

UNVIERSITY OF VICTORIA

# Manual Eclipse CDT Windows 7 Manual

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## Installation & Demonstration Guide

**Przemek Lach**

**9/3/2013**

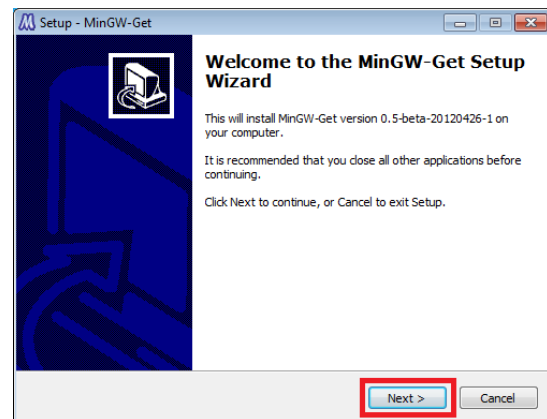
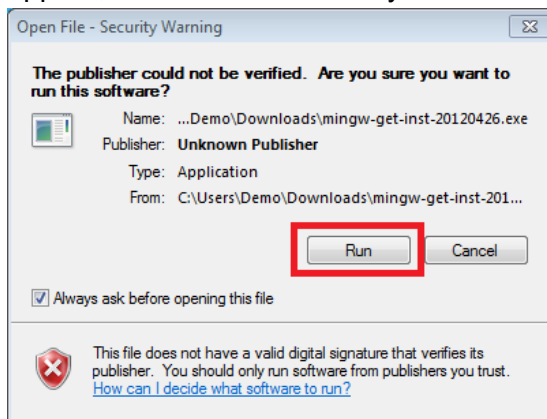
This guide shows how to use install Eclipse and C-Compiler and how to test the setup by creating a simple 'hello world' program. NOTE: This guide is based on Windows 7 (64Bit) and Eclipse Kepler (4.2).

## Installation

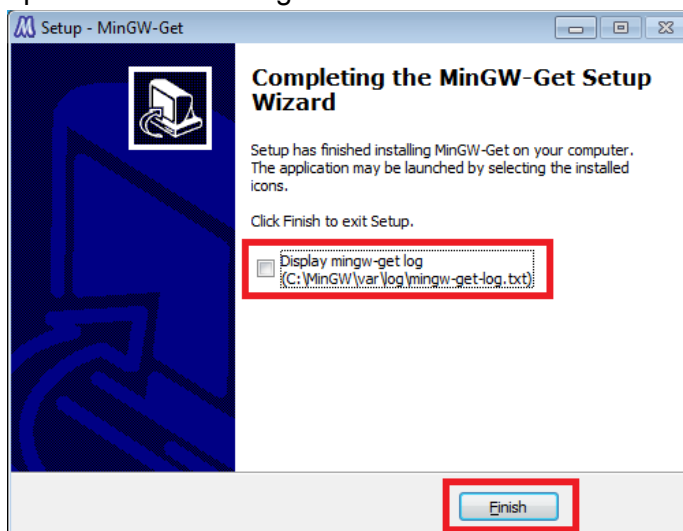
Three main pieces of software are required to do C development on your Windows Machine: Eclipse IDE, Java (needed to run Eclipse IDE) and C compiler (MinGW).

## Compiler

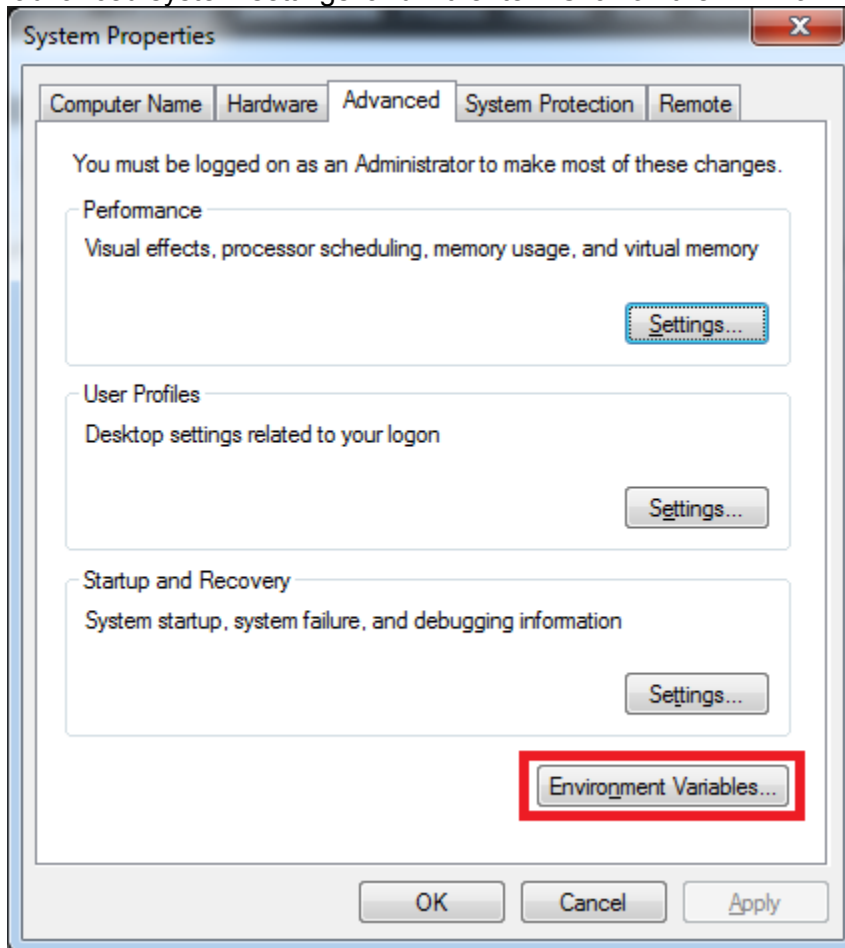
1. Navigate to the <http://moodle.uvic.ca/file.php/25885/manuals/mingw-get-inst-20120426.exe> to download the installer. This link is available on the Moodle website under Resources/CSC 111 Eclipse CDT Manuals.
2. Double click on the exe you just downloaded and follow the wizard. A dialogue will appear, click 'Run' followed by 'Next'



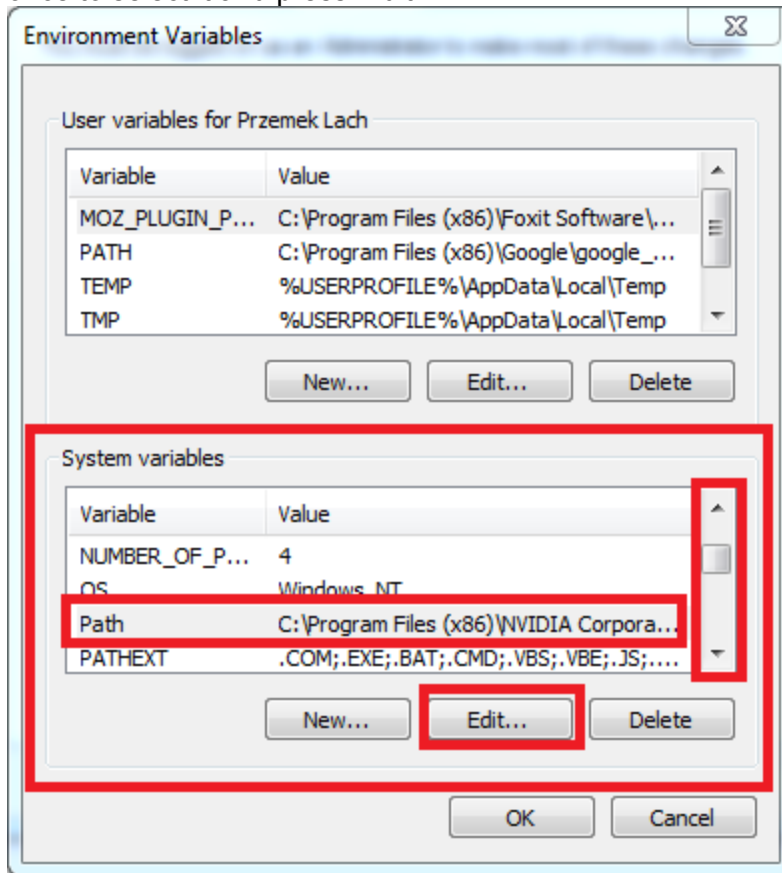
3. With the exception of accepting the license agreement leave all default values. The installer will download files and install them. This will take several minutes. Once complete a dialogue box will display telling you that installation is complete. Uncheck the option to show the log and click 'Finish'.



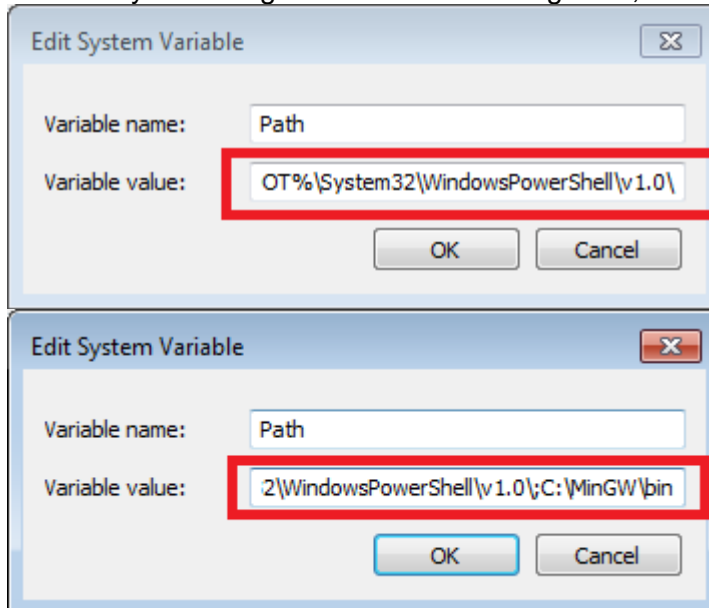
4. Finally we need to setup the environment variable. In the windows start menu type 'advanced system settings' and hit 'enter'. Click on the 'Environment Variables' button.



