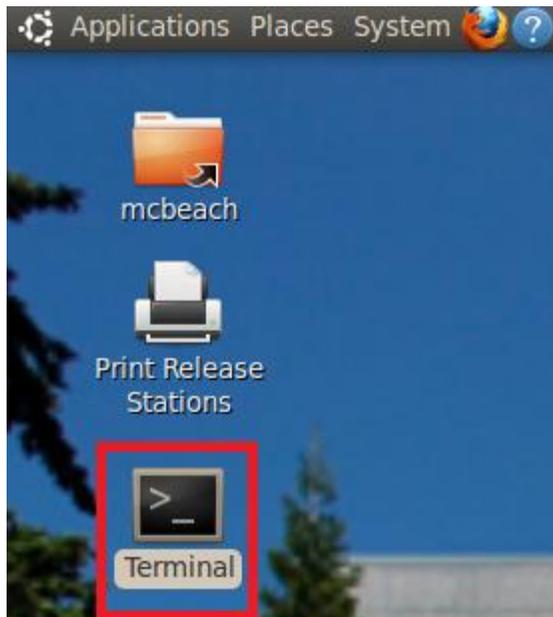
Przemek Lach

9/3/2013

This guide shows how to use Eclipse and the Terminal on the lab computers to create a simple 'hello world' program. In addition, this guide also shows how to install Eclipse on your own installation of Linux. NOTE: This guide is based on Ubuntu 12.04 LTS (64Bit) and Eclipse Kepler (4.3).

Terminal

1. Open Terminal by double-clicking on it.

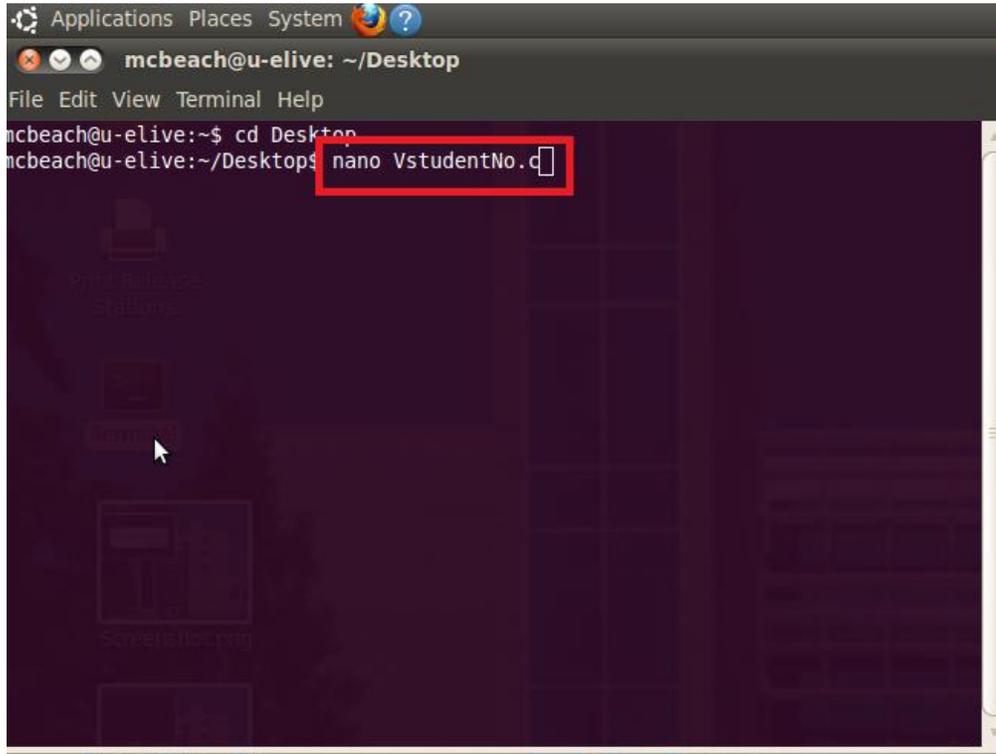


2. Move to the location where you would like your C program to be saved. You can move to different folders using the command, **cd foldername**. You can also see the different files and folders within a folder using the command, **ls**.

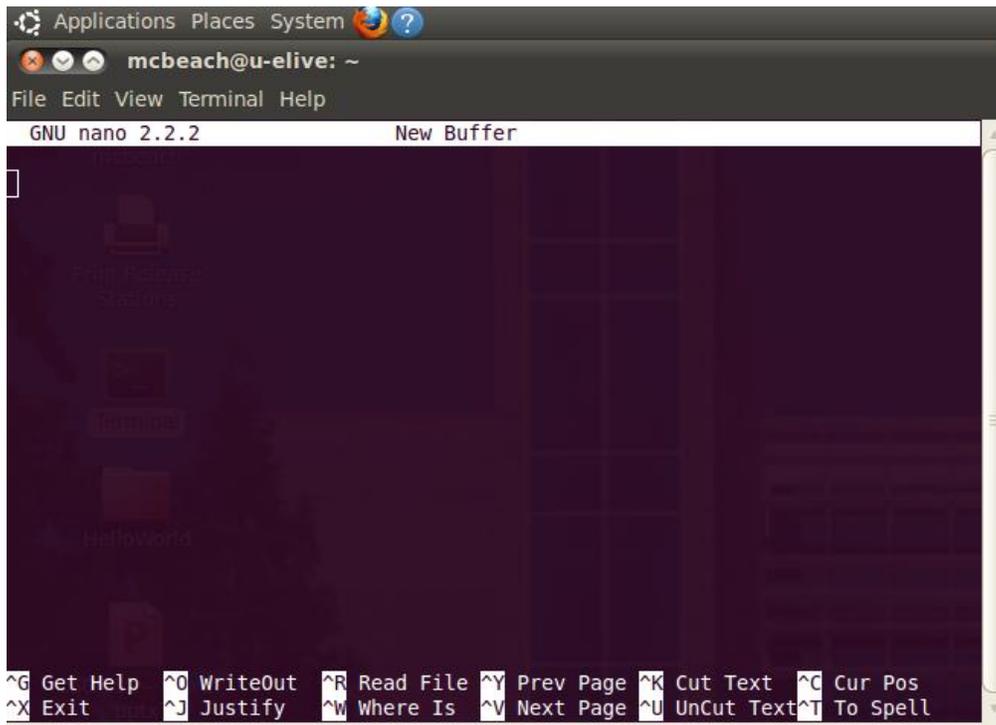
```
mcbeach@u-elve: ~  
File Edit View Terminal Help  
csc225  
csc230  
debug_this(1).xls  
Desktop  
Documents  
Downloads  
draw_example[1].doc  
draw_example.doc  
drawpattern.m  
drawpattern.m~  
drawpattern.odt  
e103.m  
elec260  
foo  
gcov_word_storage  
gcov_word_storage.zip  
Go Crazy With Me.wma  
InsertARM1.s  
IsPalindrome.java  
kwic_2.89  
kwic_2.89.zip  
kwic_2.91  
kwic_2.91.zip  
mcbeach@u-elve:~$ cd Desktop
```

The screenshot shows a terminal window with a dark background and light-colored text. The terminal displays the output of the 'ls' command, listing various files and folders in the user's home directory. The command 'cd Desktop' is entered at the prompt and is highlighted with a red rectangular box.

