

CSE 1061 Fundamentals of Programming

Lecture #2

Spring 2015

Computer Science & Engineering Program
The School of EE & Computing
Adama Science & Technology University



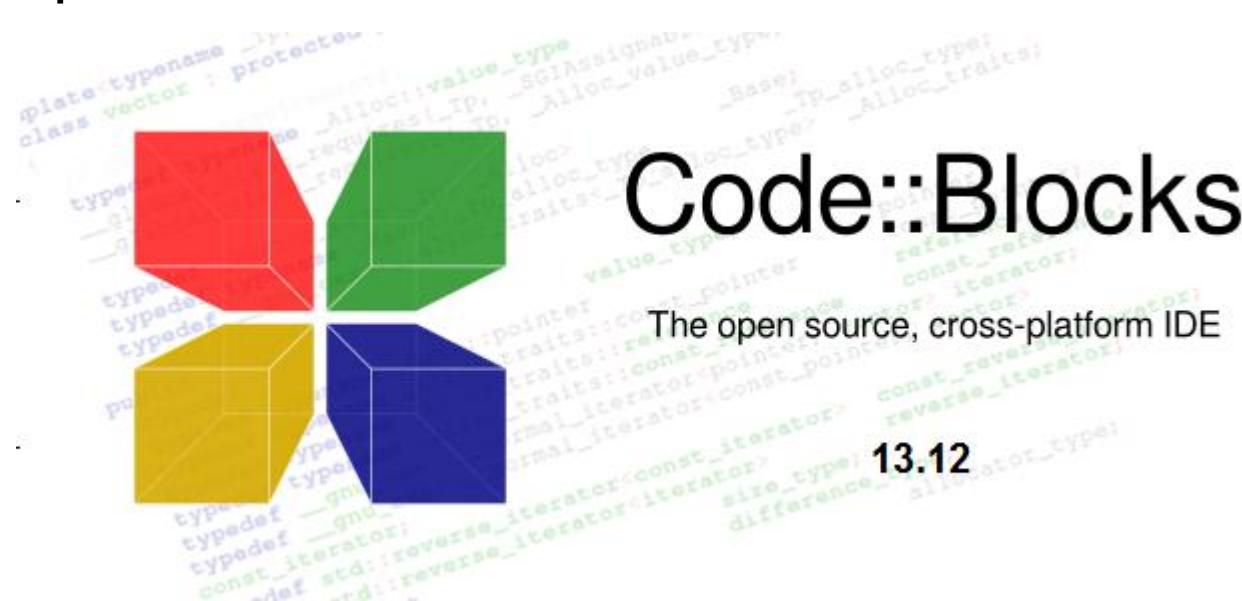
Getting Familiar with the C++ Environment

- Software Requirement
- Opening an IDE
- Creating new Project
- Workspace and Projects manager
- Changing Code Blocks Settings
- Our First C++ Program



- A C++ Compiler
 - **GCC(MinGW) Compiler<=Preferred**
 - Microsoft Visual C++ 2010
 - Borland C++ Compiler 5.82
- An IDE
 - **Code Blocks<=Preferred**
 - Microsoft Visual C++ 2010 Express Studio
 - Turbo C++

- IDE= Integrated Development Environment
 - A set of programming tools for writing applications (source code editor, compiler, linker, debugger, etc.), all activated from a common user interface and menus.
 - Open Code Blocks



The Environment



ASTU

Start here - Code::Blocks 13.12

File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help

Management X
Projects Symbols Files >
Workspace

Start here X

Code::Blocks
The open source, cross-platform IDE

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

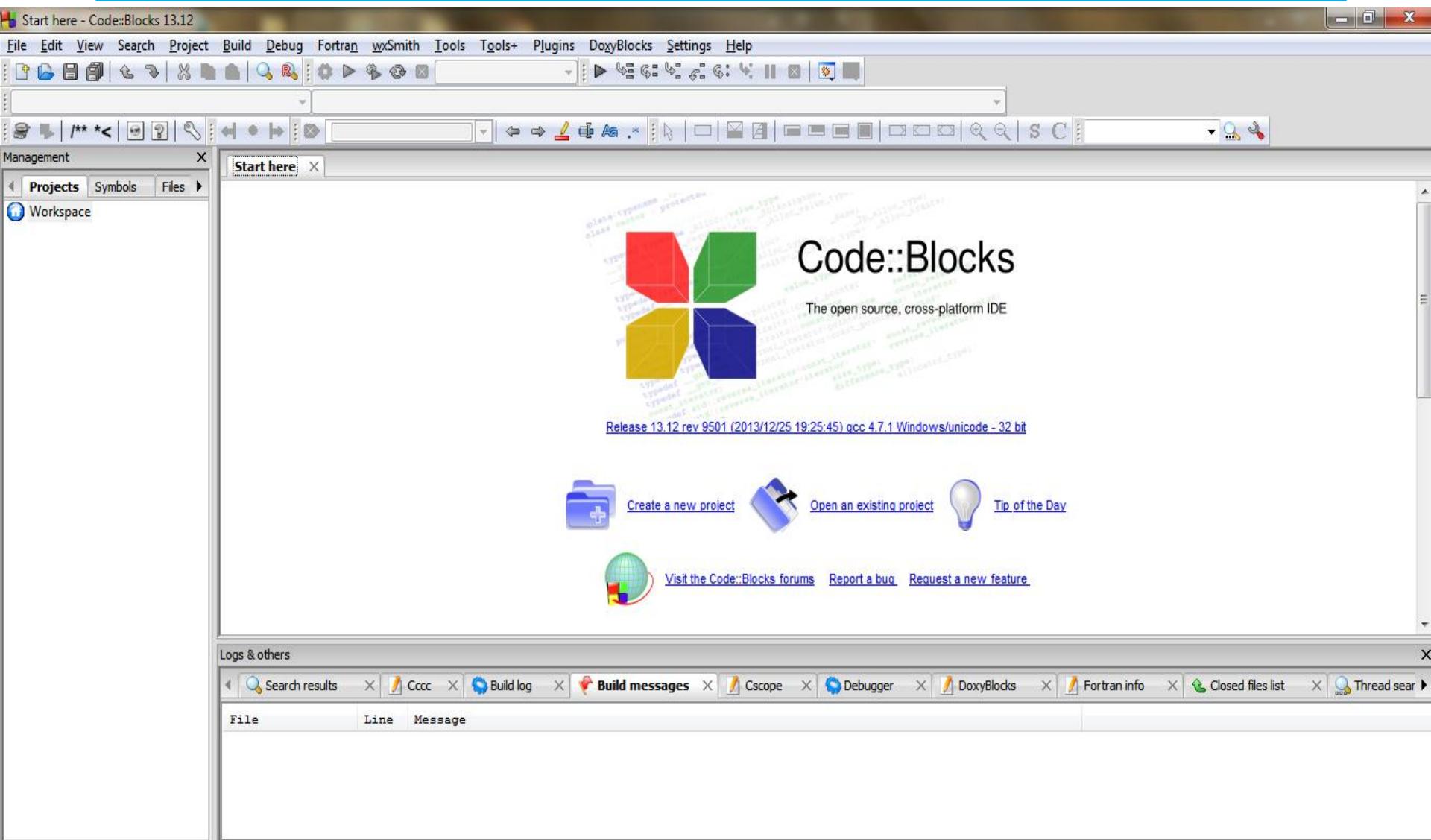
Create a new project Open an existing project Tip of the Day

