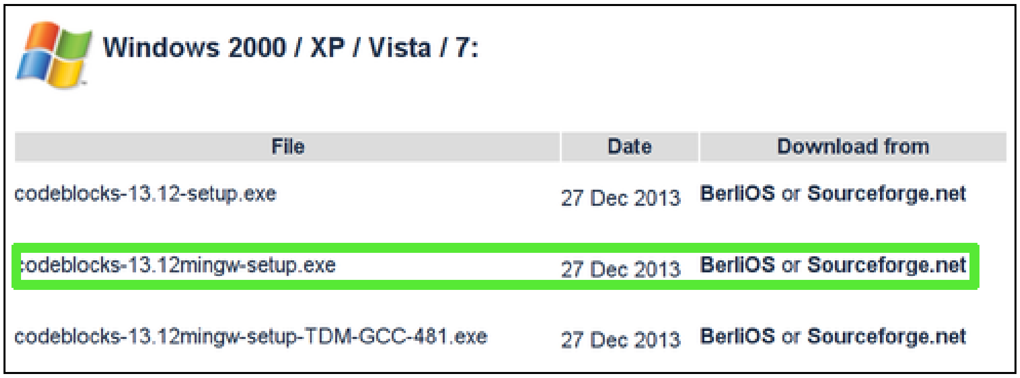
Project 1

due at midnight on Mon Sep 26 (60 points)

For this course, we will use the **Code::Blocks** development environment. It works on Windows, Mac, and Linux.

- For Windows, select the one named codeblocks-VERSION-mingw-setup.exe, and run the installer.



Windows 2000 / XP / Vista / 7:

File	Date	Download from
codeblocks-13.12-setup.exe	27 Dec 2013	BerliOS or Sourceforge.net
:odeblocks-13.12mingw-setup.exe	27 Dec 2013	BerliOS or Sourceforge.net
codeblocks-13.12mingw-setup-TDM-GCC-481.exe	27 Dec 2013	BerliOS or Sourceforge.net

Figure 1: Choose the ‘mingw’ version

- For Mac, there is a file CodeBlocks-VERSION-mac.zip that contains an Application bundle directly. When you run it, it may ask about the compiler to use:
  If it reports that no compilers are available, let me know right away.

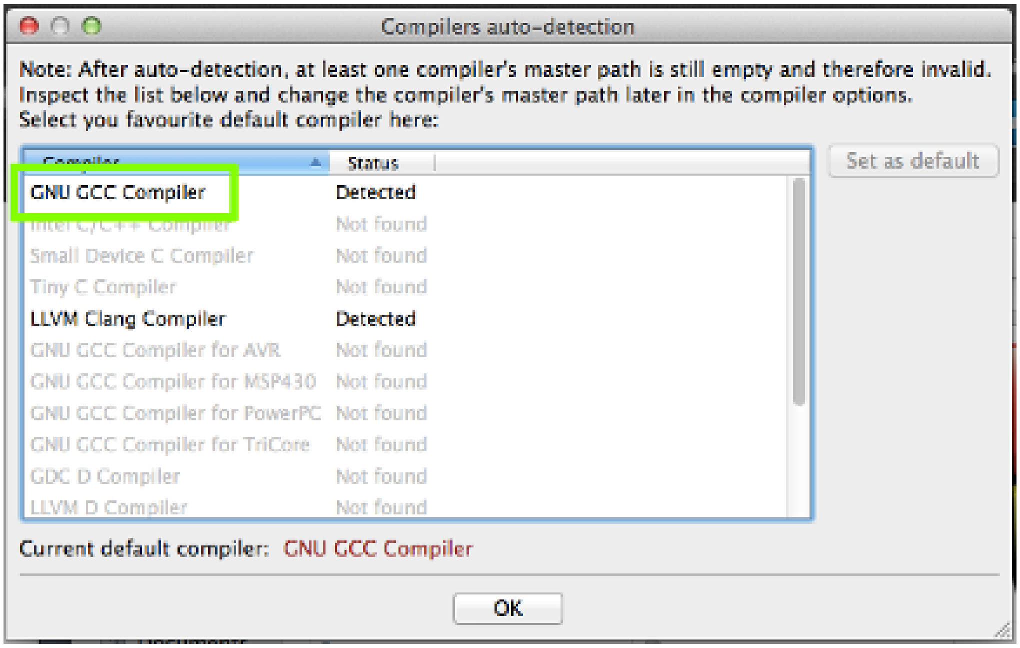
  Note: if CodeBlocks is giving you trouble on the Mac, here are some instructions for using Xcode.