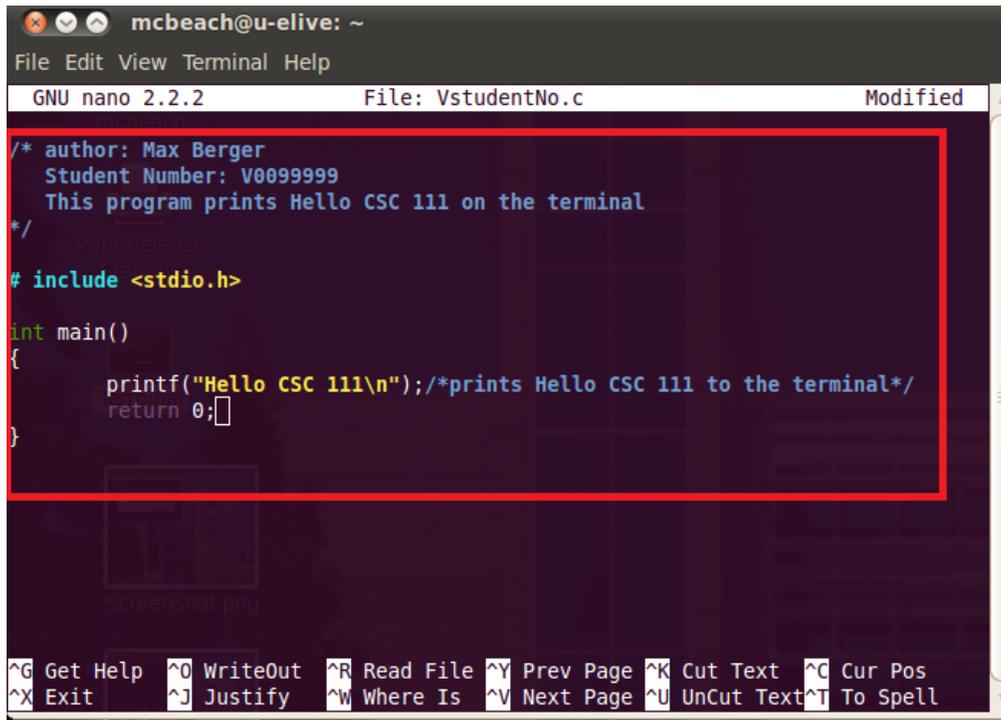
3. Type **Nano filename.c** where filename is *yourStudentNumber.c* (Example: *V009977667.c*). This is the naming convention that will be following for specifying filenames throughout the term.



Nano text editor opens in the Terminal.



4. Type your C code.



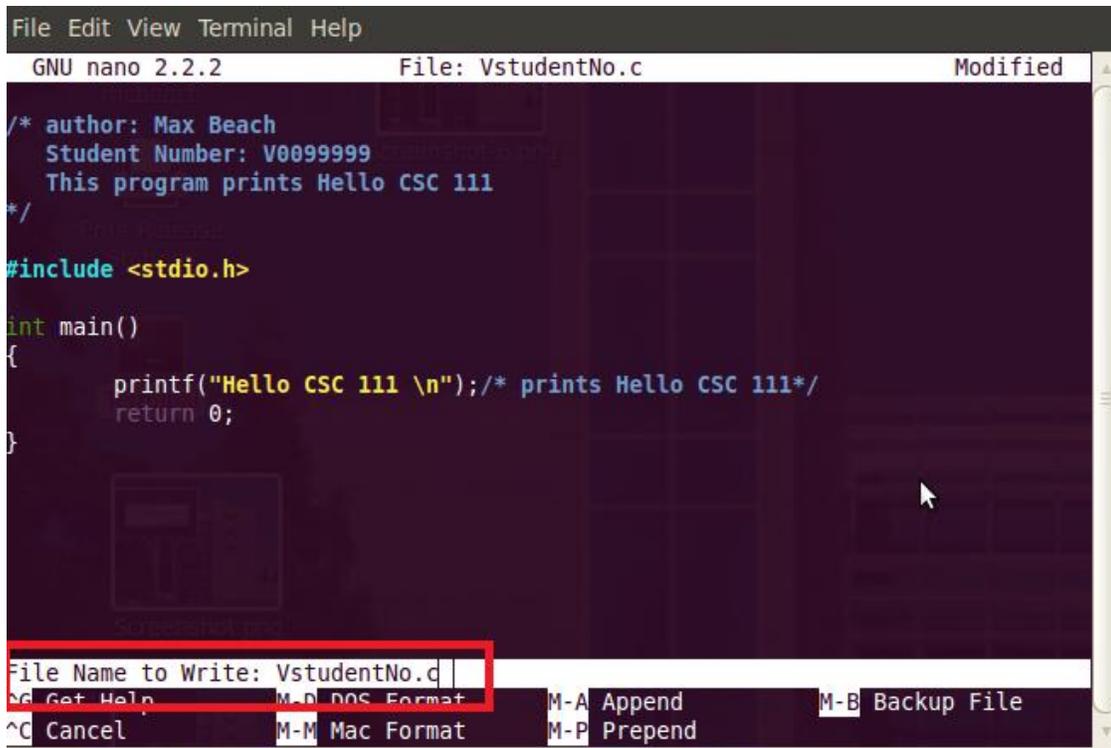
```
mcbeach@u-elive: ~
File Edit View Terminal Help
GNU nano 2.2.2 File: VstudentNo.c Modified

/* author: Max Berger
   Student Number: V0099999
   This program prints Hello CSC 111 on the terminal
*/
#include <stdio.h>

int main()
{
    printf("Hello CSC 111\n");/*prints Hello CSC 111 to the terminal*/
    return 0;
}

^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell
```

5. Save your C program by pressing "CTRL + o" and then press Enter.



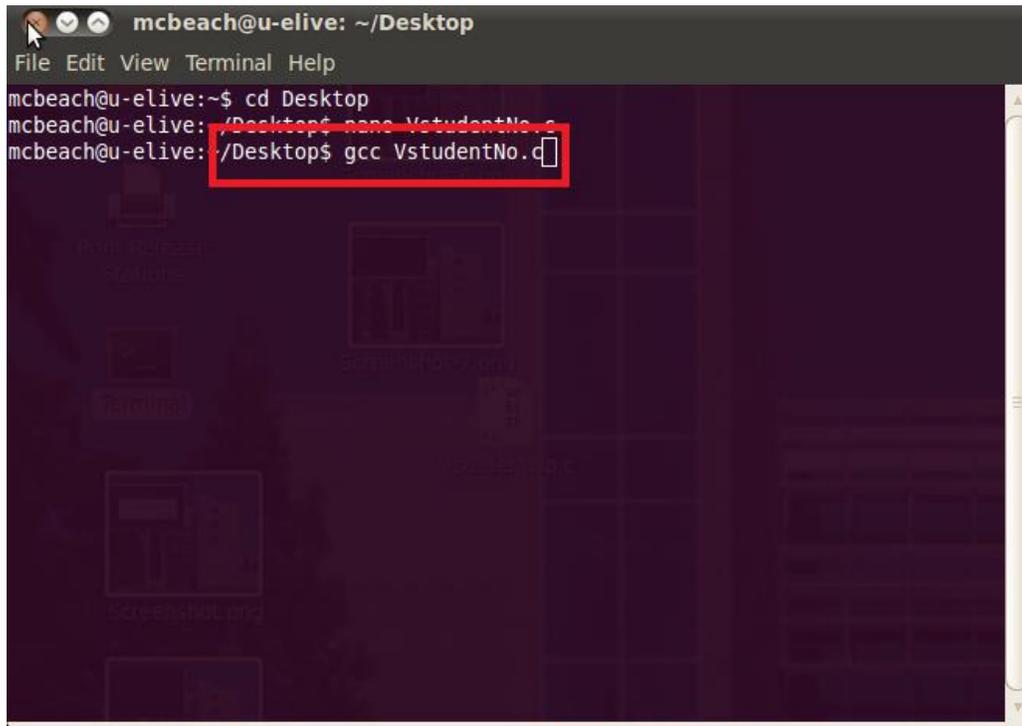
```
File Edit View Terminal Help
GNU nano 2.2.2 File: VstudentNo.c Modified

/* author: Max Beach
   Student Number: V0099999
   This program prints Hello CSC 111
*/
#include <stdio.h>

int main()
{
    printf("Hello CSC 111 \n");/* prints Hello CSC 111*/
    return 0;
}

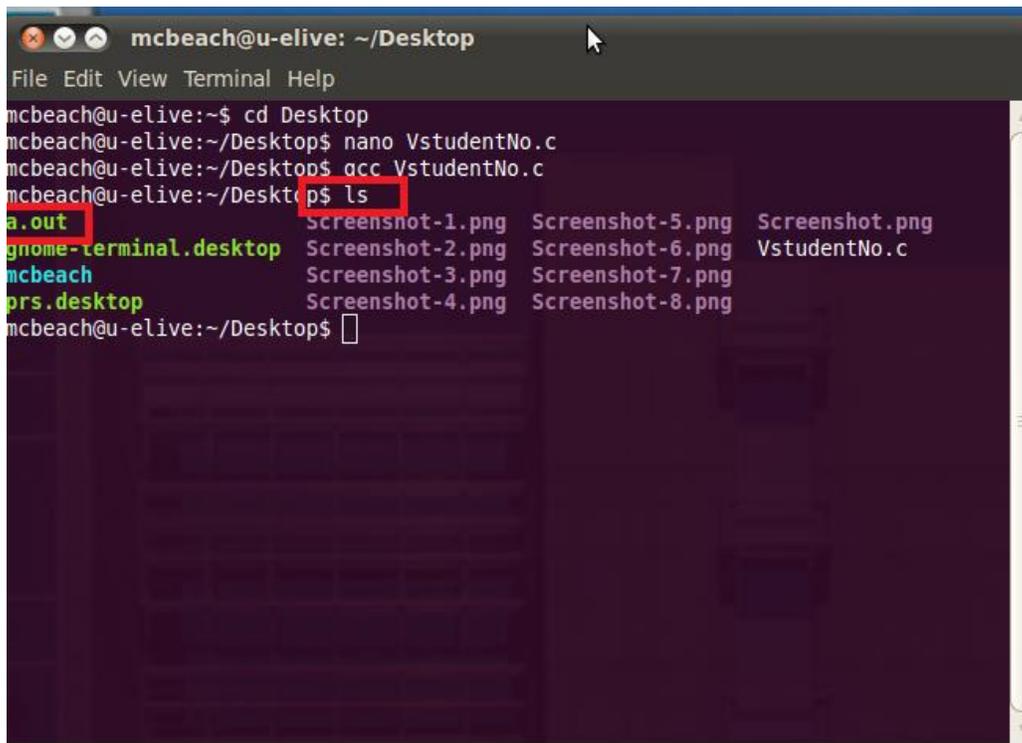
File Name to Write: VstudentNo.c
^G Get Help ^M-D DOS Format ^M-A Append ^M-B Backup File
^C Cancel ^M-M Mac Format ^M-P Prepend
```