Visit the Code::Blocks forums Report a bug Request a new feature

Logs & others

Search results Ccc Build log Build messages Cscope Debugger DoxyBlocks Fortran info Closed files list Thread search

File Line Message

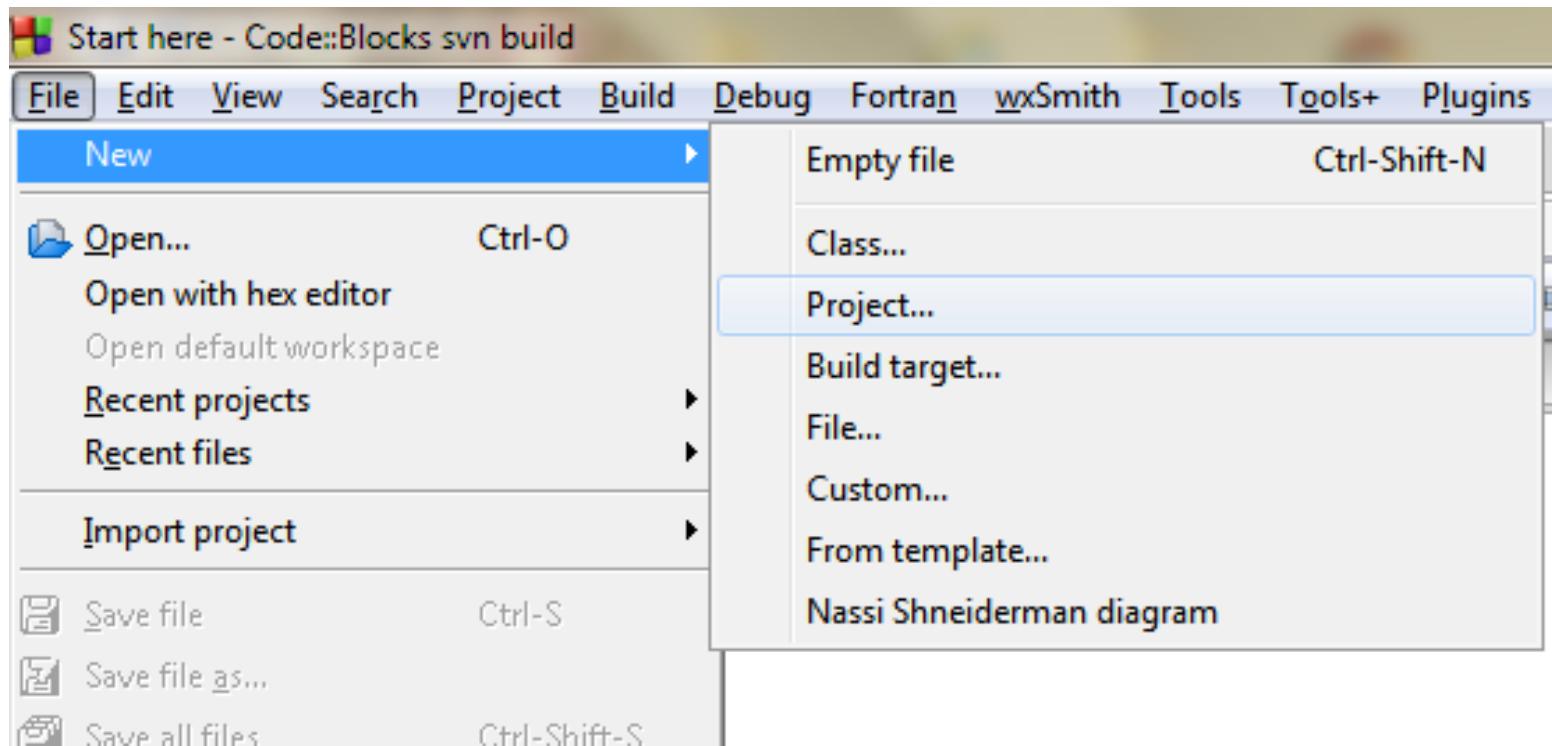


Create a new Project

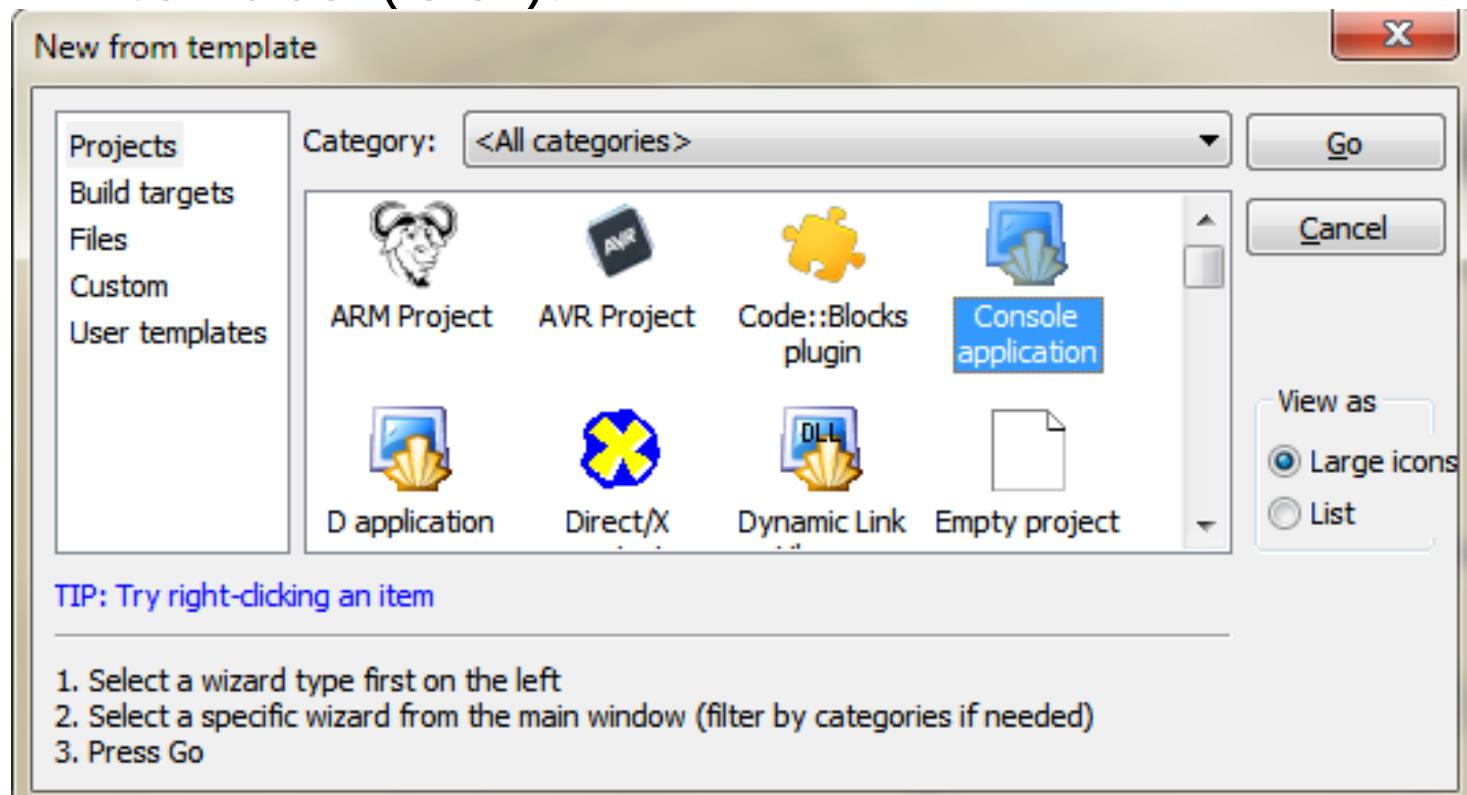