Get started with Code::Blocks

When you start Code::Blocks, you should see this welcome screen, with toolbars above it and a tabbed panel below.

Here is the simplest way to start programming with Code::Blocks:

1. Select **File** » **New** » **Empty file...** from the menu (or hit Shift-Ctrl-N).
2. Select **File** » **Save file** from the menu (or hit Ctrl-S).
3. Navigate to someplace sensible (such as your Desktop or Documents folder), and create a new folder called **CS102**.
4. With that new folder selected, type the File name `hello.cpp` and hit Save.

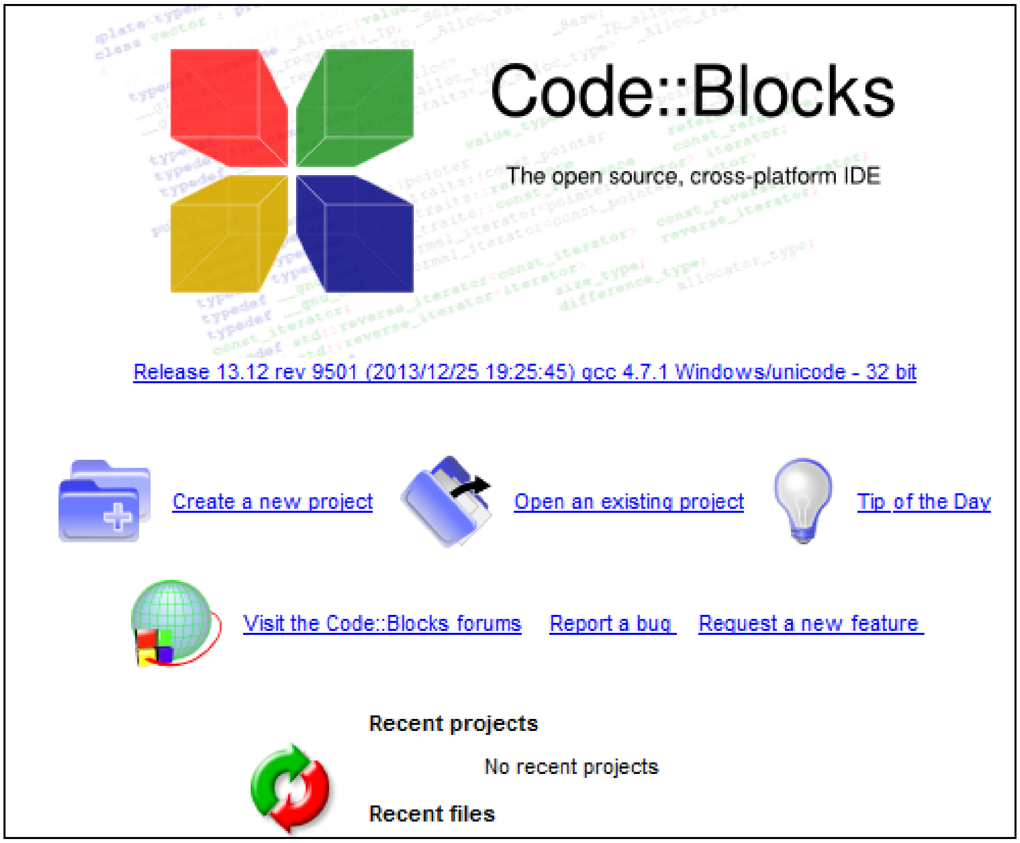


Note: After auto-detection, at least one compiler's master path is still empty and therefore invalid. Inspect the list below and change the compiler's master path later in the compiler options.
Select you favourite default compiler here:

Compiler	Status
GNU GCC Compiler	Detected
Intel C/C++ Compiler	Not found
Small Device C Compiler	Not found
Tiny C Compiler	Not found
LLVM Clang Compiler	Detected
GNU GCC Compiler for AVR	Not found
GNU GCC Compiler for MSP430	Not found
GNU GCC Compiler for PowerPC	Not found
GNU GCC Compiler for TriCore	Not found
GDC D Compiler	Not found
LLVM D Compiler	Not found

Current default compiler: GNU GCC Compiler

Figure 2: Choose GNU GCC compiler



Release 13.12 rev 9501 (2013/12/25 19:25:45) gcc 4.7.1 Windows/unicode - 32 bit

Recent projects

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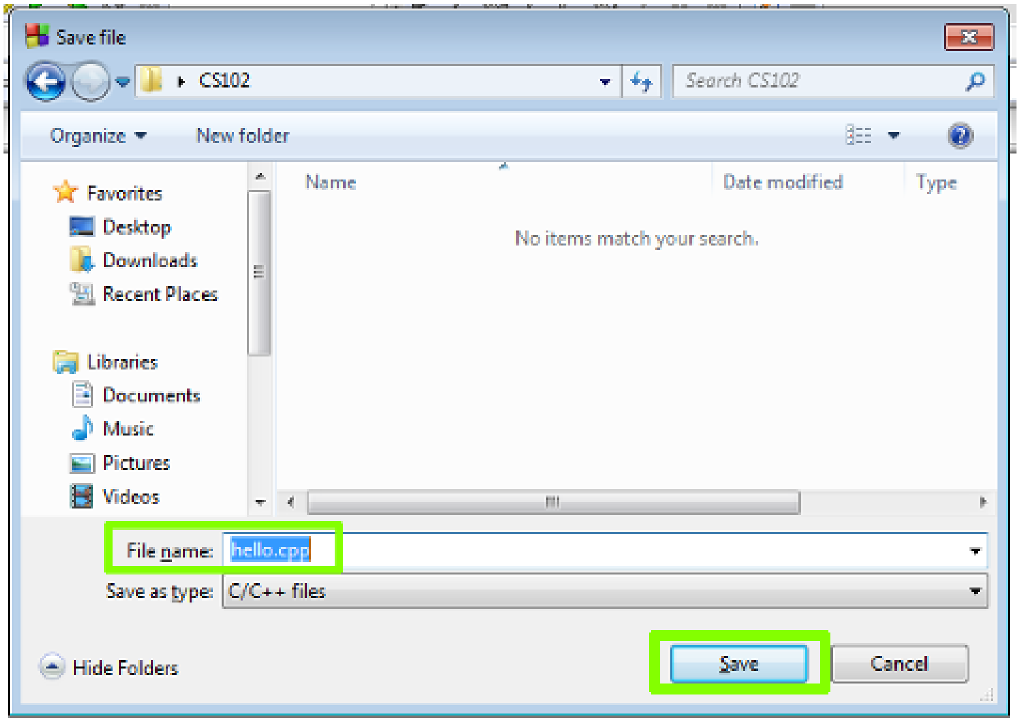
Figure 3: Code::Blocks Start Here