5. In the 'System variables' section scroll down until you find the 'Path' variable. Click on it once to select it and press 'Edit'



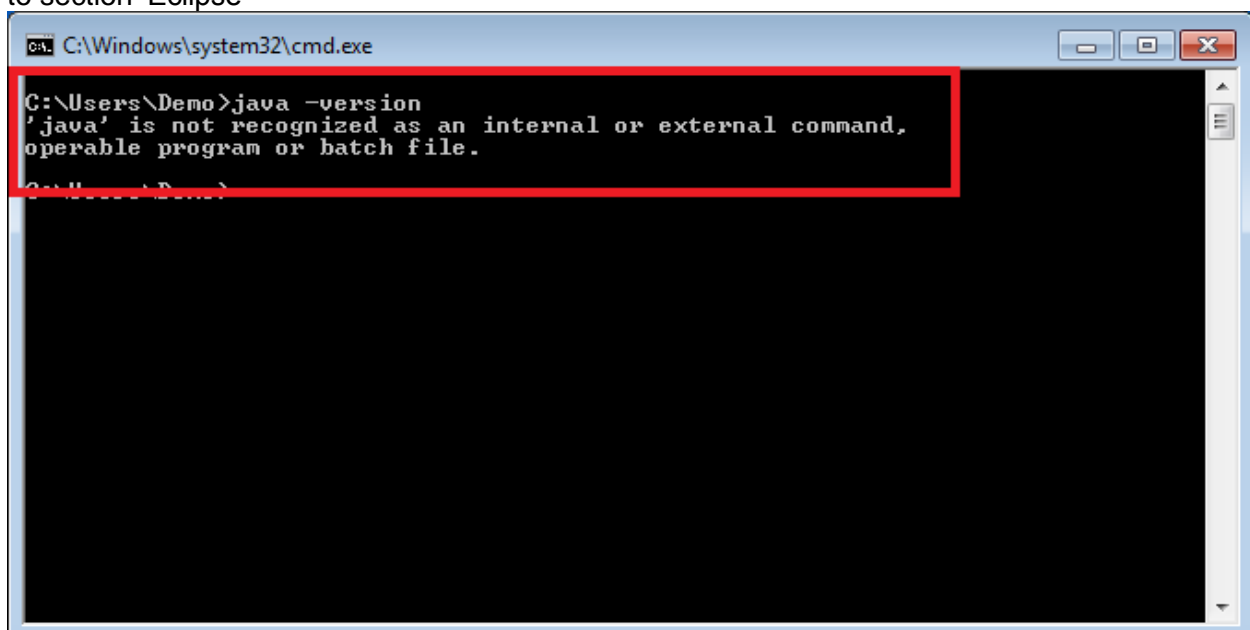
6. In the 'Variable value' section scroll the cursor as far right as possible. **\*\*Make sure to be all the way on the right\*\***. Add the following line ';C:\MinGW\bin'

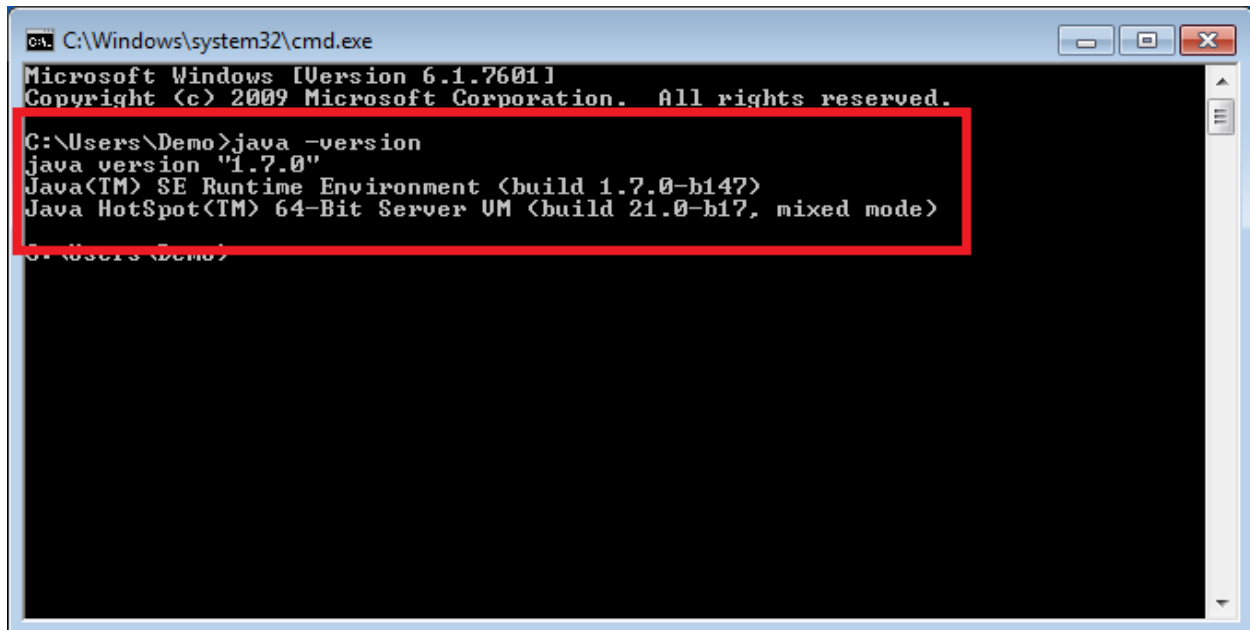


7. Click 'Ok' as many times as required to close all the windows; should be three Ok's.
8. Log out and back in for environment variable changes to take effect.

## Java

Before we can install Eclipse we need to make sure you have a 32Bit version of the Java Runtime Environment (JRE) installed. Open a command prompt and type 'java-version'. If you get an error message saying that the java command is not found then you need to install the JRE. If you don't get an error but you have the 64Bit version installed then need to install the 32Bit version of the JRE. If either of these is true proceed to section 'JRE Install'; else, proceed to section 'Eclipse'





```
CA. C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Demo>java -version
java version "1.7.0"
Java(TM) SE Runtime Environment (build 1.7.0-b147)
Java HotSpot(TM) 64-Bit Server VM (build 21.0-b17, mixed mode)

C:\Users\Demo>
```

The image shows a Windows command prompt window titled "CA. C:\Windows\system32\cmd.exe". The window displays the output of the command "java -version". The output is as follows:

```
Microsoft Windows [Version 6.1.7601]
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C:\Users\Demo>java -version
java version "1.7.0"
Java(TM) SE Runtime Environment (build 1.7.0-b147)
Java HotSpot(TM) 64-Bit Server VM (build 21.0-b17, mixed mode)

C:\Users\Demo>
```

The text "C:\Users\Demo>java -version" and its output is highlighted with a red rectangular box.

# JRE Install

1. Navigate to the Java website:  
<http://www.oracle.com/technetwork/java/javase/downloads/java-se-jre-7-download-432155.html> and download the 32Bit JRE: 'Windows x86 Offline'.

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### Java SE Runtime Environment 7 Downloads

Do you want to run Java™ programs, or do you want to develop Java programs? If you want to run Java programs, but not develop them, download the Java Runtime Environment, or JRE™.

If you want to develop applications for Java, download the Java Development Kit, or JDK™. The JDK includes the JRE, so you do not have to download both separately.

JRE MD5 Checksum

**Java SE Runtime Environment 7u25**

You must accept the Oracle Binary Code License Agreement for Java SE to download this software.

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Product / File Description	File Size	Download
Linux x86	35.78 MB	<a href="#">jre-7u25-linux-i586.rpm</a>
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Mac OS X x64	46.81 MB	<a href="#">jre-7u25-macosx-x64.tar.gz</a>
Solaris x86	45.7 MB	<a href="#">jre-7u25-solaris-i586.tar.gz</a>
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Solaris SPARC 64-bit	17.5 MB	<a href="#">jre-7u25-solaris-sparcv9.tar.gz</a>
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<b>Windows x86 Offline</b>	<b>30.25 MB</b>	<b><a href="#">jre-7u25-windows-i586.exe</a></b>
Windows x86	40 MB	<a href="#">jre-7u25-windows-i586.tar.gz</a>
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Windows x64	41.69 MB	<a href="#">jre-7u25-windows-x64.tar.gz</a>