- Exit Nano by pressing "CTRL + x" and to compile the C code, type `gcc filename.c`. In this tutorial, the code is compiled using `gcc VstudentNo.c`



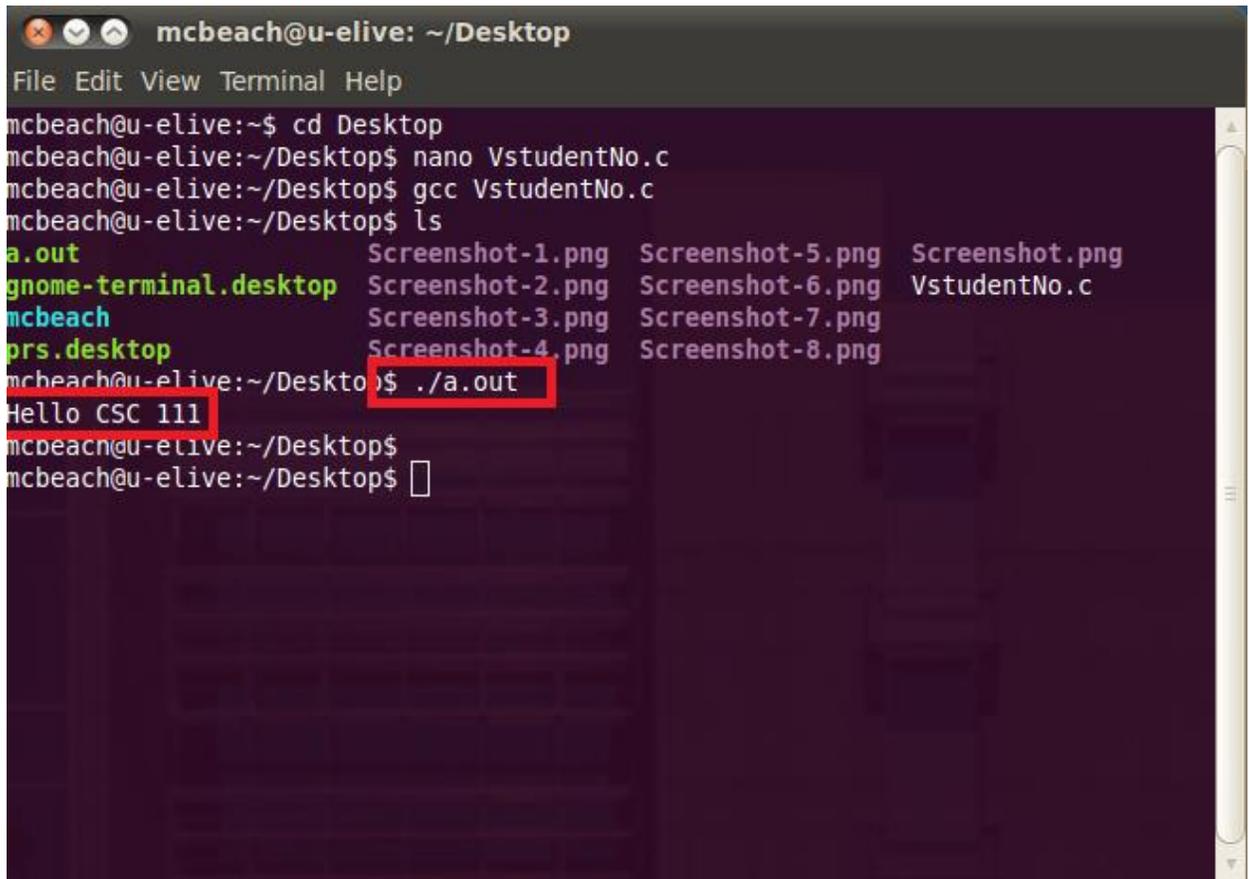
```
mcbeach@u-elve: ~/Desktop
File Edit View Terminal Help
mcbeach@u-elve:~$ cd Desktop
mcbeach@u-elve:~/Desktop$ nano VstudentNo.c
mcbeach@u-elve:~/Desktop$ gcc VstudentNo.c
```

- Now type `ls` to see a new file called `a.out` created within your current folder.



```
mcbeach@u-elve: ~/Desktop
File Edit View Terminal Help
mcbeach@u-elve:~$ cd Desktop
mcbeach@u-elve:~/Desktop$ nano VstudentNo.c
mcbeach@u-elve:~/Desktop$ gcc VstudentNo.c
mcbeach@u-elve:~/Desktop$ ls
a.out          Screenshot-1.png  Screenshot-5.png  Screenshot.png
gnome-terminal.desktop  Screenshot-2.png  Screenshot-6.png  VstudentNo.c
mcbeach       Screenshot-3.png  Screenshot-7.png
prs.desktop   Screenshot-4.png  Screenshot-8.png
mcbeach@u-elve:~/Desktop$
```

- To run your C code, type `./a.out`. The output "Hello CSC 111" is printed in your terminal.



