

# C++ Programming

## Project creation on Codeblocks

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*Teaching, Training and Coaching since more than a decade!*

*Artificial Intelligence & Computer Vision Researcher*

*PhD from Simon Fraser University - Canada*

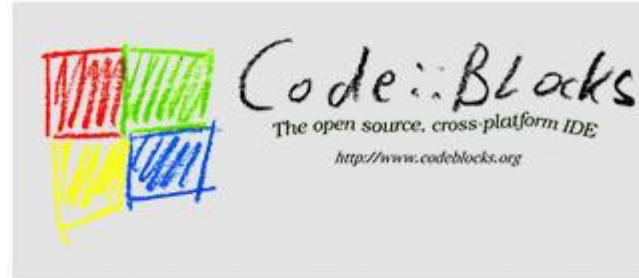
*Bachelor / Msc from Cairo University - Egypt*

*Ex-(Software Engineer / ICPC World Finalist)*



# Project Creation

- Launch it



[Release 12.11 rev 8629 \(2012/11/28 11:40:31\) 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](#)

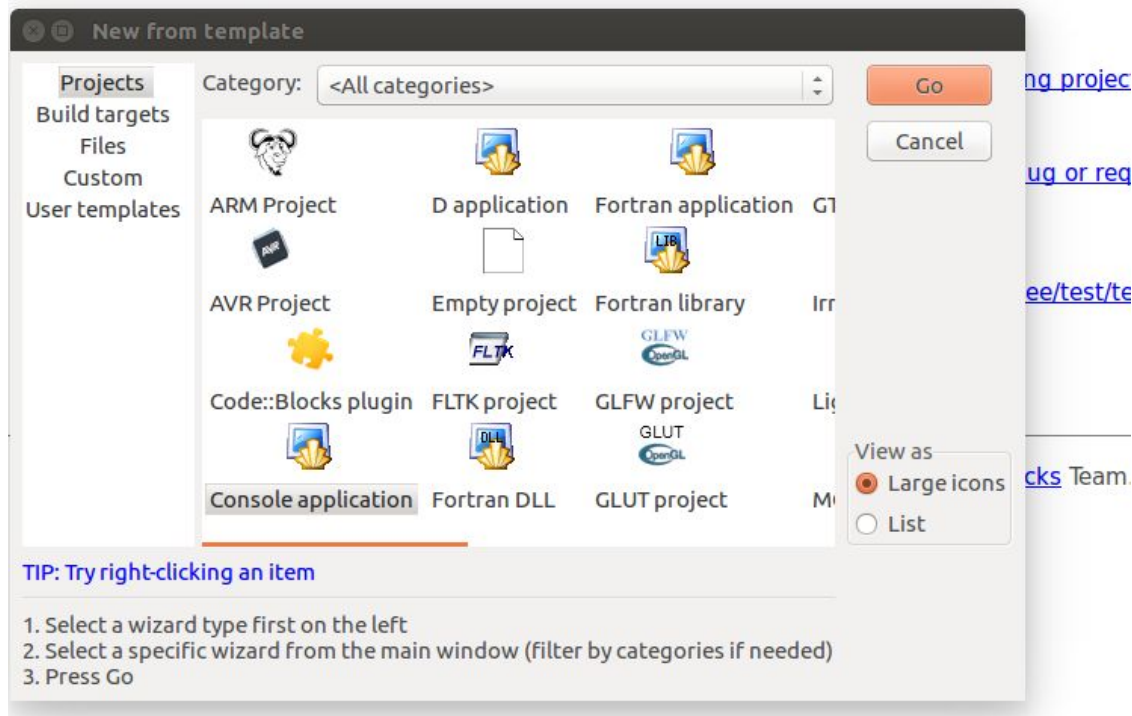
[Report a bug](#)

[Request a new feature](#)