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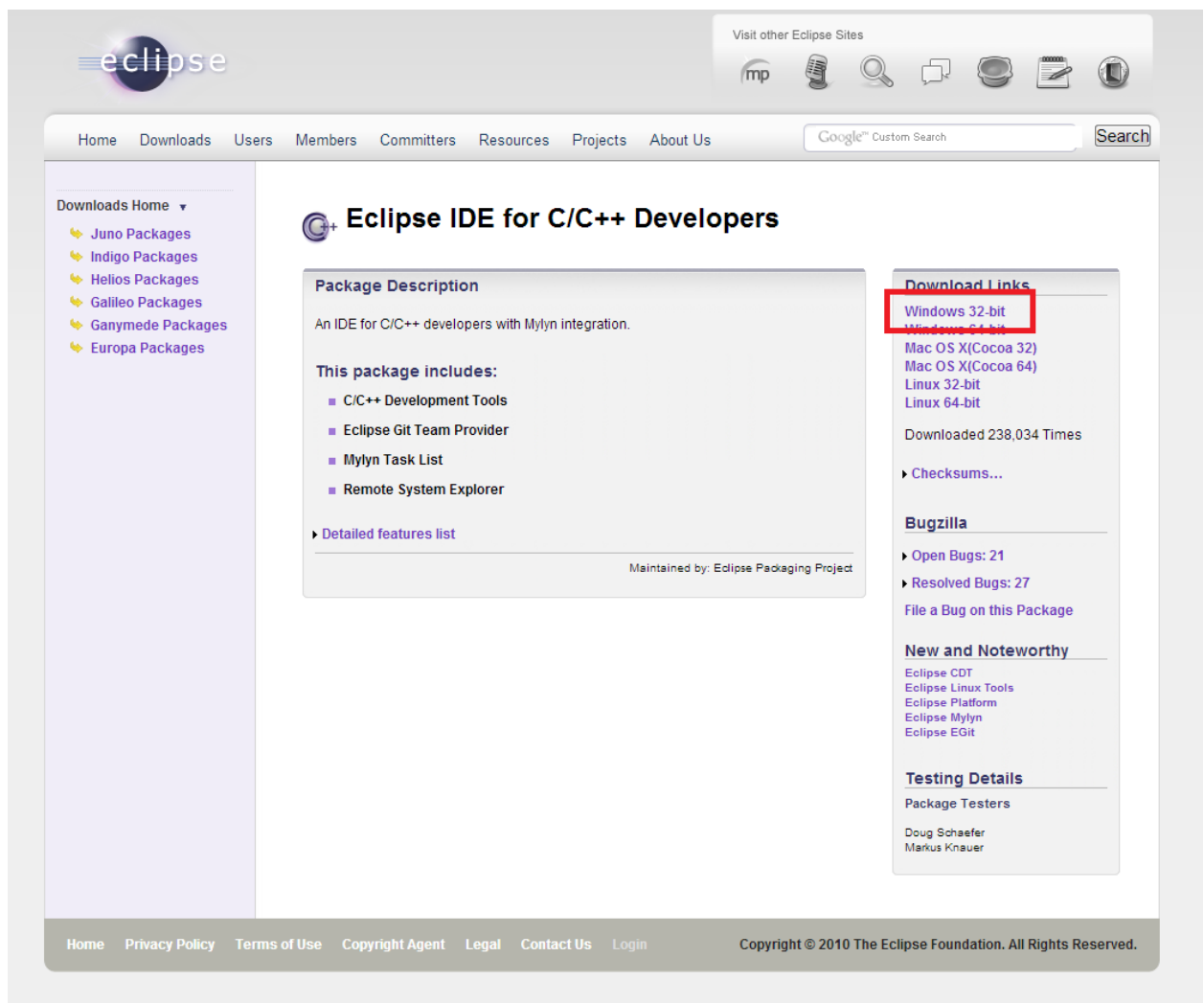
2. Once the download is complete simply run the installer. An install wizard will launch and guide you through the install. Leave all default settings.
3. Close all programs and restart your computer to complete the installation.

## Eclipse

Eclipse is an IDE that supports many languages. In our case the language is C and we need the Eclipse CDT

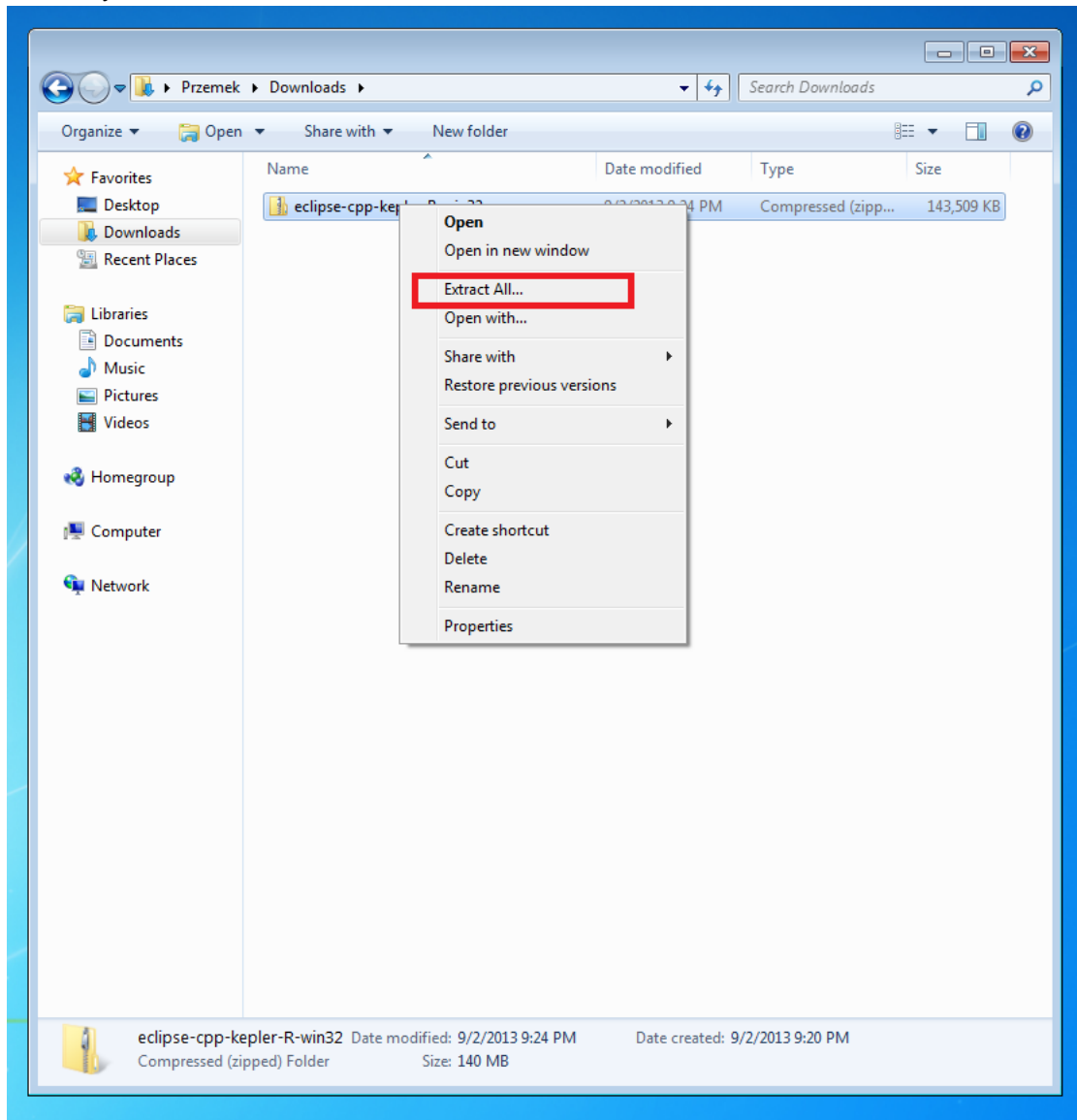
## Installing Eclipse

1. Navigate to:  
<http://www.eclipse.org/downloads/packages/eclipse-ide-cc-developers/keplerr> and click the "Windows 32-bit" link.