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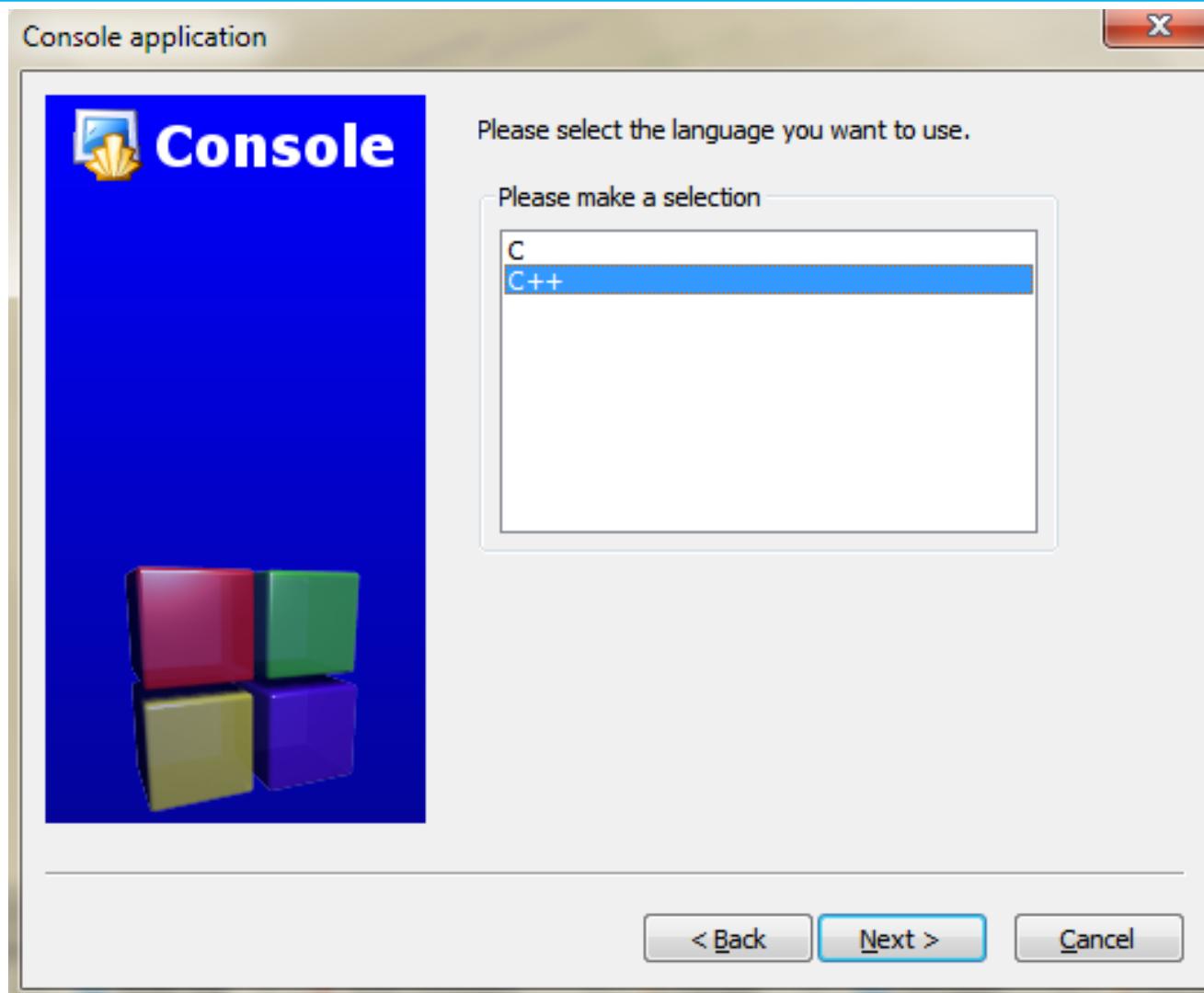
- An *application* is a runnable program.
Most applications are built from multiple source files.
 - Code::Blocks keep track of the files and compiler settings need to build an application with a *project* file