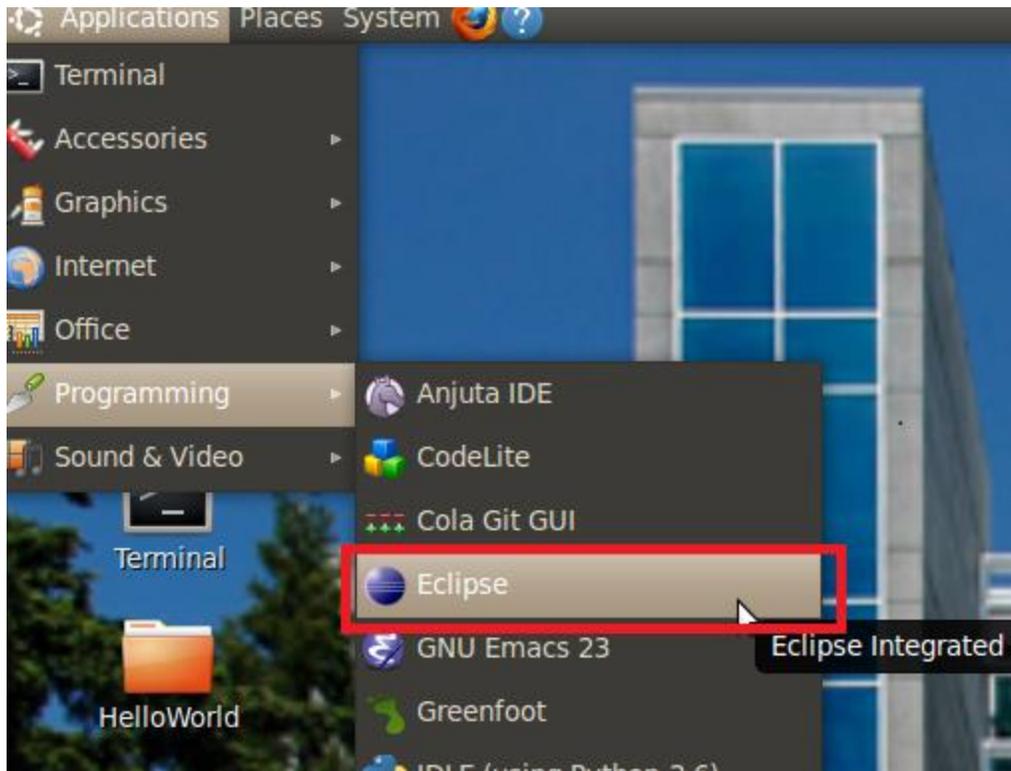
A terminal window titled "mcbeach@u-elive: ~/Desktop" with a menu bar (File, Edit, View, Terminal, Help). The terminal shows the following commands and output:

```
mcbeach@u-elive:~$ cd Desktop
mcbeach@u-elive:~/Desktop$ nano VstudentNo.c
mcbeach@u-elive:~/Desktop$ gcc VstudentNo.c
mcbeach@u-elive:~/Desktop$ ls
a.out          Screenshot-1.png  Screenshot-5.png  Screenshot.png
gnome-terminal.desktop  Screenshot-2.png  Screenshot-6.png  VstudentNo.c
mcbeach       Screenshot-3.png  Screenshot-7.png
prs.desktop   Screenshot-4.png  Screenshot-8.png
mcbeach@u-elive:~/Desktop$ ./a.out
Hello CSC 111
mcbeach@u-elive:~/Desktop$
mcbeach@u-elive:~/Desktop$
```

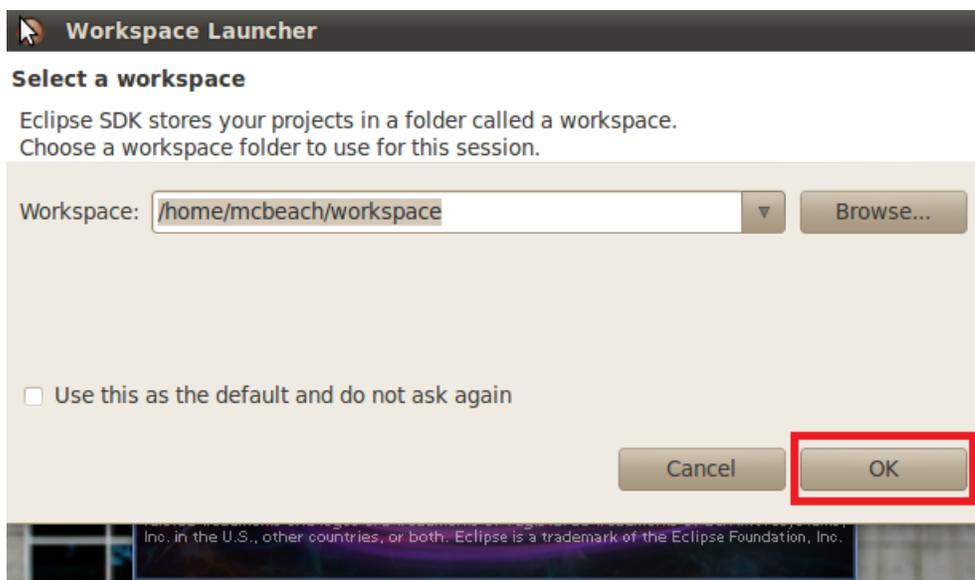
The command `./a.out` and its output `Hello CSC 111` are highlighted with red boxes in the original image.

Eclipse

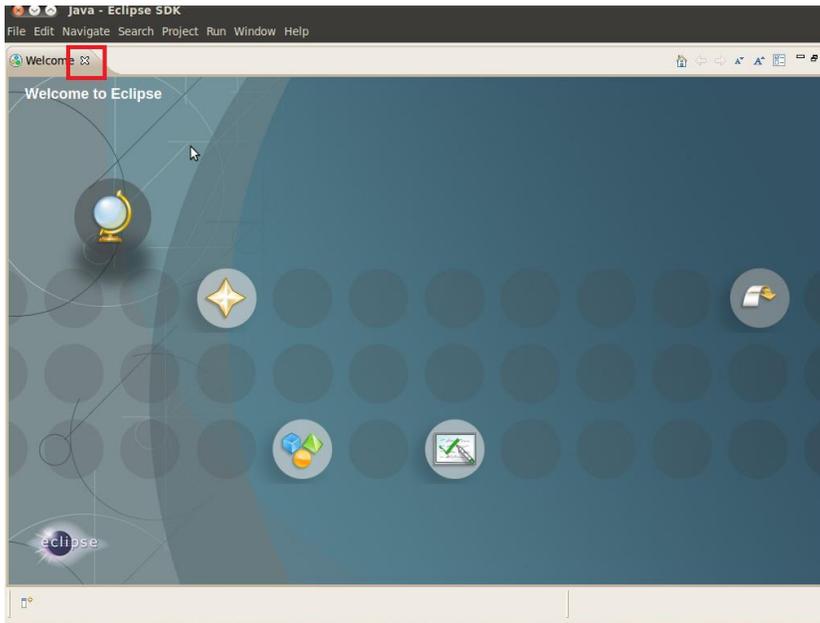
1. Open Eclipse CDT. Click Applications → Programming → Eclipse