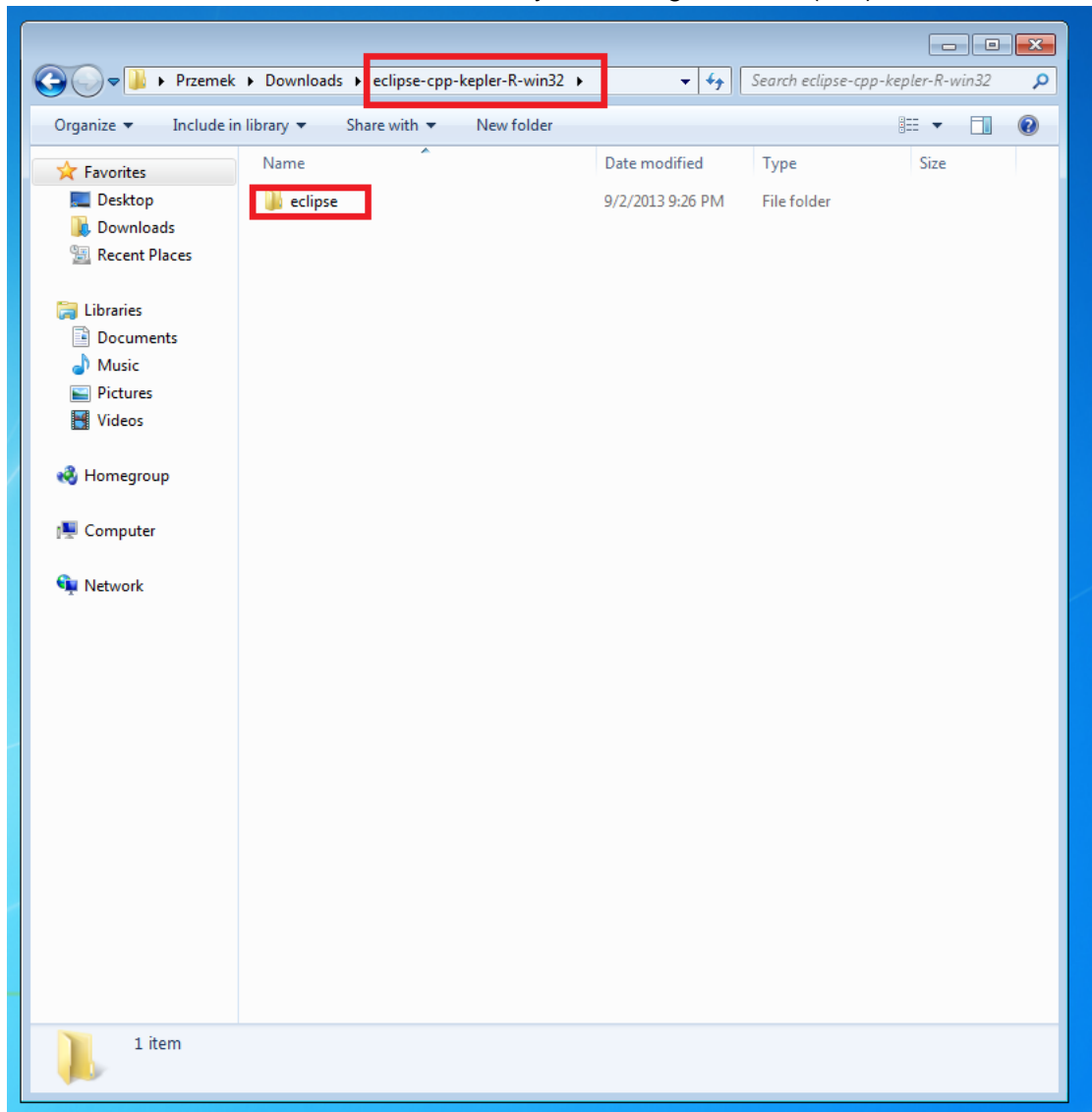




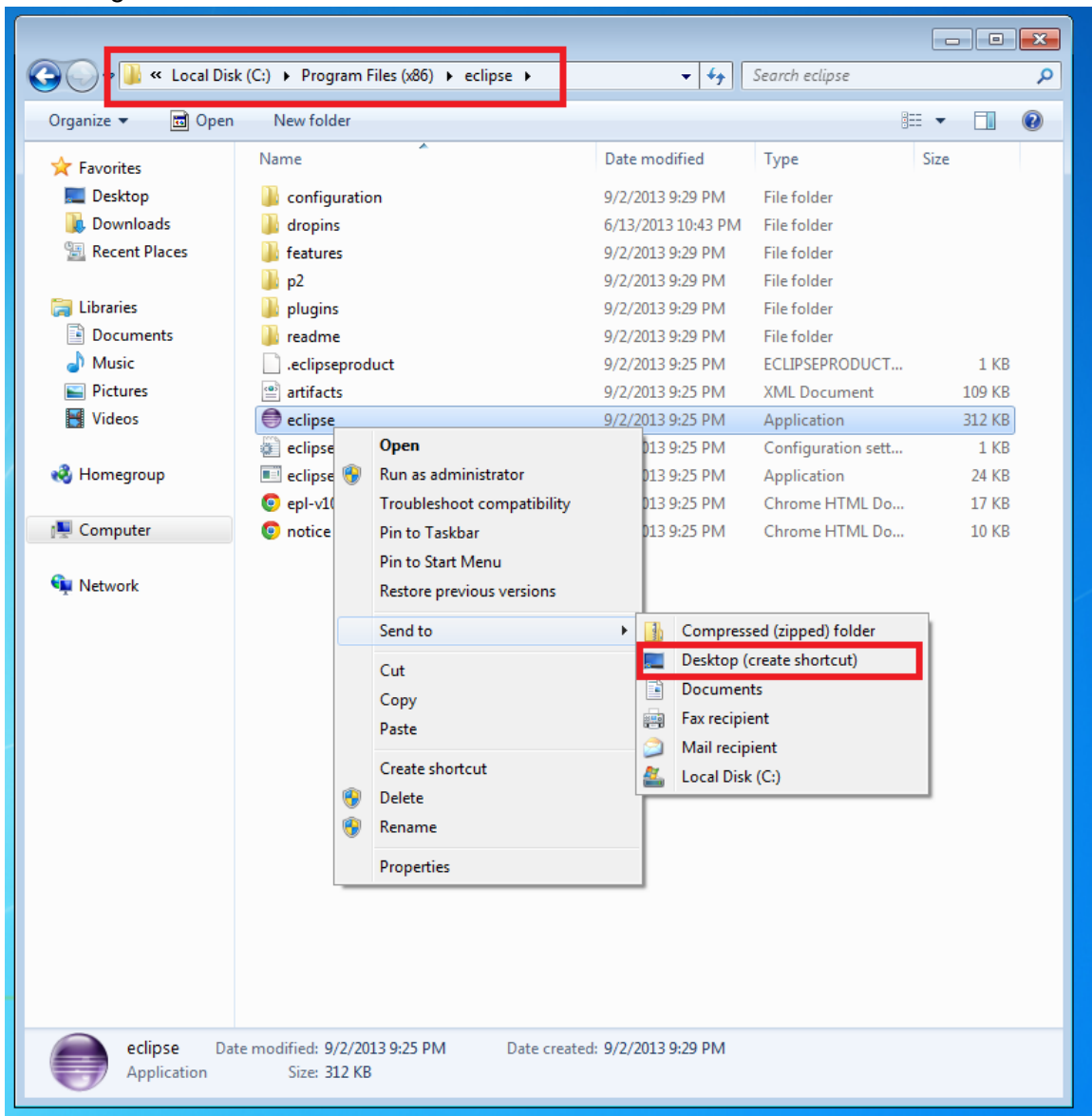
2. Right click on the file you just downloaded and extract/unzip the contents to the current directory.



3. You will now see a folder called 'eclipse-cpp-kepler-R-win32' and inside that folder you will find an 'eclipse' folder. You have now successfully installed eclipse. It is recommended that you move the eclipse to a more appropriate location; although, you don't have to. The recommended directory is C:\Program Files (x86).



- When you open the eclipse folder you will see the 'eclipse.exe'. It is recommended that you create a short-cut on your Desktop to this exe so that you don't have to always go searching for it.

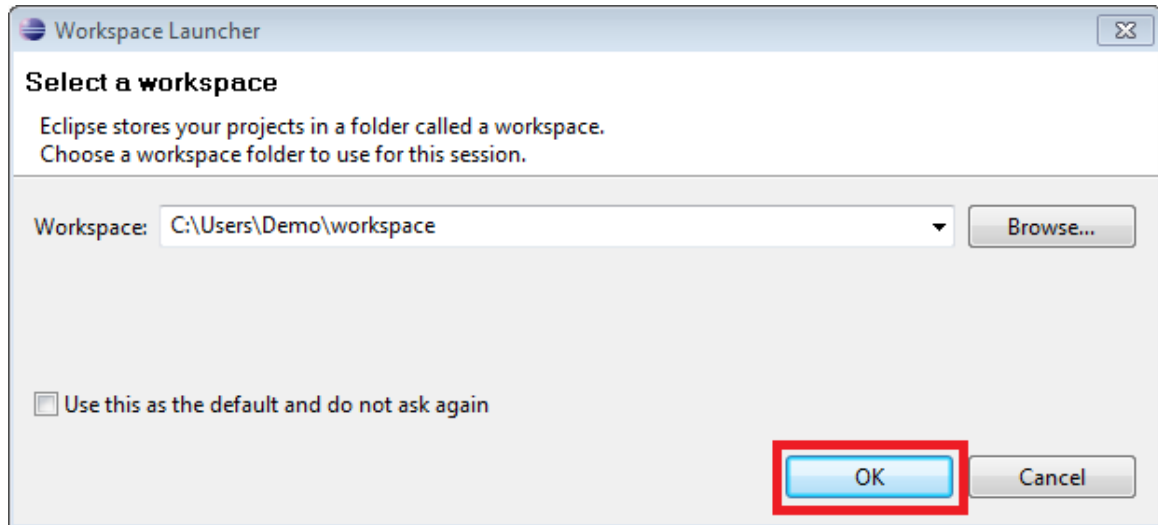


- You have now successfully installed Eclipse CDT.

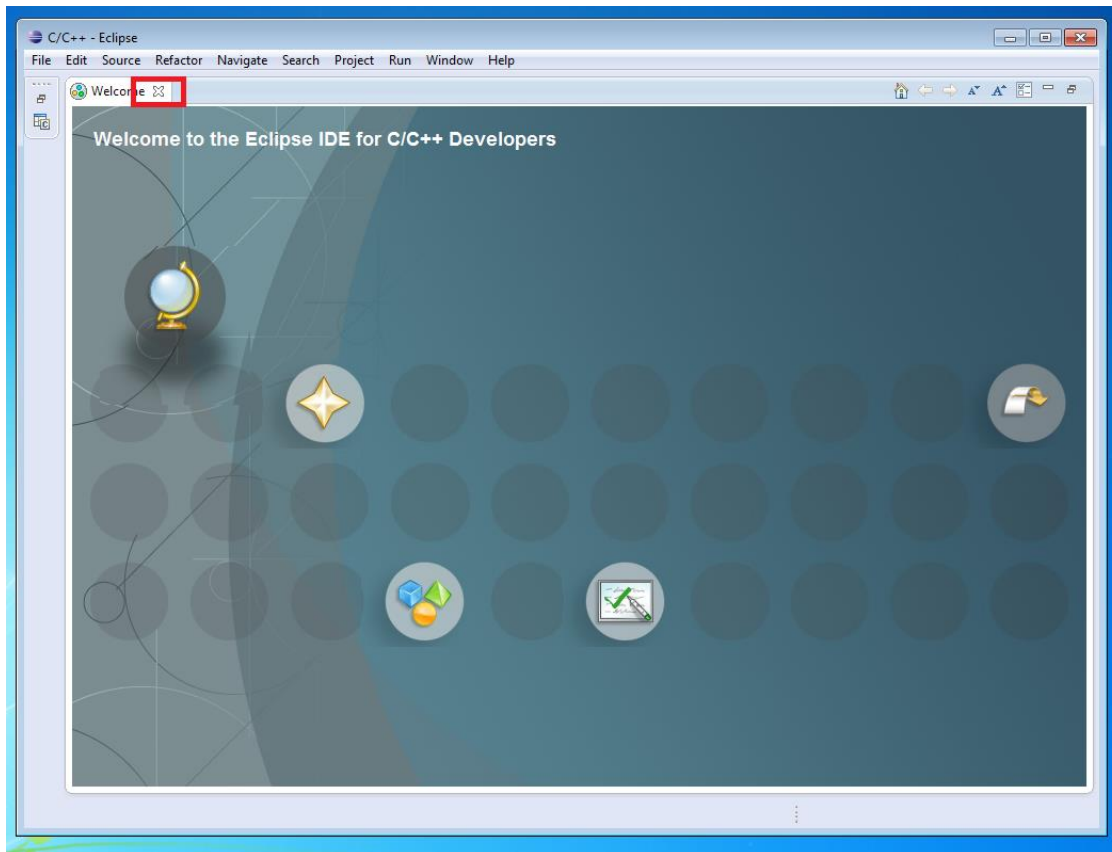
## Running in Eclipse

To make sure everything is setup correctly you need to do a simple test. We will start Eclipse, create a hello world program using a template, compile it and run the exe.