- We use Console Applications
 - An application that uses the command line for input and output rather than a graphical interface (GUI).

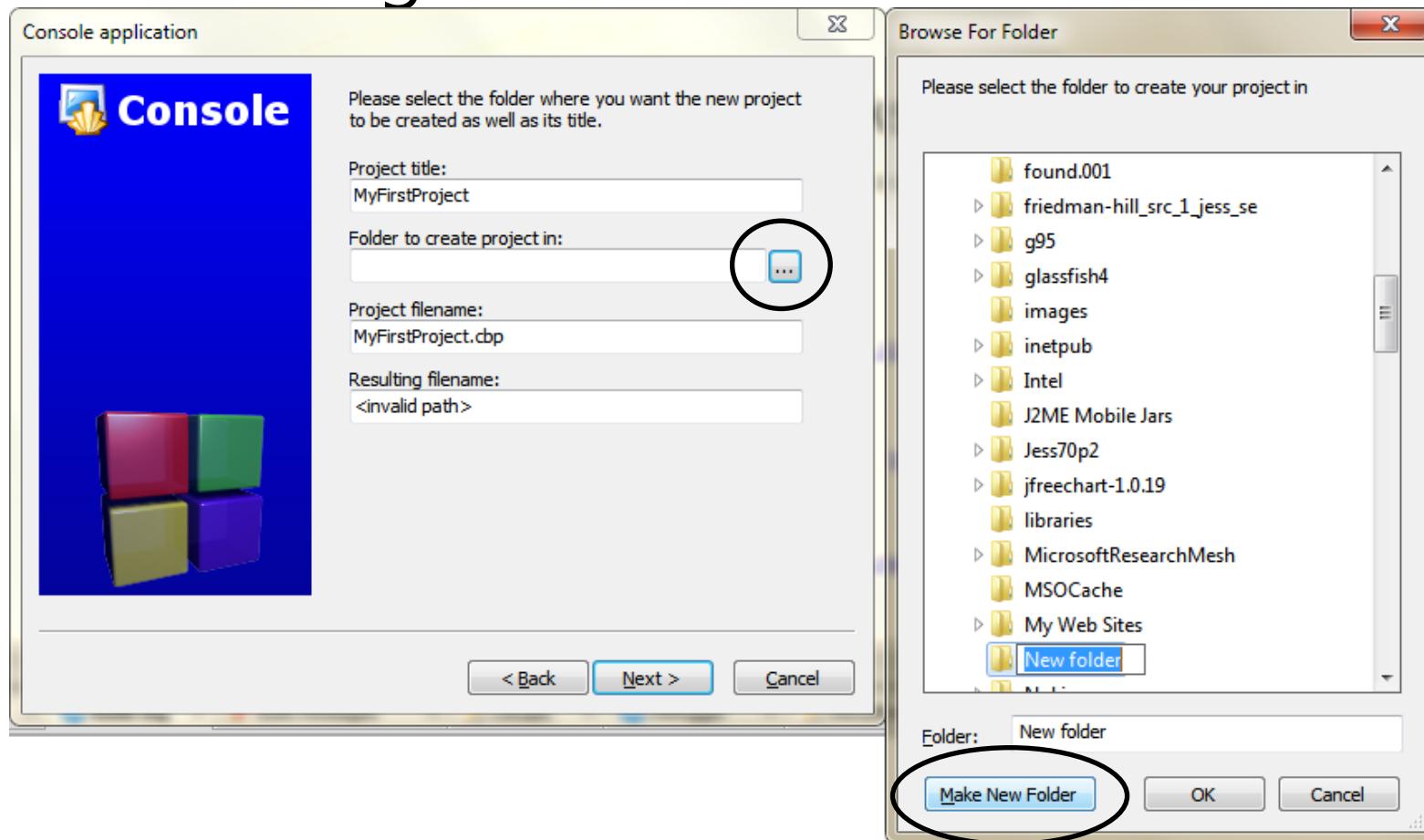


The Console Application Wizard

