Manual Eclipse CDT Linux

Installation & Demonstration Guide

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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, **Is.**

😣 🛇 🚫 mcbeach@u-elive: ~		
File Edit View Terminal Help		
<pre>csc225 csc230 debug_this(1).xls Desktop Documents Downloads draw_example[1].doc drawpattern.m drawpattern.m~ drawpattern.m~ drawpattern.odt e103.m elec260 foo nonpose gcov word storage</pre>	<pre>peacemel.doc Pictures ProjectGuide1 ProjectGuide1.zip Public raw_format.txt styles_example.doc task1.txt Templates Thumbs.db unitstep.m unitstep.m Untitled 1.odt variable.htm Videos</pre>	
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-elive:~{ cd Desktop	Visual Studio 2008 Visual Studio 2008Projects Visual Studio 2008Templates word_storage word_storage.tar workspace WWW	4 (

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.



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



6. 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*



7. Now type **Is** to see a new file called **a.out** created within your current folder.



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



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.

🔊 Workspace Launcher
Select a workspace
Eclipse SDK stores your projects in a folder called a workspace. Choose a workspace folder to use for this session.
Workspace: /home/mcbeach/workspace Browse
Use this as the default and do not ask again
Cancel OK
Inc. in the U.S., other countries, or both. Eclipse is a trademark of the Eclipse Foundation, Inc.

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.

File Edit Source Refactor Na	avigate Run Se <u>a</u> rch	Project Window Help
New	Shift+Alt+N ▶	C++ Project 환 문(///////////////////////////////////
Open File		C Project
Close	Ctrl+W	P <u>r</u> oject
Close All	Shift+Ctrl+W	Convert to a C/C++ Project 🛛 🗖 🗄 Outline 🛿 💿 Make Ta 🖓 🖬
Save	Ctrl+S	Source Folder 🗸 🗸 🗸
Save As		Folder An outline is not available.
Save All	Shift+Ctrl+S	Source File
Revert		Header File
Move		File from Template
Rename		Class
Refresh	F5	Other Ctrl+N
Convert Line Delimiters To		Problems 🕢 Tasks 🖳 Console 🛛 🔲 Properties 🛛 🔒 📑 🛃 🗊 🗂 🗖
Print	Ctrl+P	Build [myProject]
Switch Workspace		4
Restart		
Import		
Export		
Properties	Alt+Enter	
<u>1</u> main.c [test]		
Exit		Ξ
		•
□ [♦] 0 items selected		

 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.

C Project Create C project of selected type	
Project name myFirstProject Vse default location Location: /home/przemek/workspace/myFirst	tProject Browse
Project type:	Toolchains:
 Executable Empty Project Hello World ANSI C Project Shared Library Static Library Makefile project 	Linux GCC
Show project types and toolchains only if	they are supported on the platform ext > Cancel Finish

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



 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++ \rightarrow Source File. Click Next.



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

Create a new	source file.		C
Source <u>F</u> older: Source File: Template:	myFirstProject VstudentNo.c Default C source template	V	Browse Configure
?	< Back Next > Cancel		Finish

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.

File Edit Source Refactor Na	avigate Run Se <u>a</u> rch Project Window Help
t <mark>1 []</mark>]	7 🗟 7 🞯 7 🦂 🕸 7 🖉 7 🗛 7 🖉 🥙 🛷 7 🖉 🗐 🗾
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ि Project Explor 🛿 🦳 🗖	€ *VstudentNo.c 😫 🗖 🗖
 SmyFirstProject SmyFirstPro	<pre>/* * Student Name: * Student Number: * Student Number: * Date: */ #include <stdio.h> in main(){ printf("Hello CSC 111\n"); return 0; } Problems @ Tasks @ Console 23 Properties C-Build [myFirstProject] **** Build of configuration Debug for project myFirstProject **** </stdio.h></pre>
	Writable Smart Insert 11:14

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

File Edit Source Refactor M	Navigate Run Search Project Window Help	1
C1▼ 🛛 🚔 🖬 😭 😂 월 ▼ ⋛ ▼ 🛟 ▼ 🗇 ▼	ĨŸ ĞŸ ĞŸ ∫ ŠŸ ŠŸ ∫ ≫Ÿ QŸ Q₃Ÿ ∫ Ø AŸŸ ∫ ■ 1 3 E EC/C++	»
ြဲ Project Explor 🛚 🗖 🗖	I 🖻 ∗VstudentNo.c 🕱 🗖 🗖) <u> </u>
Image: Second secon	<pre>/* * Student Name: * Student Number: * Program Purpose: * Date: */ #include <stdio.h> int main(){</stdio.h></pre>	
	<pre>printf("Hello CSC 111\n"); return 0; }</pre>	
	🕅 Problems 🖗 Tasks 🗈 Console 🐹 📄 Properties 🛛 🚳 🕞 📑 🗖 🖓 🖓	1
	C-Build [myFirstProject]	-
	Building target: myFirstProject Invoking: GCC C Linker gcc -o"myFirstProject" ./VstudentNo.o Finished building target: myFirstProject	
myFirstProject	t	

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.

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Trash	Rename	
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Browse Net	Move to 🕨	
	Move to Trash	
	Send To	
	Extract Here	
	Properties	
	"eclipse-cpp-kepler-R-linux-gtk-x86_64.tar.gz" selected (155.5 MB)	



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.

😣 Ecl	😣 Eclipse			
•	A Java Runtime Environment (JRE) or Java Development Kit (JDK) must be available in order to run Eclipse. No Java virtual machine was found after searching the following locations: /home/przemek/Desktop/eclipse/jre/bin/java java in your current PATH			
	Close			

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.