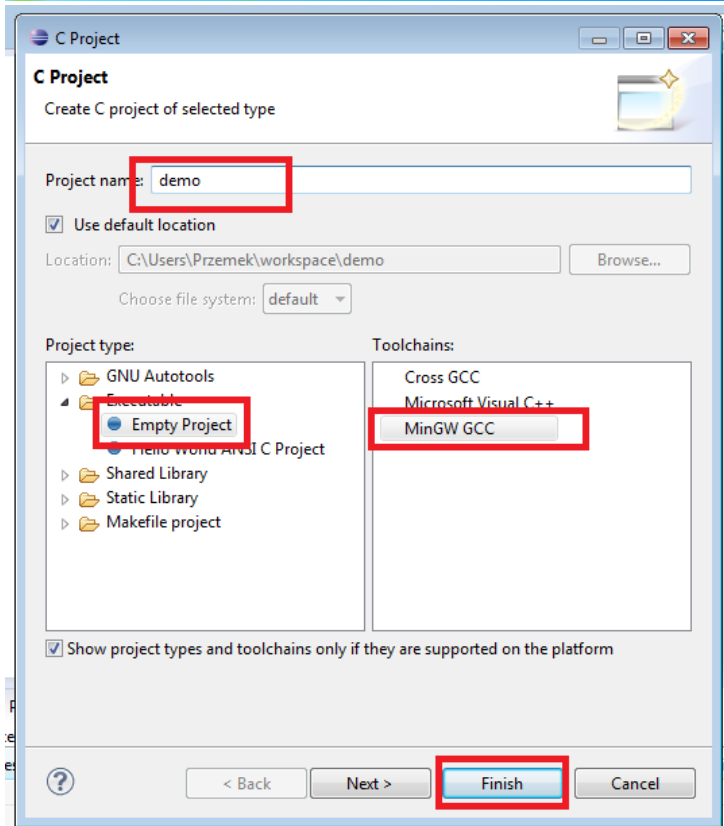
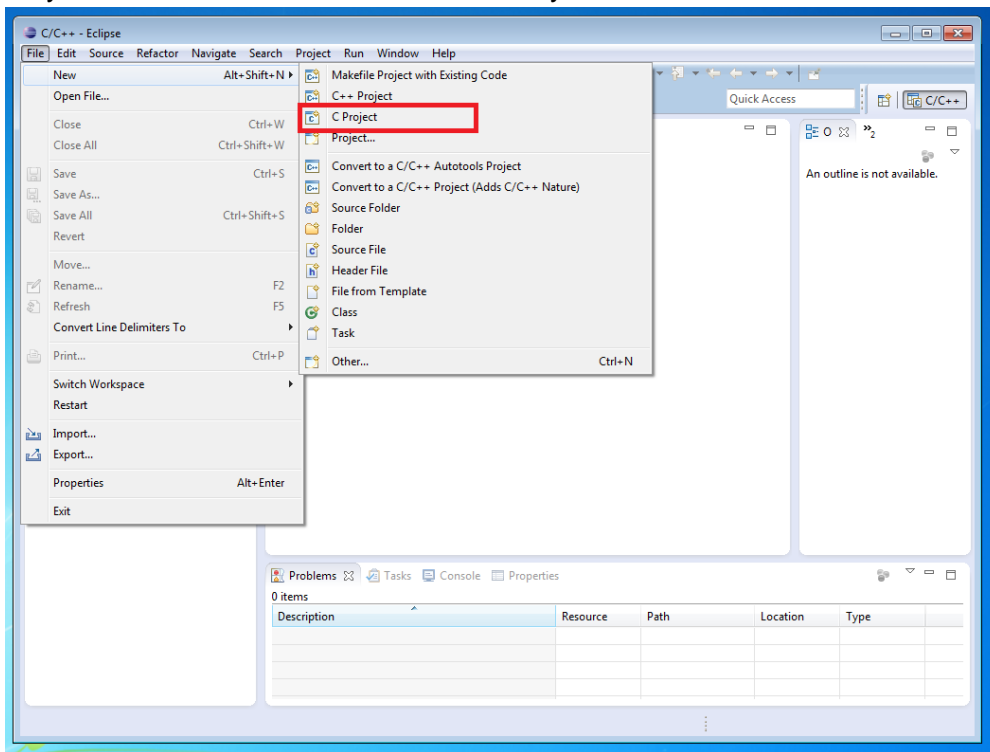
1. Start Eclipse. You will be prompted about where you want your workspace to be. Leave the default location and click 'Ok' **NOTE:** This is the location where all your projects that you create using Eclipse will be stored.



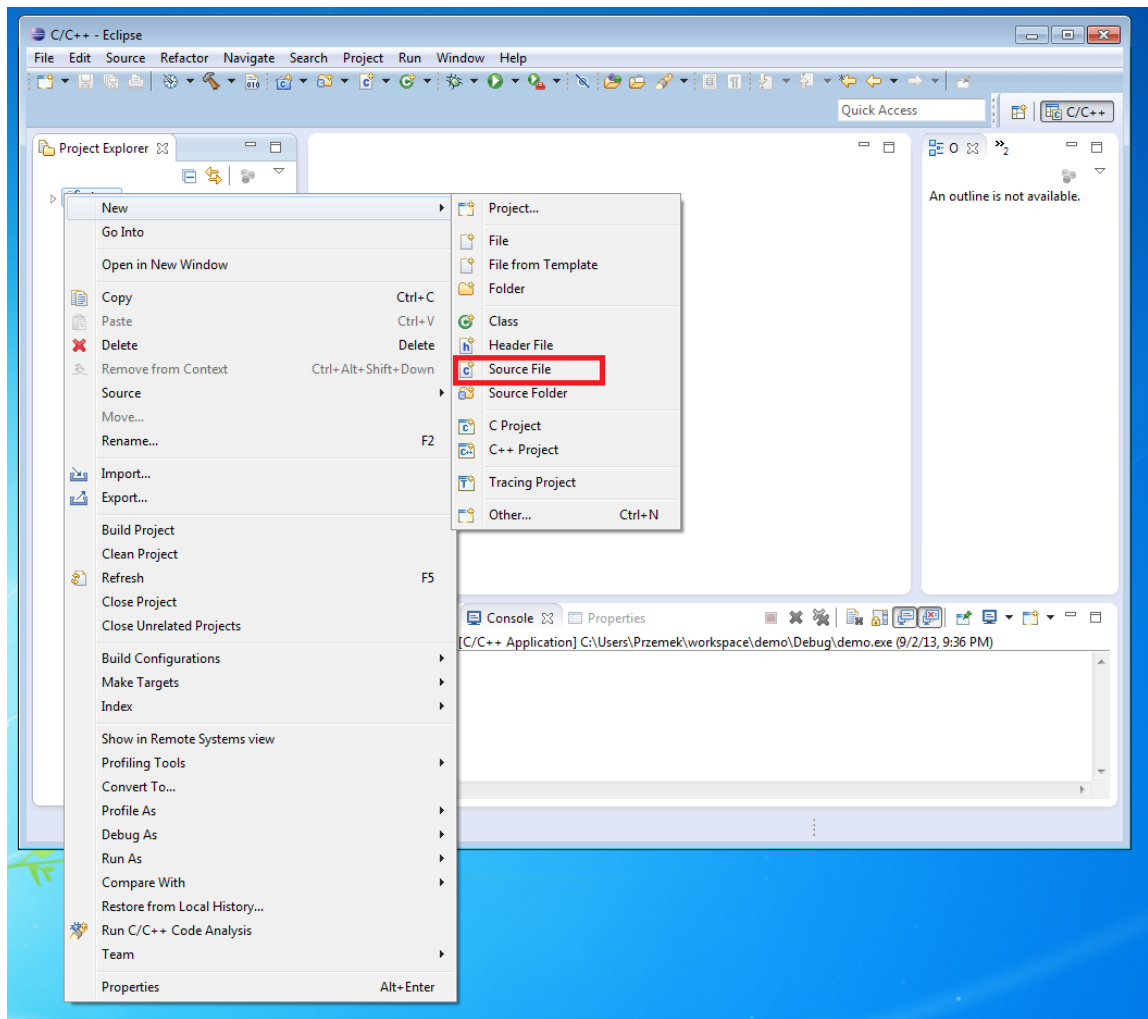
2. You will be presented with the Eclipse welcome page. Please close it by clicking 'X' in on the left hand side.