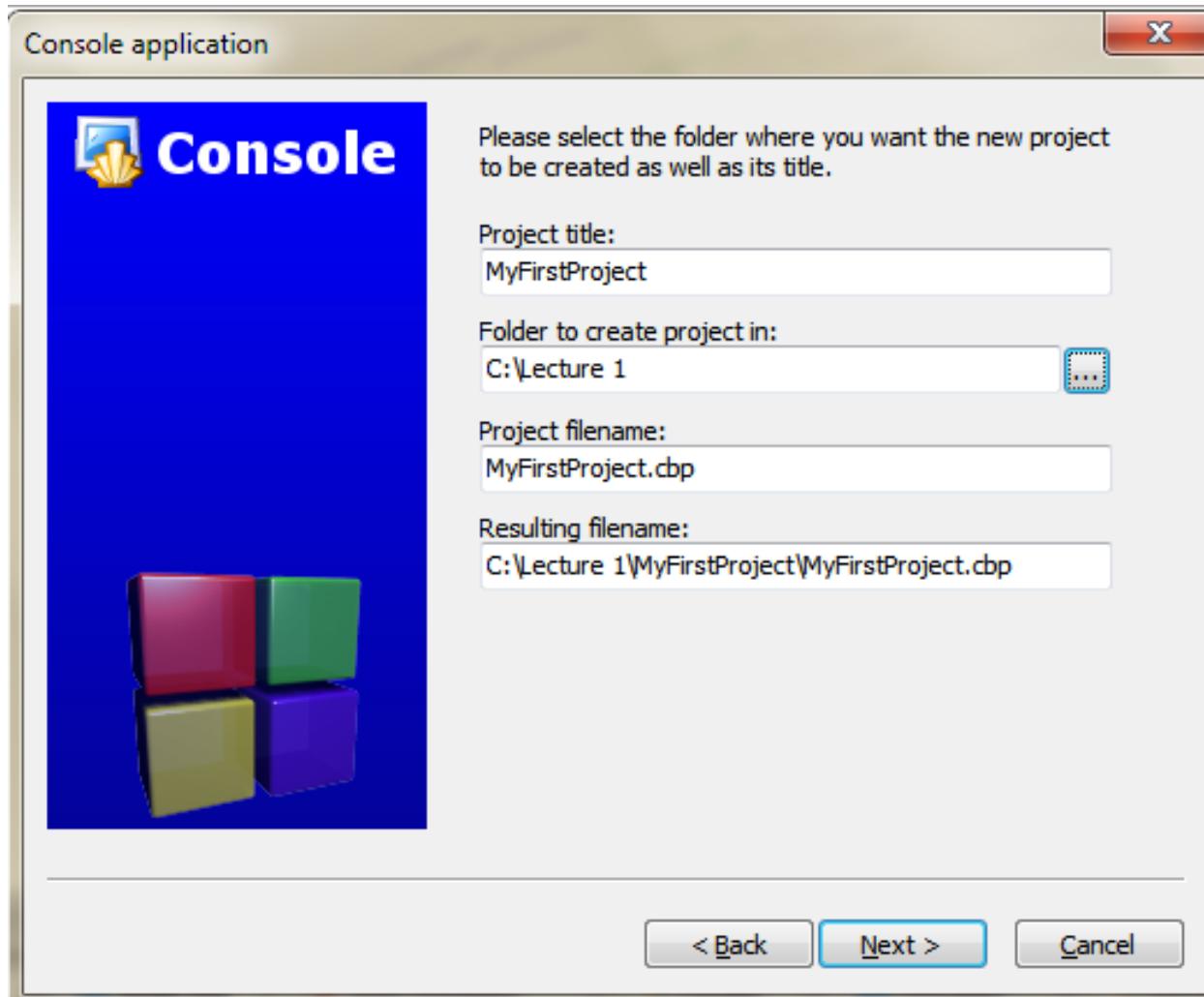


Project Properties

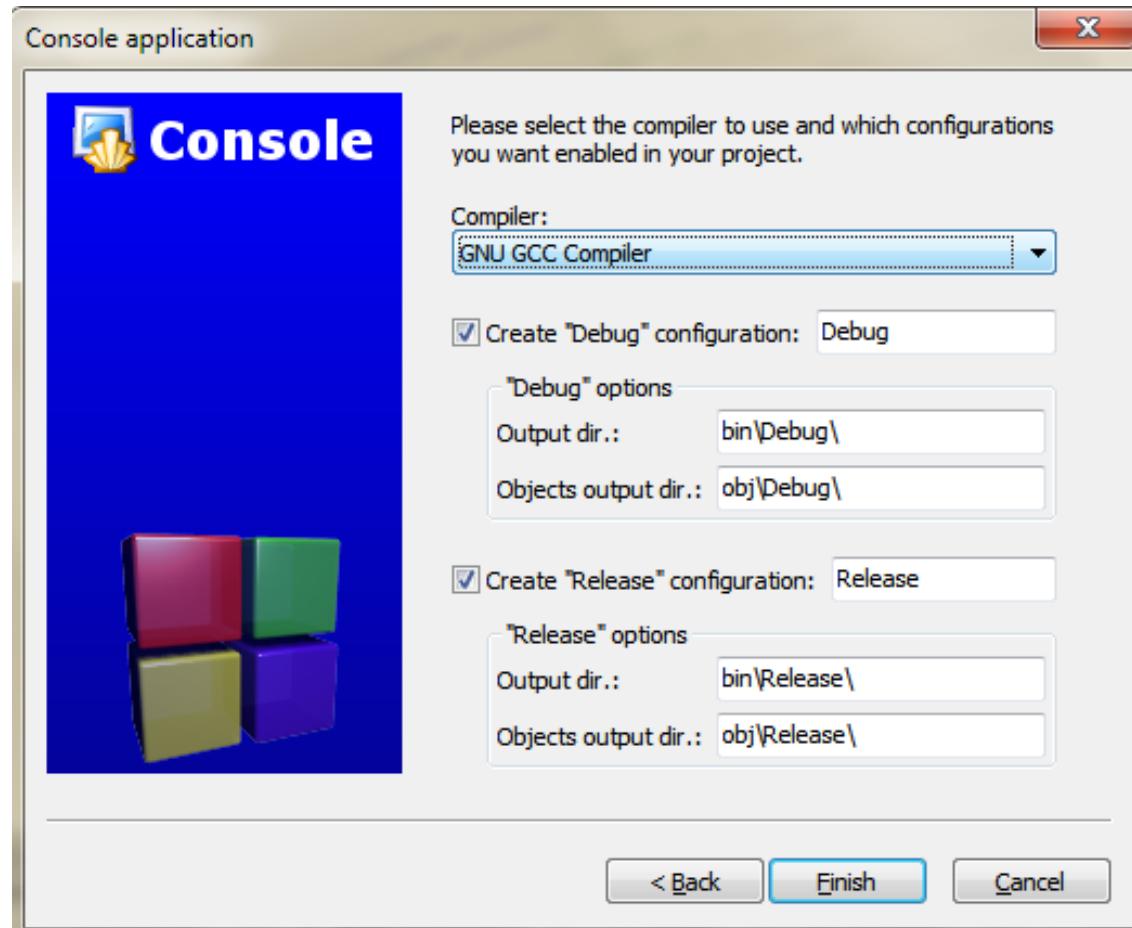
- Give descriptive project title
- Create a folder on c: drive(preferred) or use existing folder