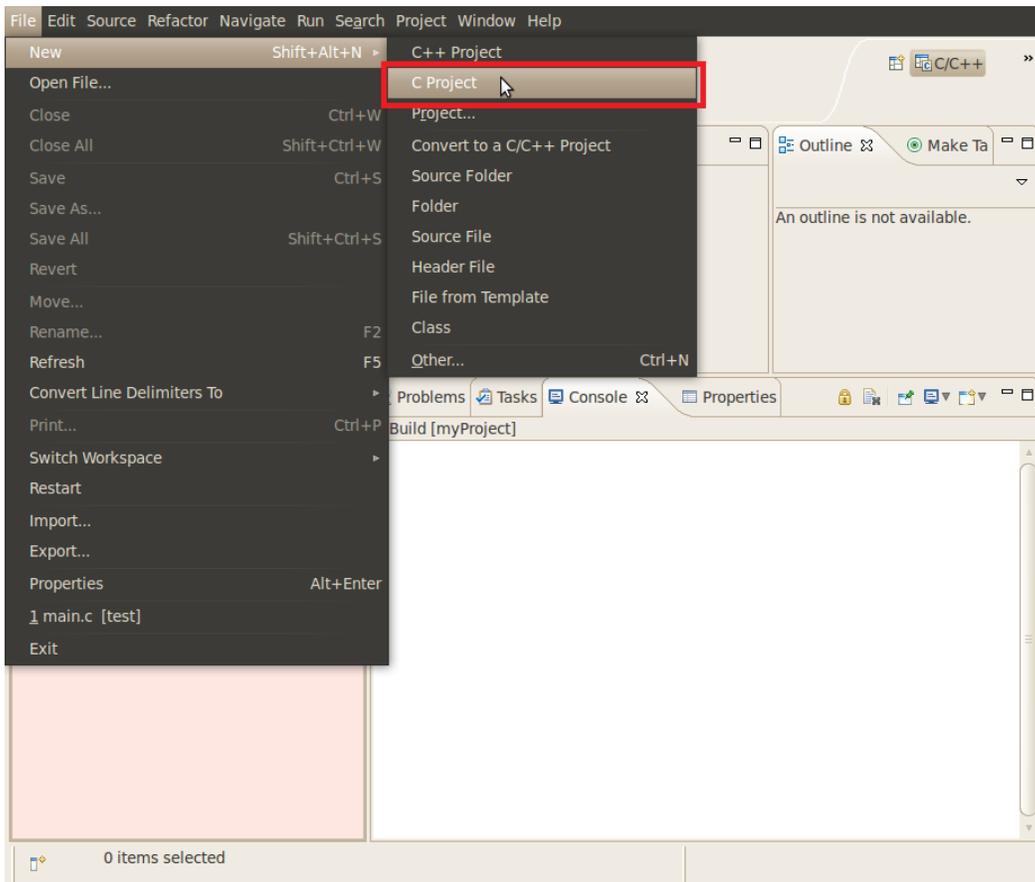
2. The following screenshot appears asking for the location where you want your C project to be stored. Click OK.



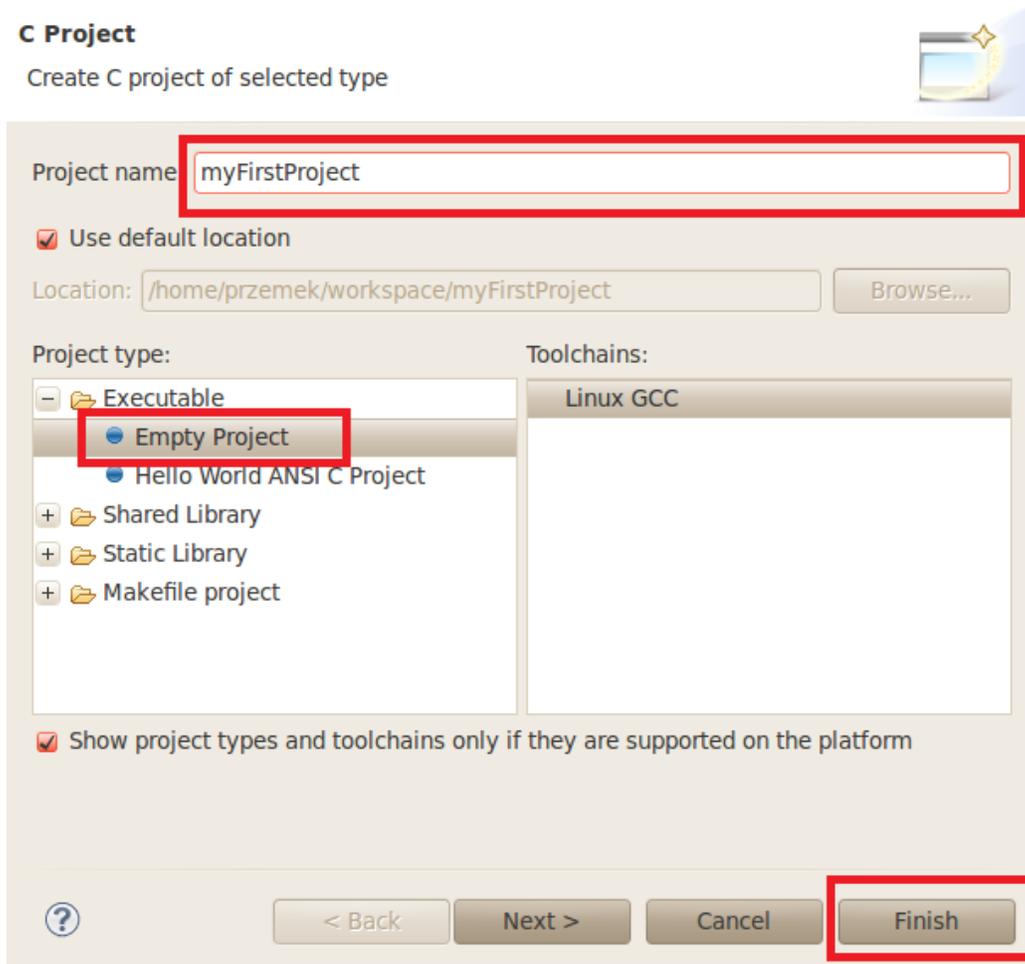
3. The following Welcome screen appears. Close it by clicking on X.



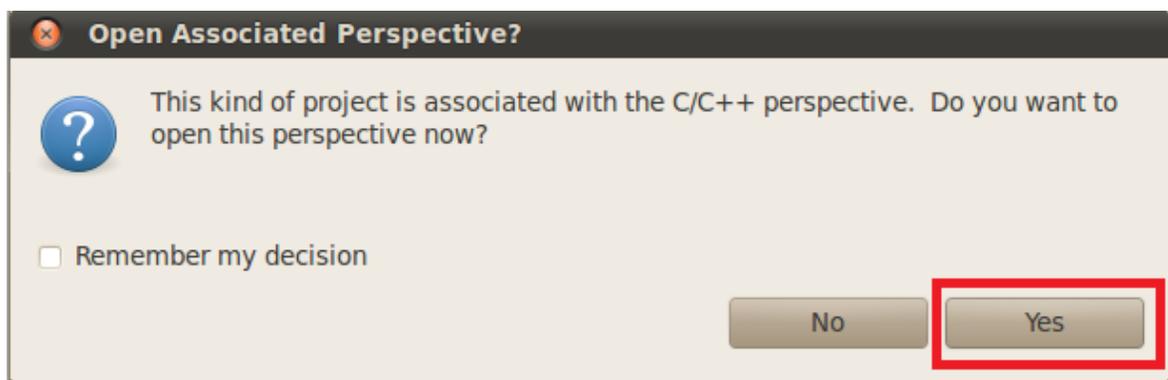
4. The following screen appears after the Welcome screen is closed. To open a new project, click on File → New → C Project.