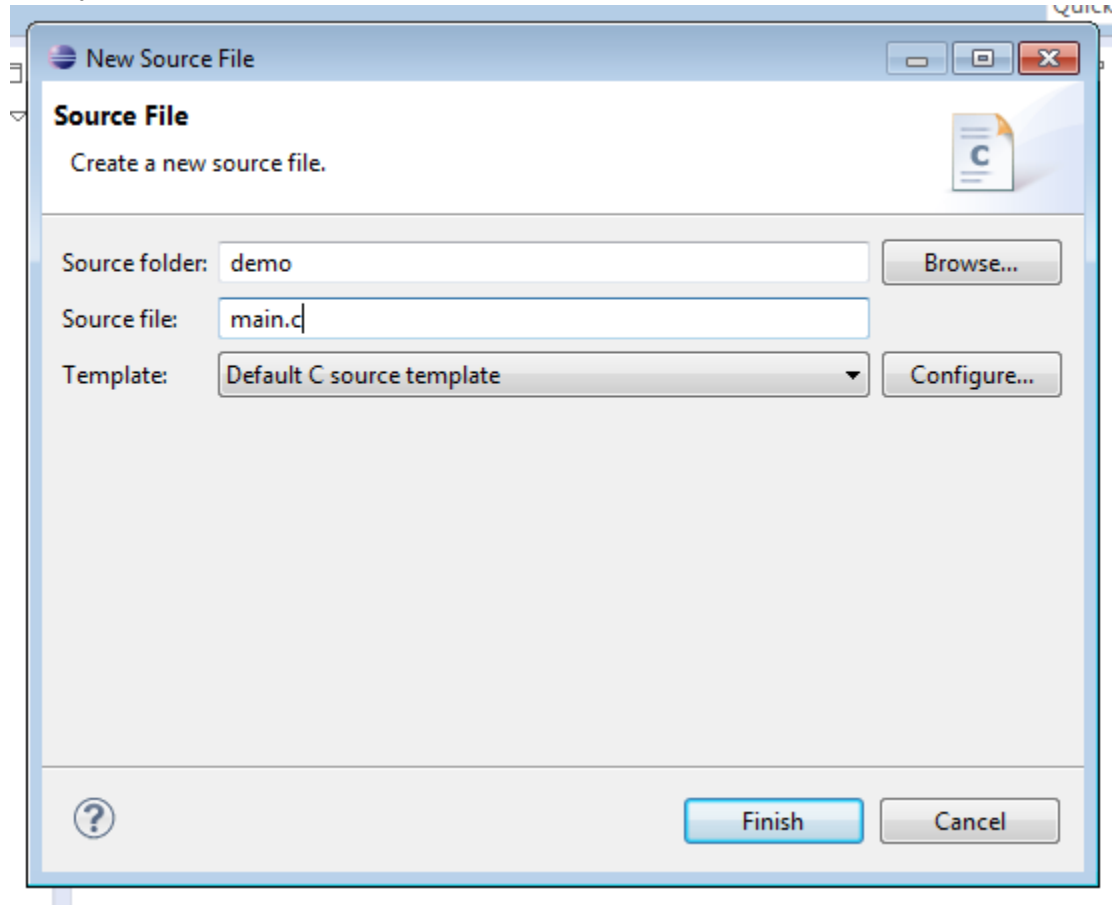
- Go to File/New/C Project. In the wizard that pops up type in a project name (any name you want but no space allowed), select the 'Empty Project' and click 'Finish'. NOTE: you may have other tool chains listed. Ensure you choose MinGW GCC.