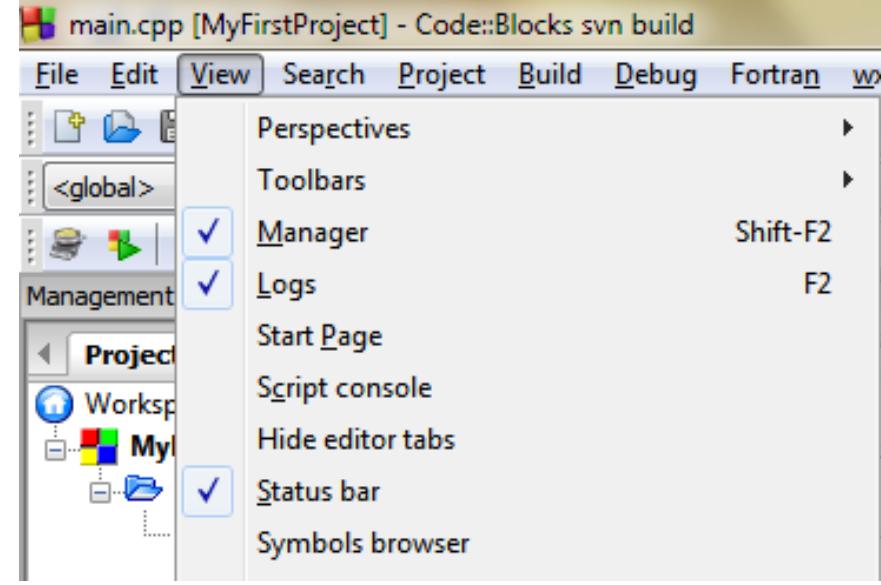
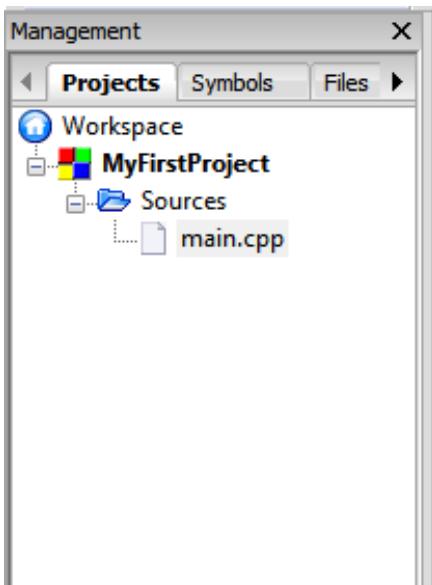
• Cbp=Code Blocks Project



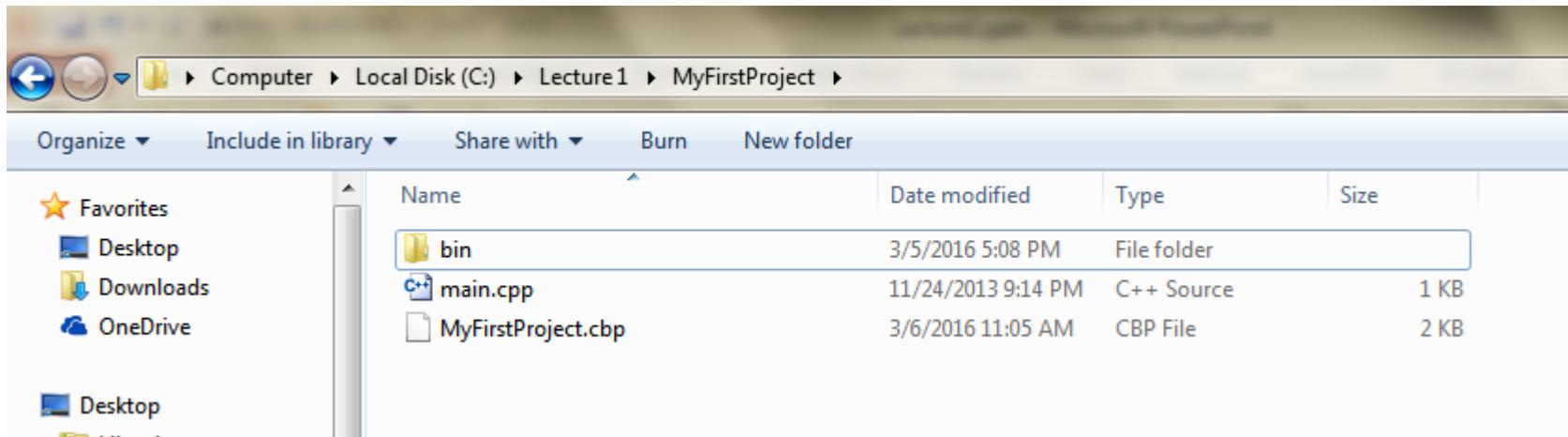
Select Compiler



- Workspace collects projects together
 - where you can easily switch between projects
- The Projects are listed on the Manager
 - One sample c++ source file is inserted
- Can't see Manager?
 - make sure it is checked on the view menu