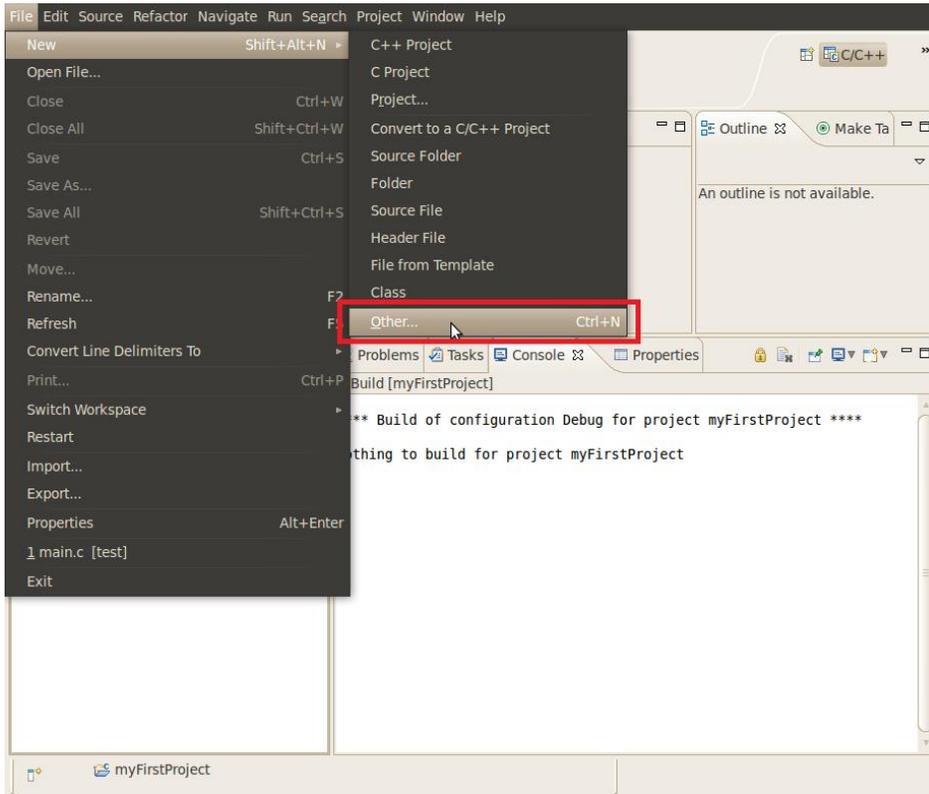
- The following dialog box appears prompting you to name your C project. Click on Executable to expand it → click on Empty Project → name the C project myFirstProject → Click Finish.



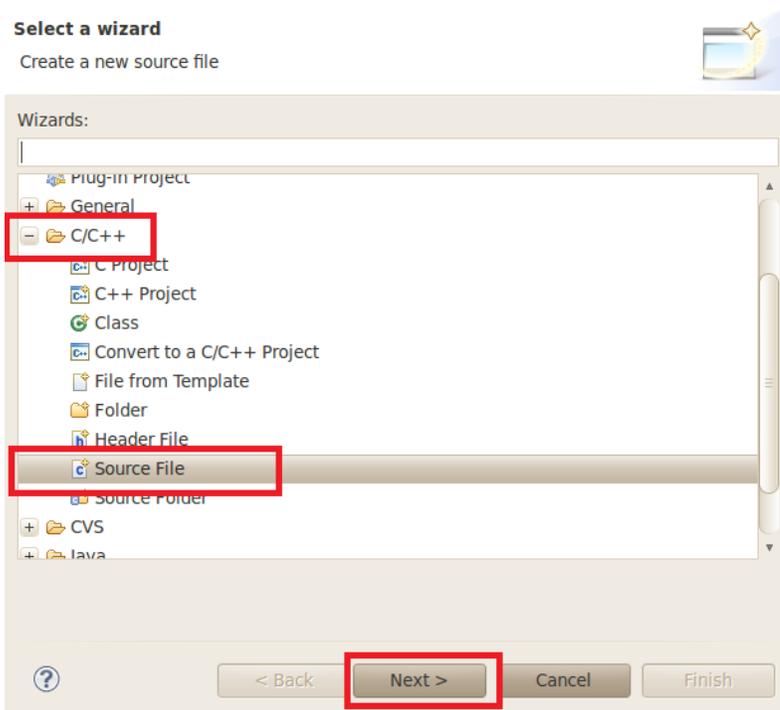
- The following Open Perspective dialog box appears. Click 'Yes' to open your project in the C perspective.



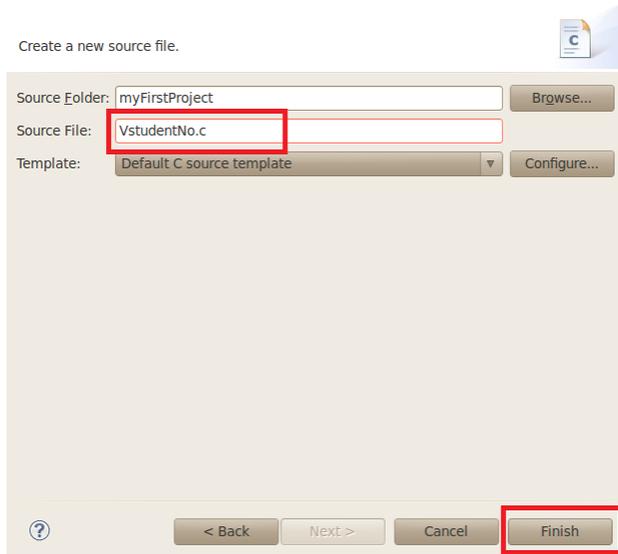
7. Create a new Source File in which you will write your C code. Click on New → Other



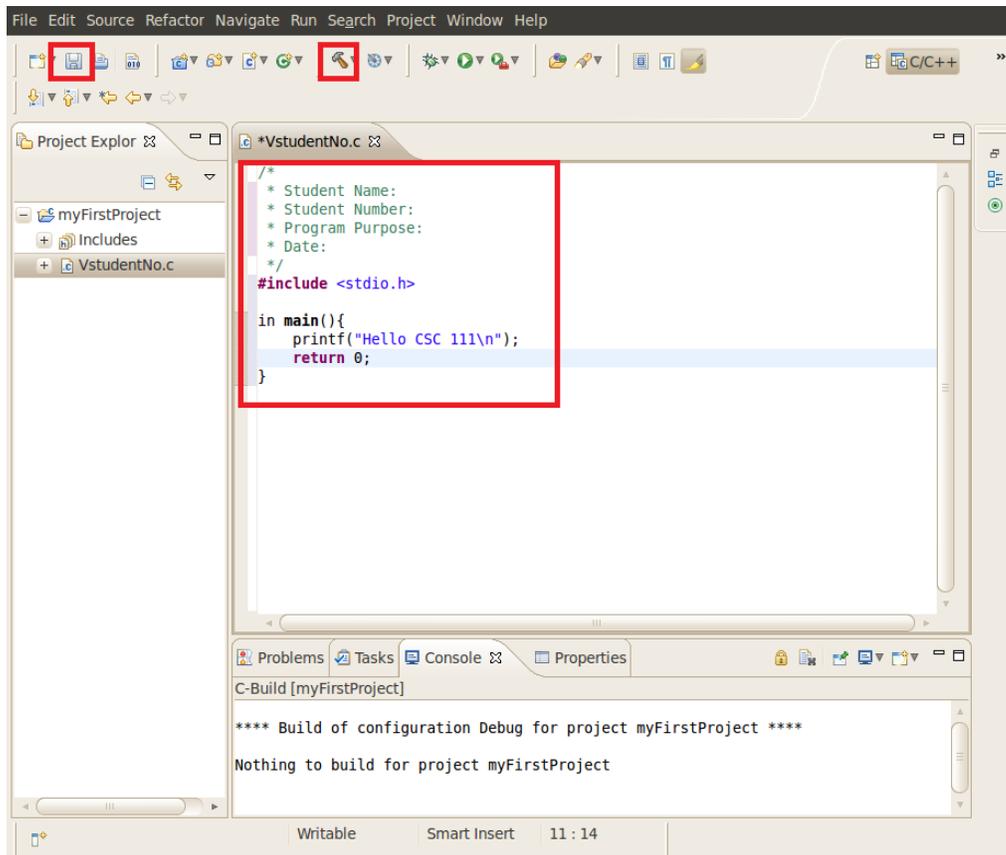
8. The following dialog box appears. Click on C/C++ → Source File. Click Next.