4. On the left hand side right click on your project name and add a new source file to your project.

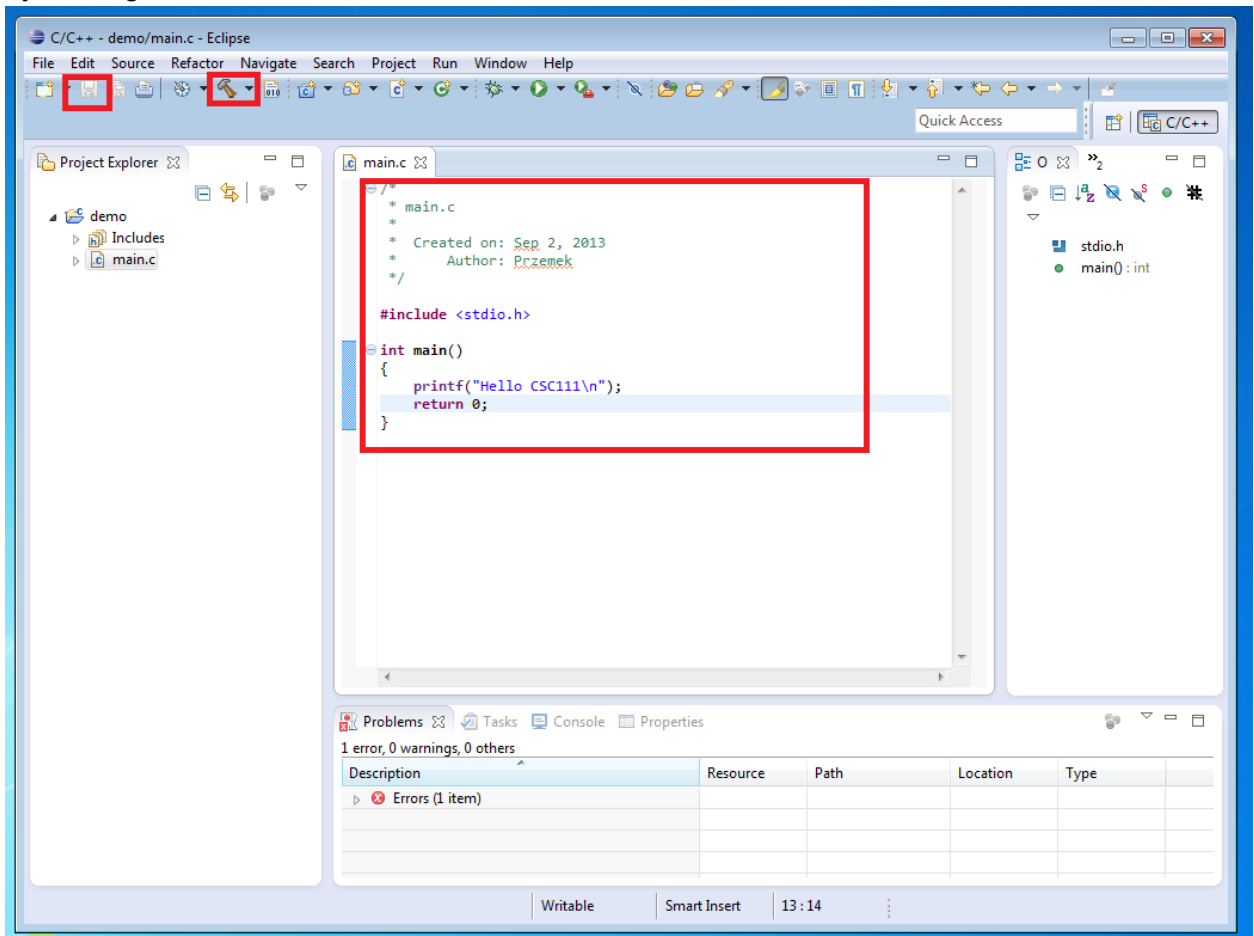


5. Give your file a name, 'main.c' and click 'Finish'

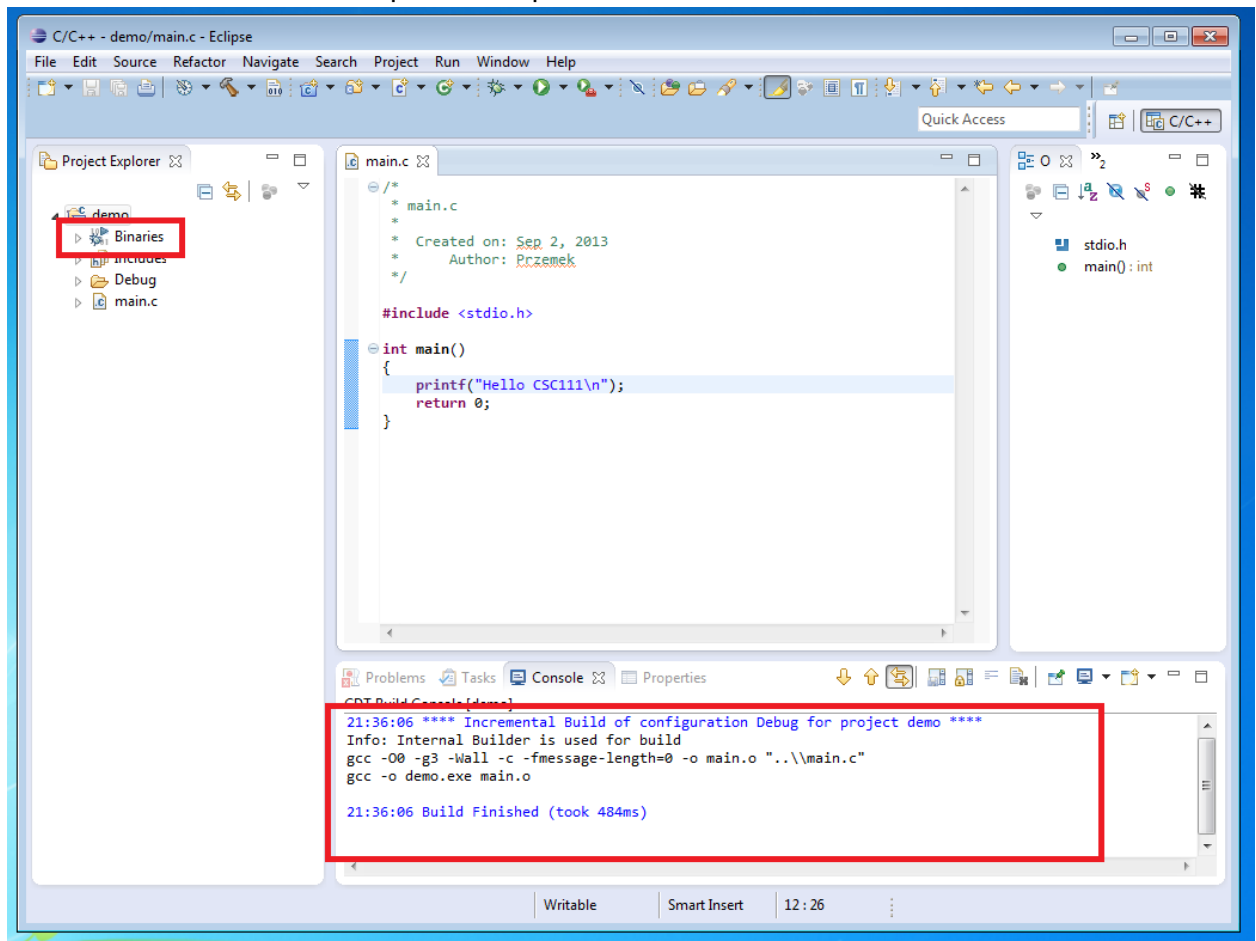




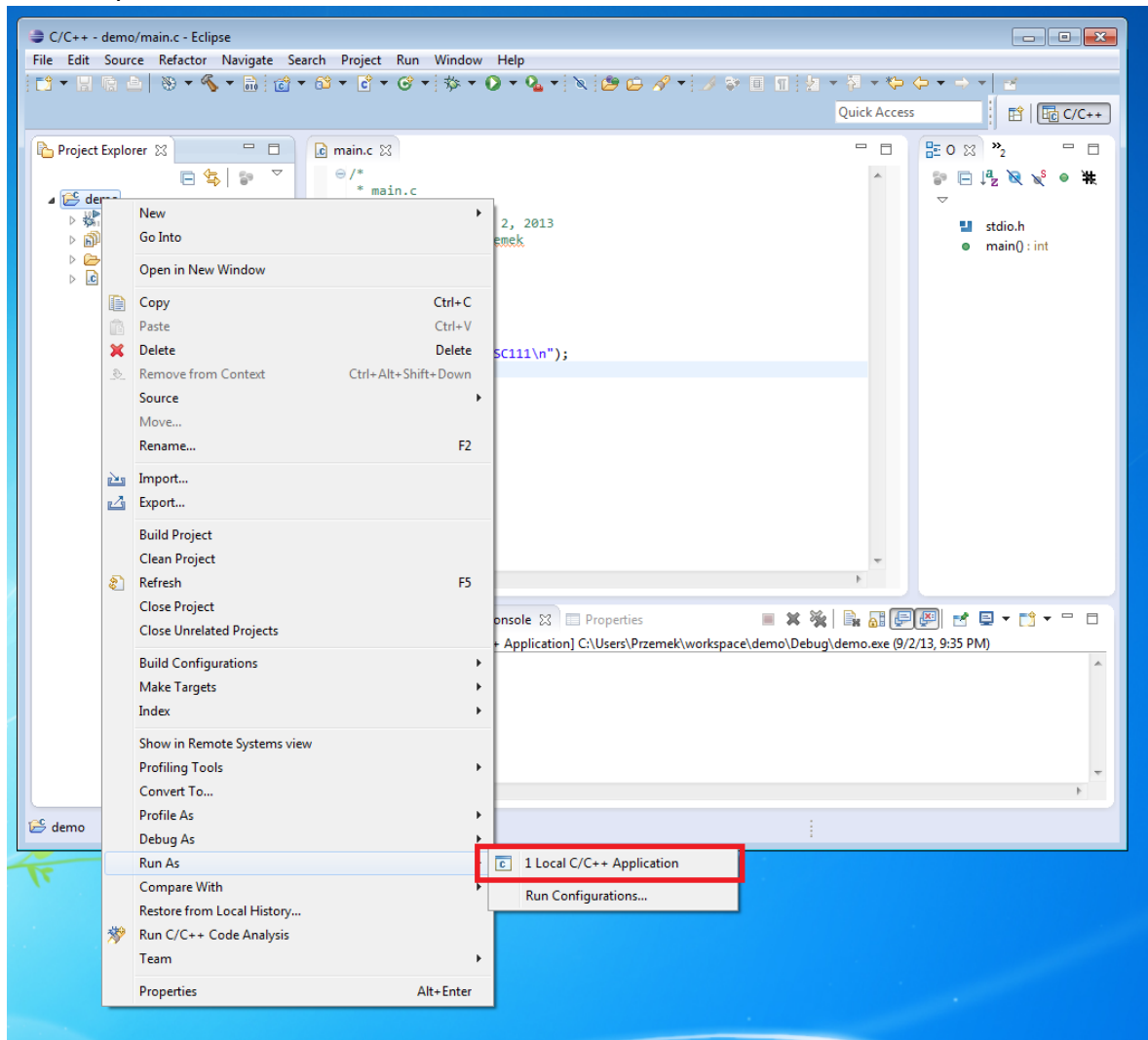
6. Enter the code as shown below, save it by clicking the 'diskette' icon and then compile it by clicking the 'hammer' icon.

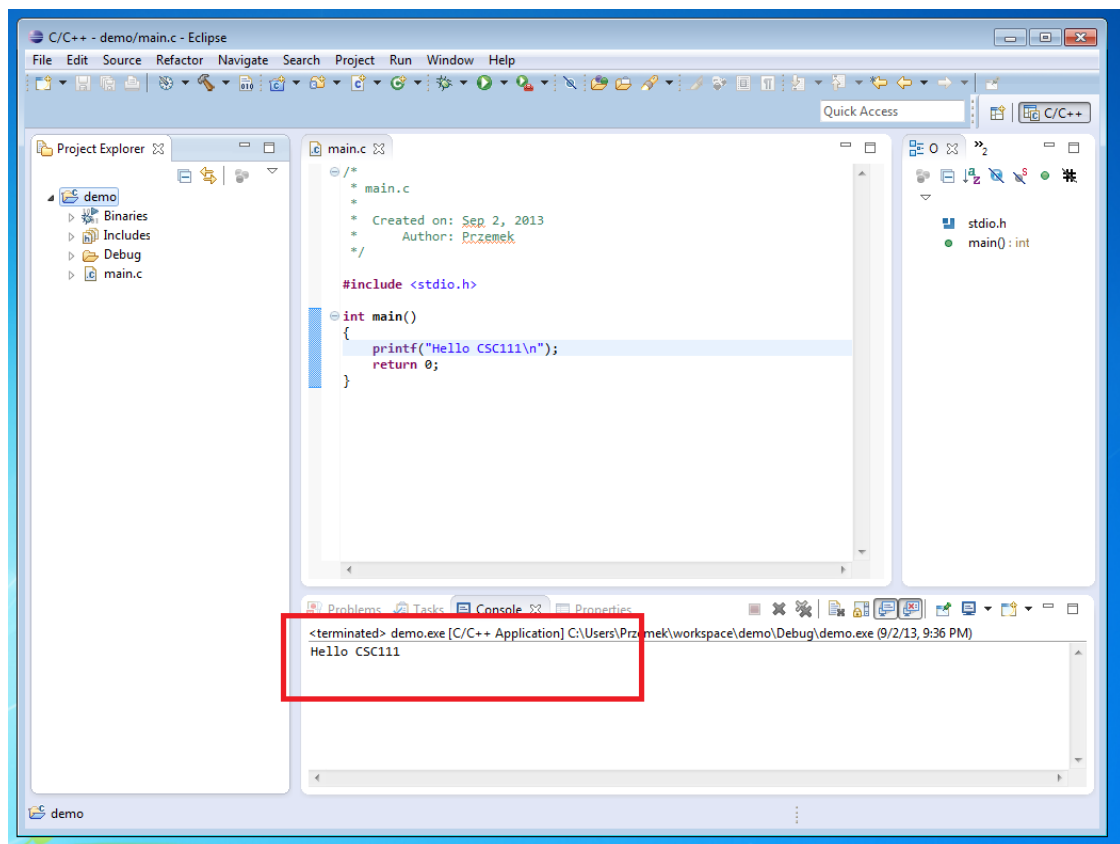


7. If you entered your program correctly there should be no errors at the bottom and you should have a 'Binaries' directory on the left hand side. Ensure you select the 'Console' tab at the bottom to view compilation output.