File name: hello.cpp

Save as type: C/C++ files

Figure 4: Save hello.cpp

5. Now you can begin typing your first program into Code::Blocks. Below is an example you can use.

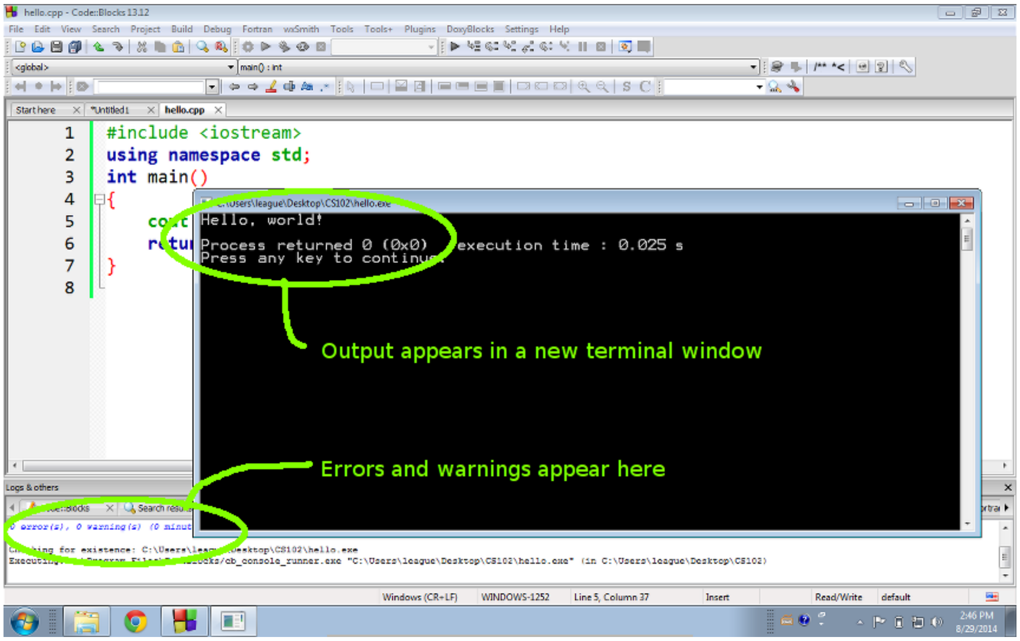
```
#include <iostream>
using namespace std;
int main()
{
    cout << "Hello, world!" << endl;
    return 0;
}
```

   As you type, the environment will offer possible completions of identifiers and keywords. You can use the arrow keys to select them, or just ignore the prompt. By default, it also inserts matching delimiters for you, such as entering both { and } when you just type {.

6. Save the file again, using Ctrl-S.

7. Now, select **Build** » **Build and run** from the menu, or press F9.

8. Once your “hello world” program is working, you can move on to the next section.



```
#include <iostream>
using namespace std;
int main()
{
    co t
    r tu
}
```

C:\Users\league\Desktop\CS102\hello.exe

```
Hello, world!

Process returned 0 (0x0)   execution time : 0.025 s
Press any key to continue.
```

Output appears in a new terminal window

Errors and warnings appear here

```
0 error(s), 0 warning(s) (0 minut
Ch  king for existence: C:\Users\leag   Desktop\CS102\hello.exe
Executing:   Program Files\   blocks/cb_console_runner.exe "C:\Users\league\Desktop\CS102\hello.exe" (in C:\Users\league\Desktop\CS102)
```

Figure 5: Output after build and run

Write a program to calculate age

Create a program that declares and initializes two integer variables:

- `birthYear`, which represents the year in which you were born
- `currentYear`, which represents the current year (2016)

The the program should do a calculation and print a message like this:

```
You turn 19 in 2016.
```

In this example output, we had `currentYear` set to 2016, and `birthYear` set to 1997.

Your program should adjust its output, however, depending on the values of those variables. For example, if I go into your program and change `currentYear` to 2254 and leave `birthYear` as 1997, it should say:

```
You turn 257 in 2254.
```

Submit your program

Please save your program as `p1age.cpp`, using all lower-case and no spaces. Then upload *just that file* to this dropbox for project 1.