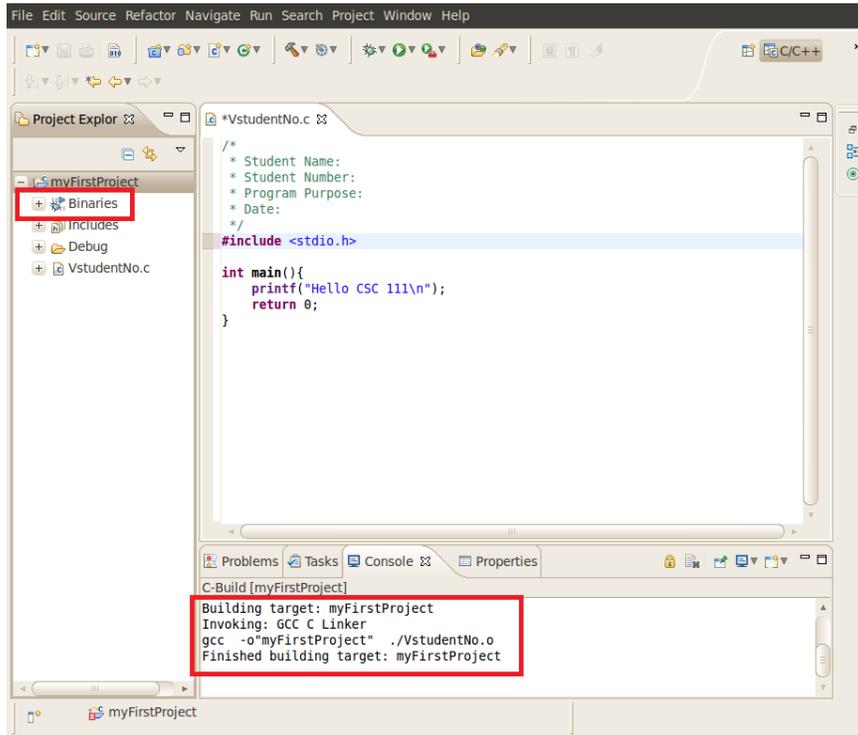
9. Enter the name of the C file. Name it using the following convention "yourStudentNumber.c" (Example: V00657766.c)



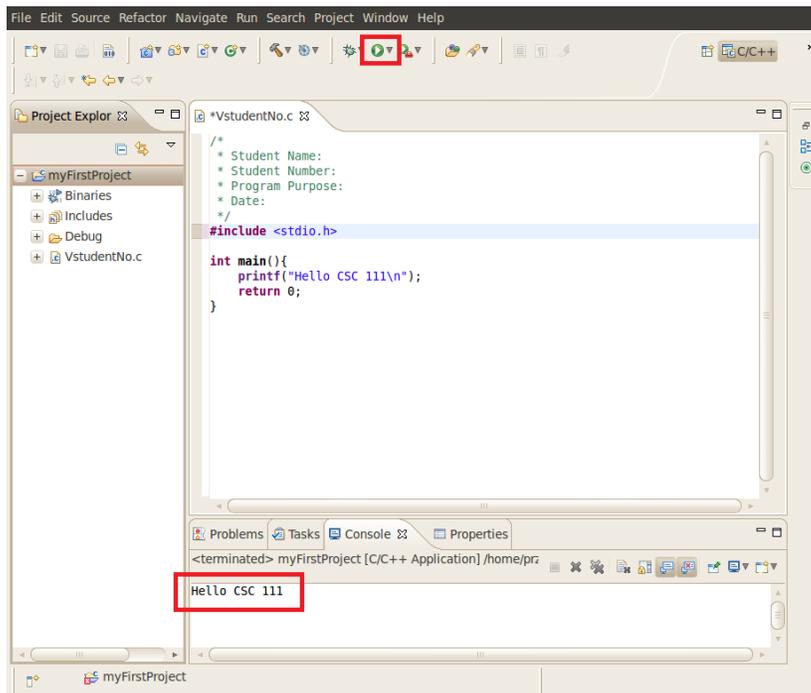
10. The following screen appears, type your C code. After writing your C code, Save your code and Compile your code by clicking on the Hammer icon in the top of the Eclipse screen.



11. After you compile your C code, a new folder named “Binaries” appears under your myFirstProject folder.



12. Run your code by clicking on the Run/ Execute button on top. Your output appears in the console in the bottom of the eclipse screen.



Installation

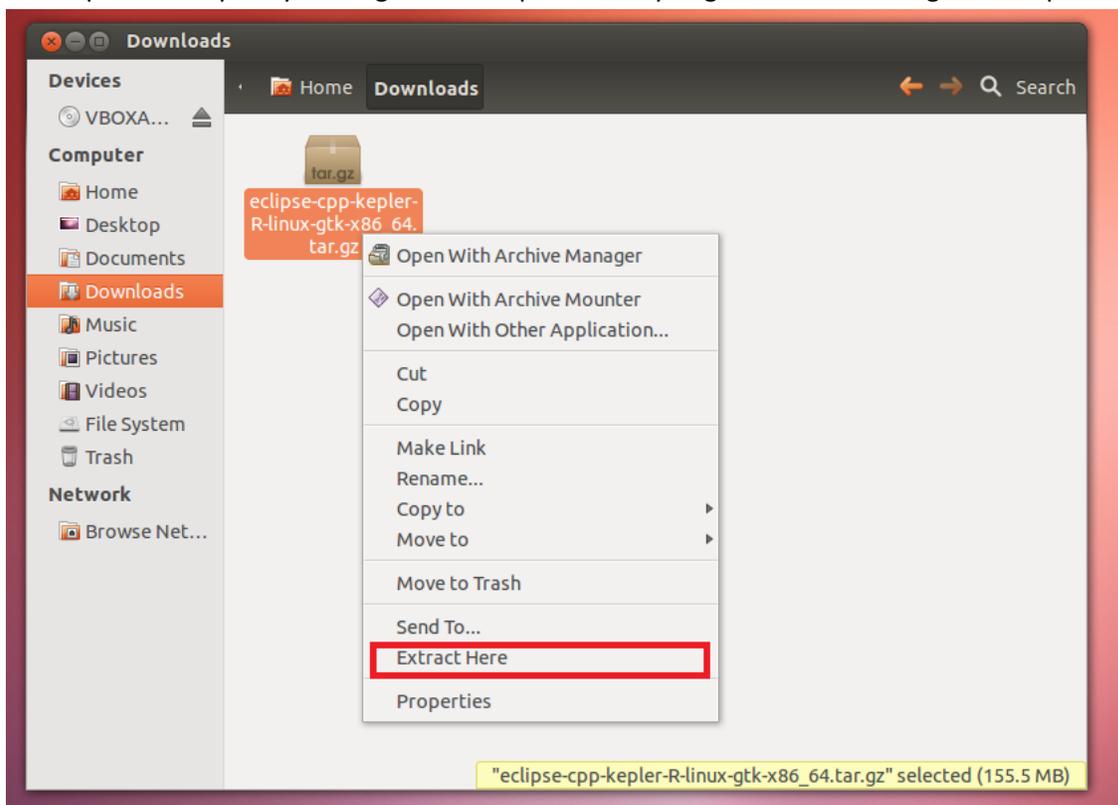
OPTIONAL: only if using your own machine