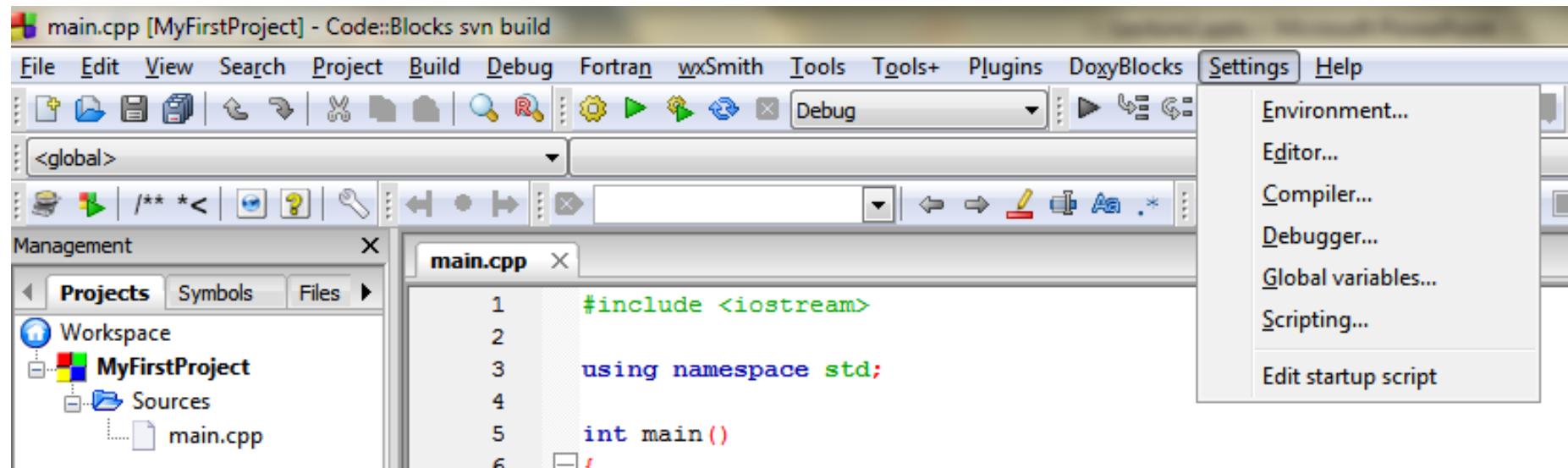


- View your Project in Windows Explorer



Settings

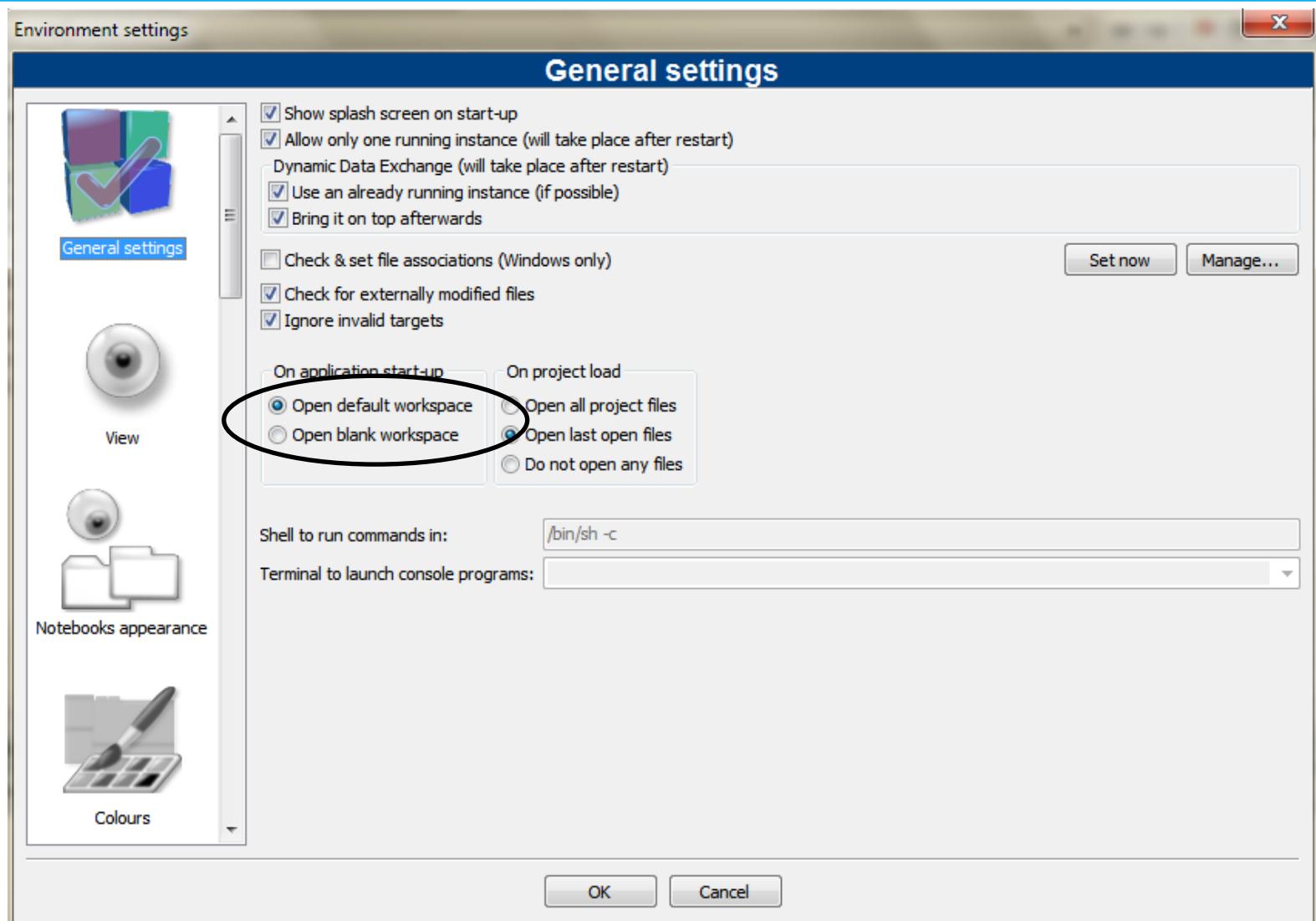
- We can change settings as desired



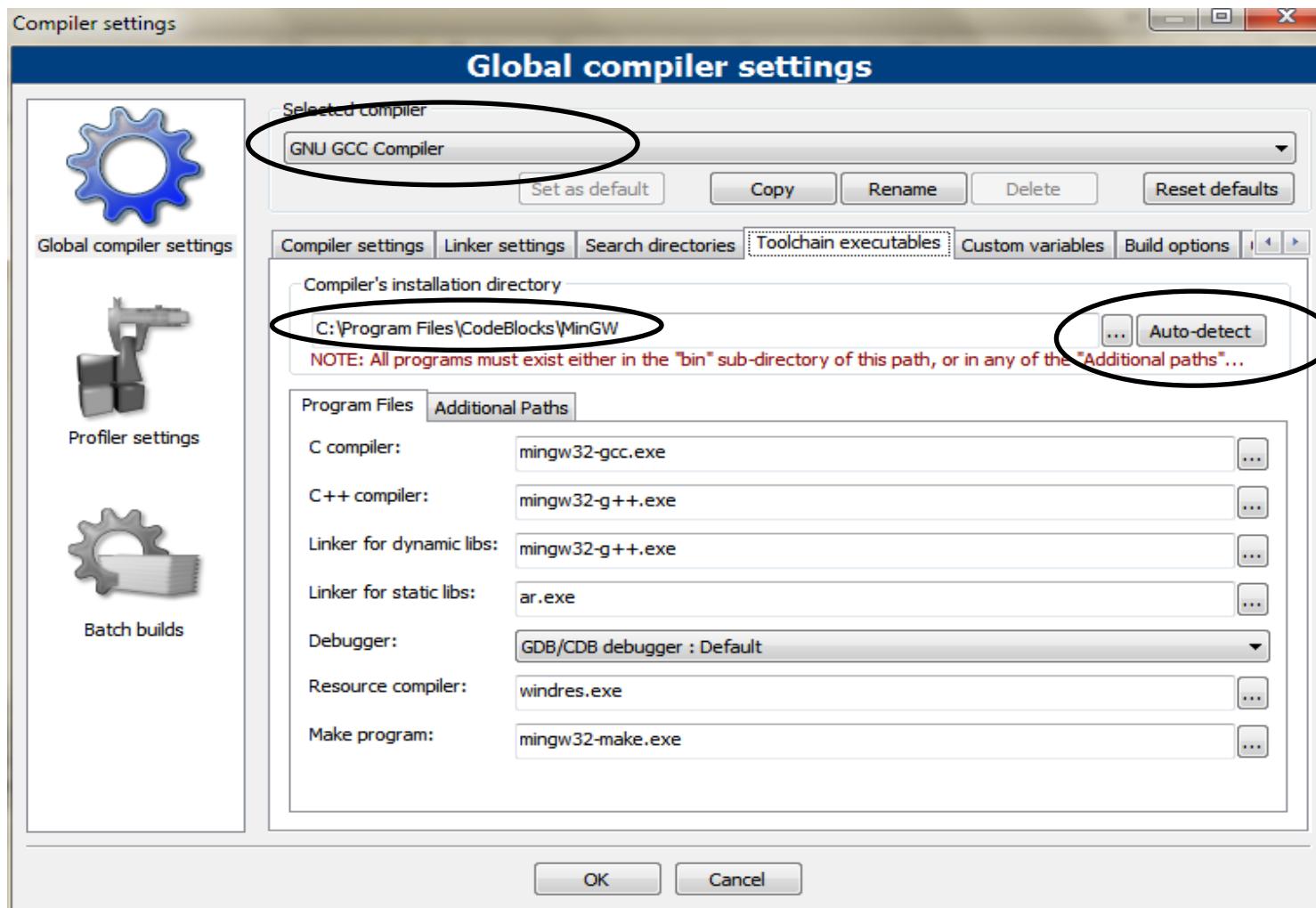
Environment Setting



ASTU



- Don't change this if you didn't install additional compilers separately



Our First C++ Program

```
main.cpp X

1 #include <iostream>
2
3 using namespace std;
4
5 int main()
6 {
7     cout << "Hello world!" << endl;
8     return 0;
9 }
10
```



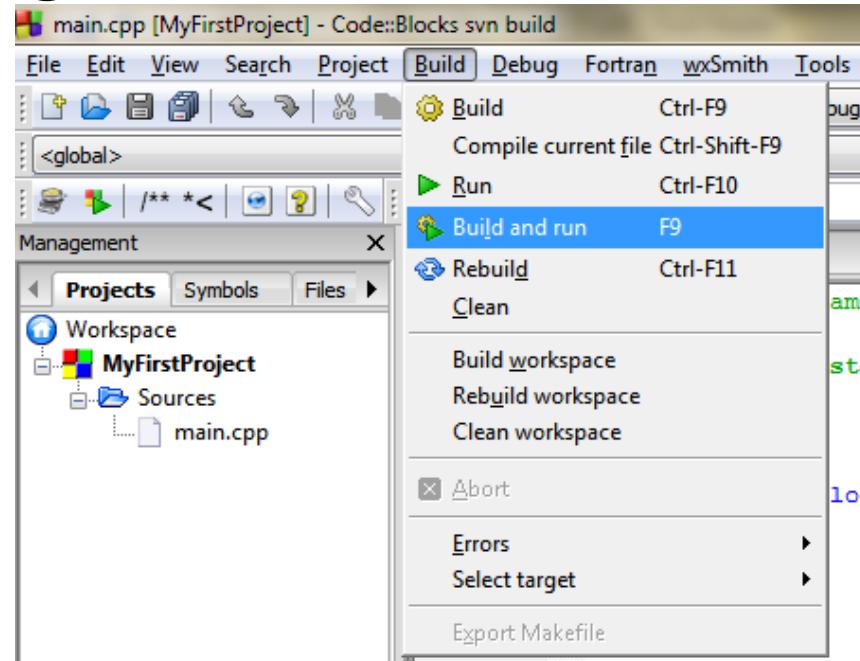
- A namespace is a collection of name definitions.
 - One name, such as a function name, can be given different definitions in two namespaces.
 - A program can then use one of these namespaces in one place and the other in another location.

- All the standard libraries we will be using place their definitions in the **std(standard) namespace.**
 - It is almost impossible to write a C++ program without using at least one of these libraries.
- To use any of these definitions in your program, you must insert the following using directive:
using namespace std;

- For example, the library for console I/O is **iostream**. So, most of our demonstration programs will begin
#include <iostream>



- **Build:** The source program will be compiled and linker links the object files created by the compiler into an executable
- **Run:** The program will be in memory





- We can change the color and Font of the console
 - Right click on the title bar
 - Choose properties