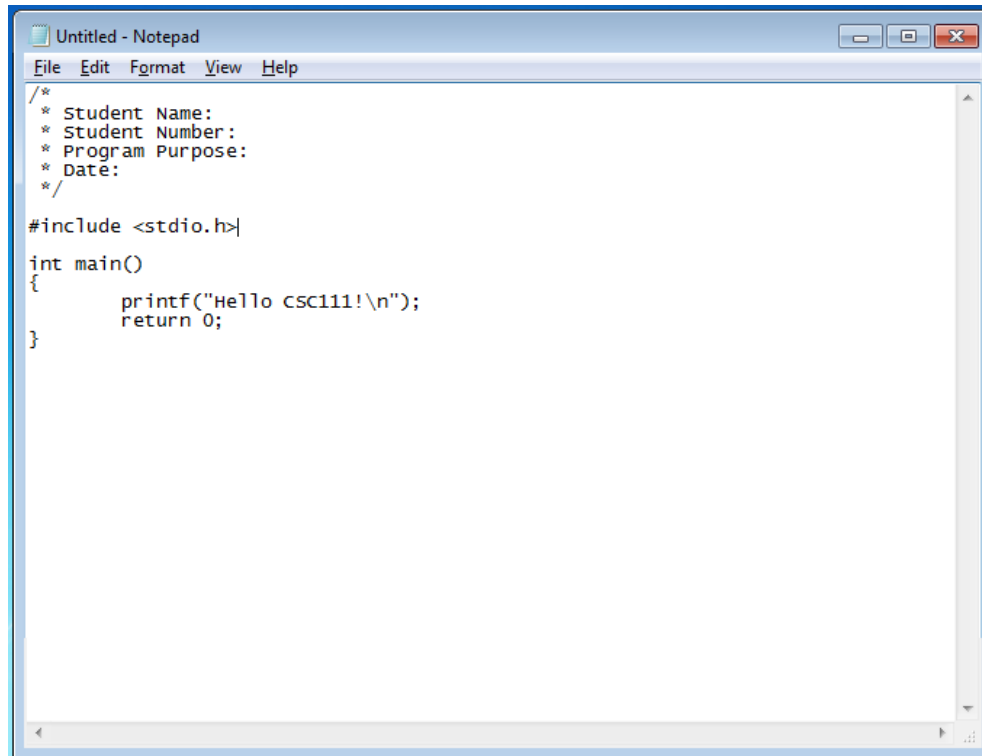
8. To run your program right click on your project and select Run As/1 Local C/C++ Application. NOTE. You will only have to go through this menu the first time. After you've run your application once you can simply click the play button in the toolbar at the top. Your output will be seen in the 'Console' tab at the bottom.





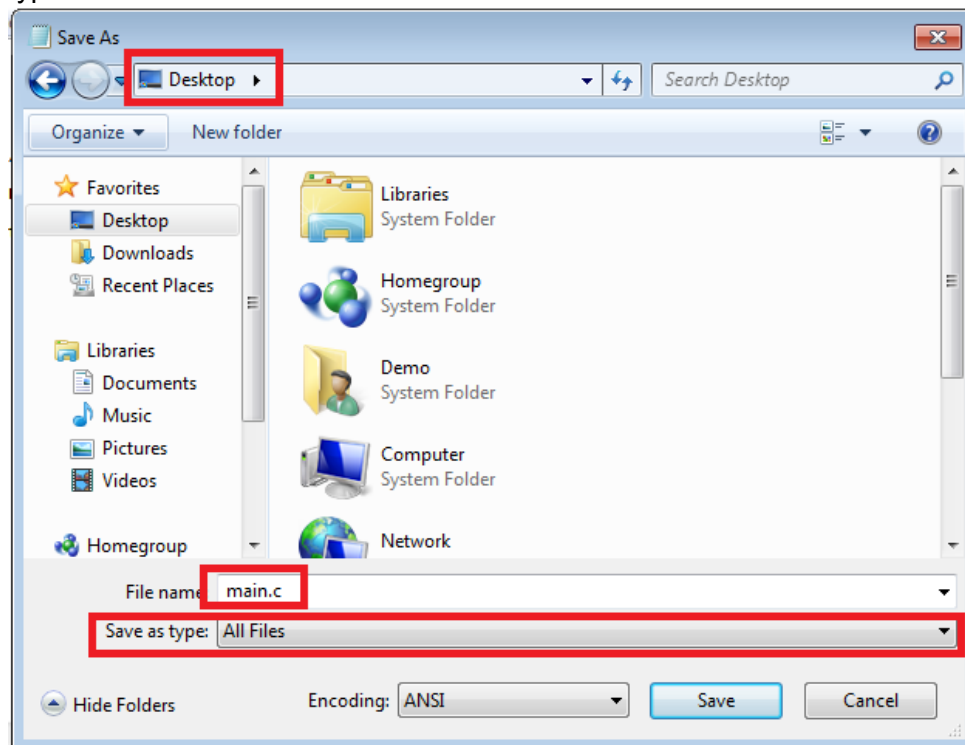
## Running on the Command Line

1. Open Notepad and type the code below.

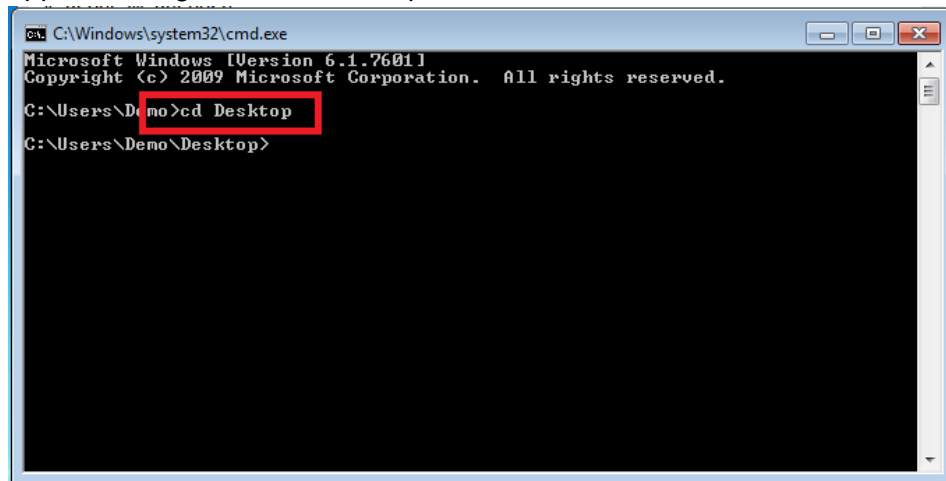
A screenshot of a Notepad window titled 'Untitled - Notepad'. The window has a menu bar with 'File', 'Edit', 'Format', 'View', and 'Help'. The text area contains the following C code:

```
/*  
 * Student Name:  
 * Student Number:  
 * Program Purpose:  
 * Date:  
 */  
  
#include <stdio.h>  
  
int main()  
{  
    printf("Hello CSC111!\n");  
    return 0;  
}
```

2. Save the file to your Desktop as 'main.c'. Ensure that you change the 'Save as type' to 'All Files'.



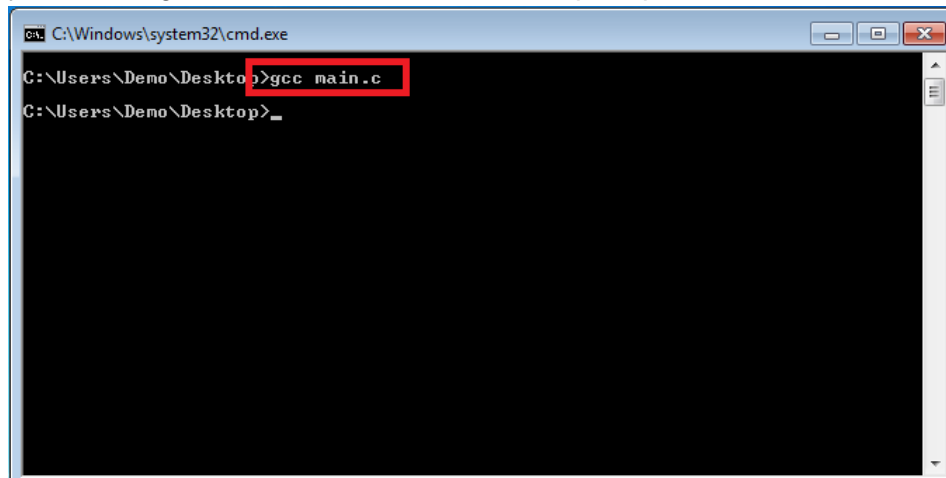
3. From the start menu type 'cmd' and hit enter. The command prompt should appear. Navigate to the desktop.



```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

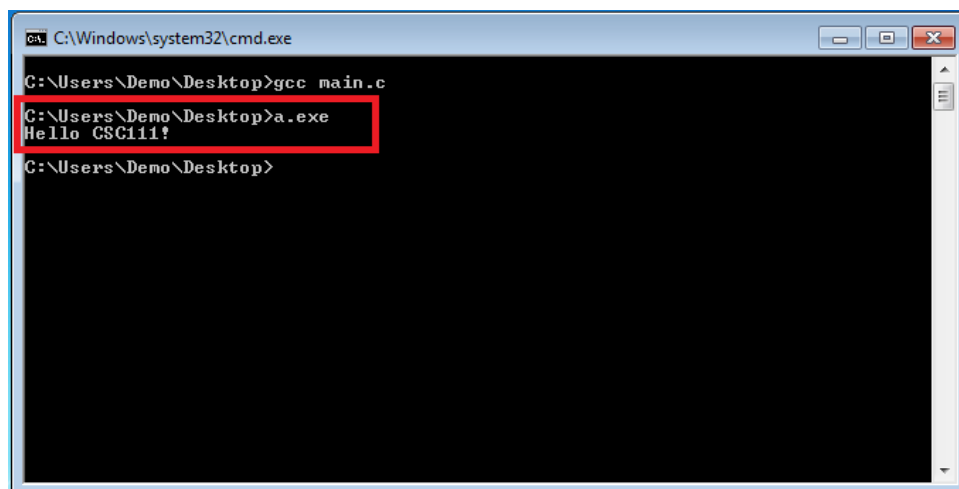
C:\Users\Demo>cd Desktop
C:\Users\Demo\Desktop>
```

4. Type 'gcc main.c' to compile your code. If you entered your program correctly you should get no errors and the command prompt should look as follows.



```
C:\Windows\system32\cmd.exe
C:\Users\Demo\Desktop>gcc main.c
C:\Users\Demo\Desktop>_
```

5. Finally to run your program type 'a.exe'. You should see your welcome message as shown below.



```
C:\Windows\system32\cmd.exe
C:\Users\Demo\Desktop>gcc main.c
C:\Users\Demo\Desktop>a.exe
Hello CSC111!
C:\Users\Demo\Desktop>
```