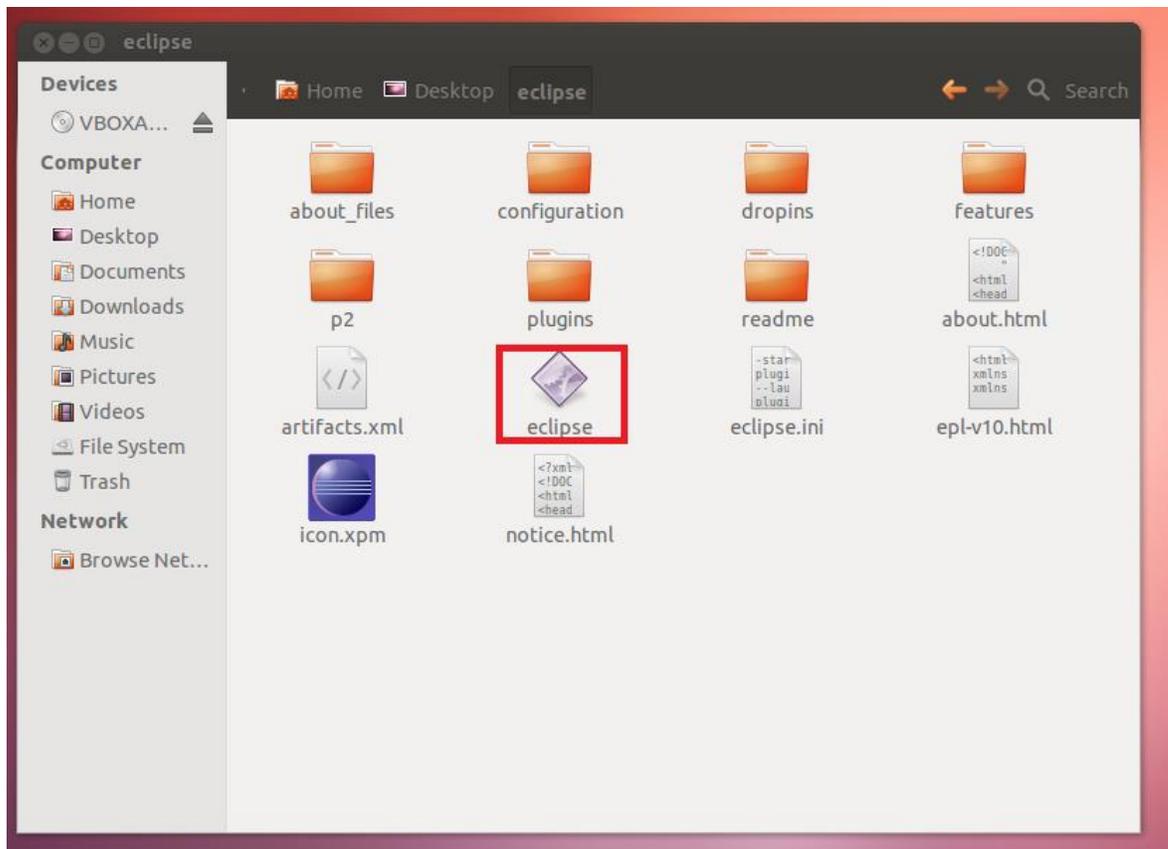
1. Open your browser and navigate to:

<http://www.eclipse.org/downloads/packages/eclipse-ide-cc-developers/keplerr>

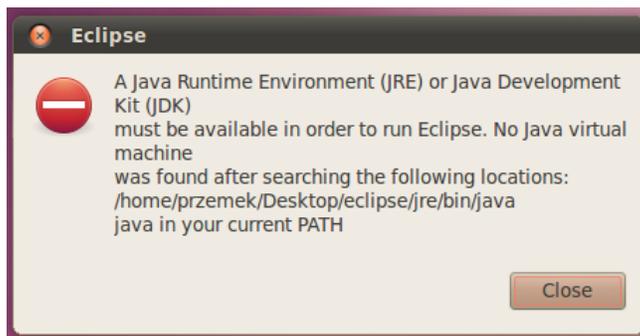
Download either the 32Bit or 64Bit version depending on your platform. The download is approximately 150MB so depending on your connection this may take some time.

2. Save and then extract the file to a location that is convenient for you. The extracted folder is the Eclipse application and no installation is required. An example of a place to extract this folder is your desktop. Start Eclipse by clicking on the Eclipse icon. If you get an error message see Step 2.1-2.5.

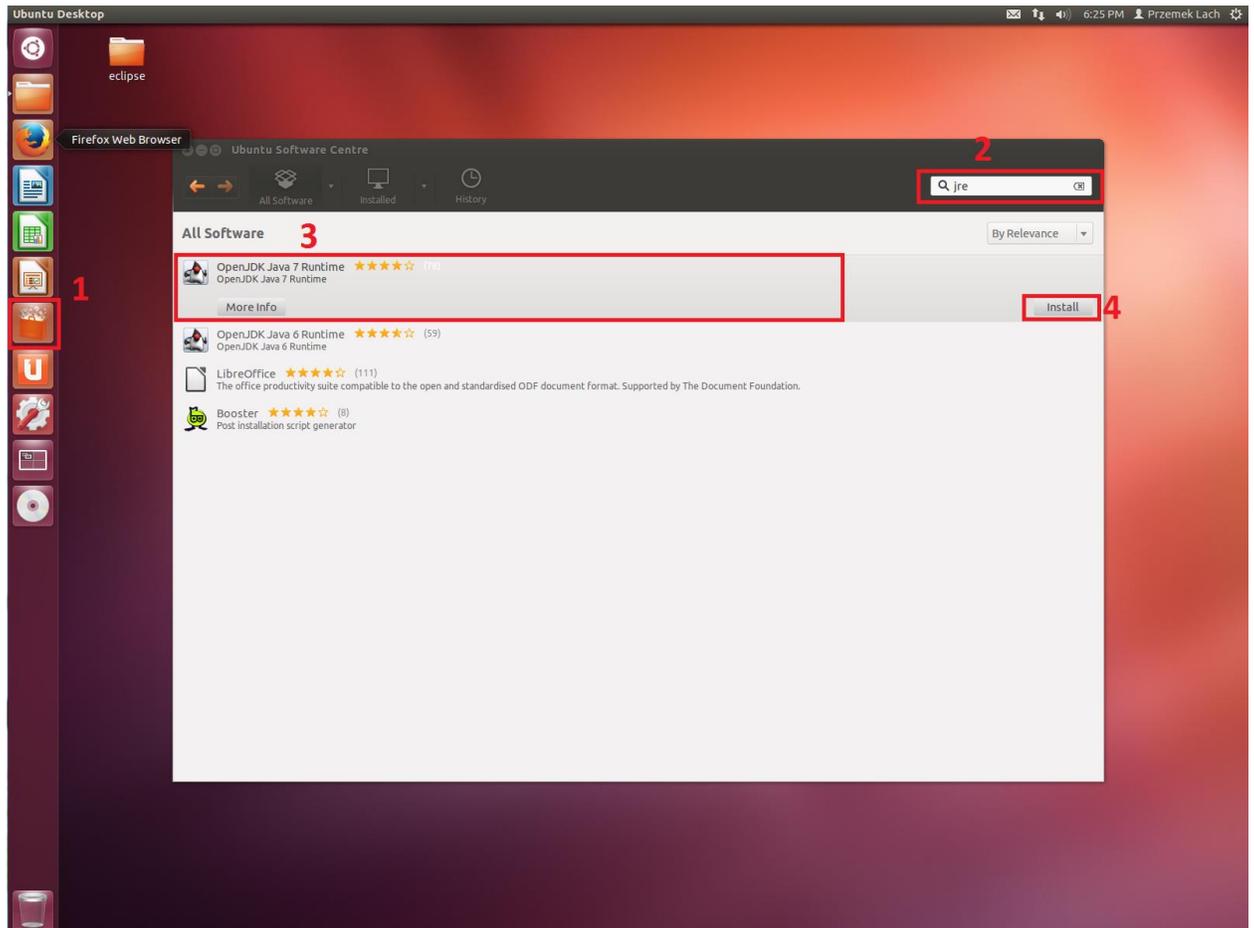




- 2.1. Eclipse IDE requires the Java Runtime Environment in order to run. If you do not have this installed you will see the following error message, or similar, when you try to run Eclipse.



2.2. Start Ubuntu Software Center and search for “jre”.



2.3. Click on the Open JDK Java 7 Runtime and click Install.

2.4. After a few minutes of downloading and installing a dialogue window will inform you that installation is complete. Now you can go to the ‘Eclipse’ section of this guide, starting at Step 4, to create a simple ‘hello world’ application. NOTE: some of the UI may appear different since the most recent version of Eclipse, which you just installed, is several versions ahead of the lab Eclipse.