# Project Creation

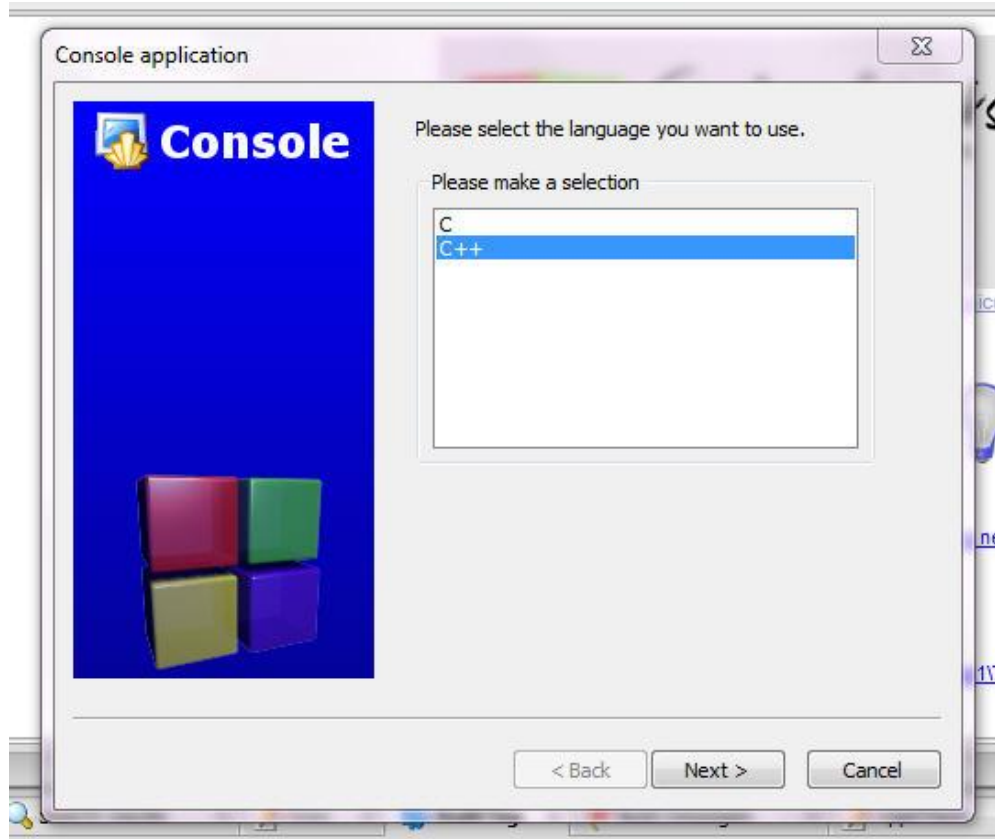
- Select Console App

Release 16.01 rev 10760 (2016-02-01 01:39:02) gcc 5.3.1



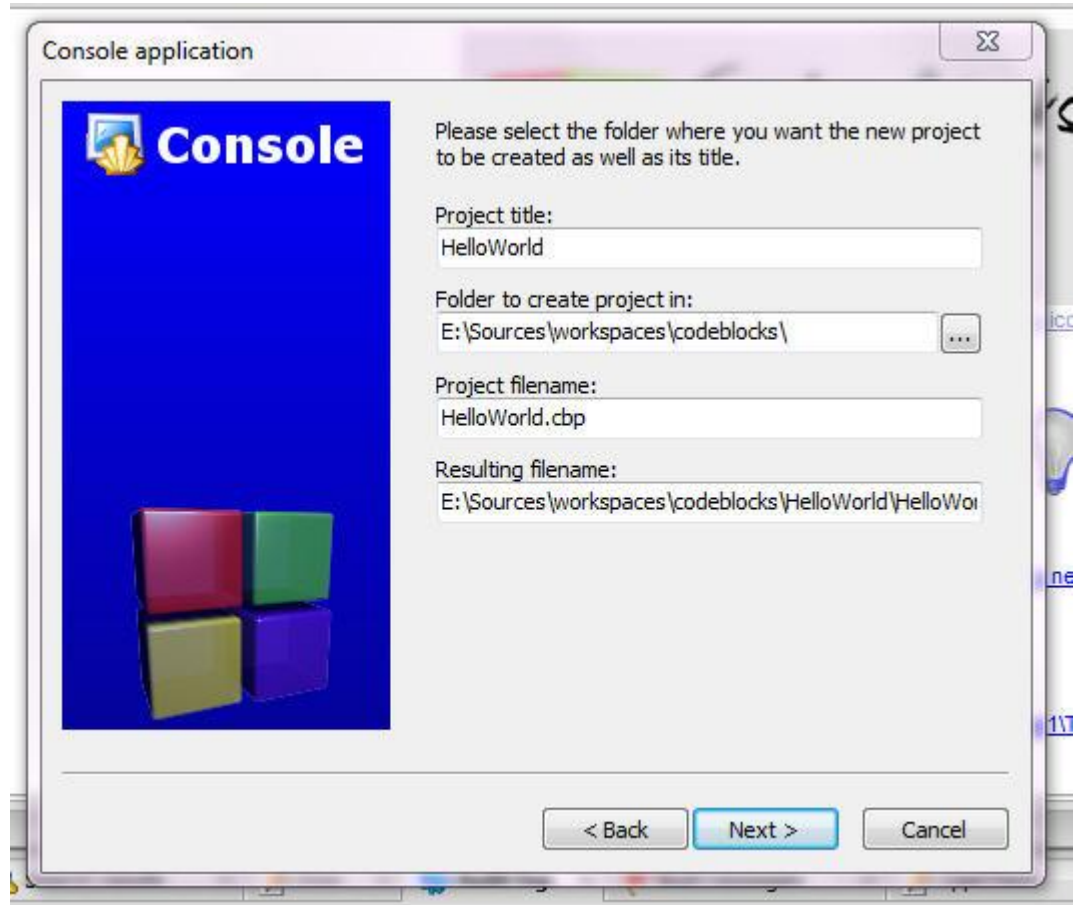
# Project Creation

- C++



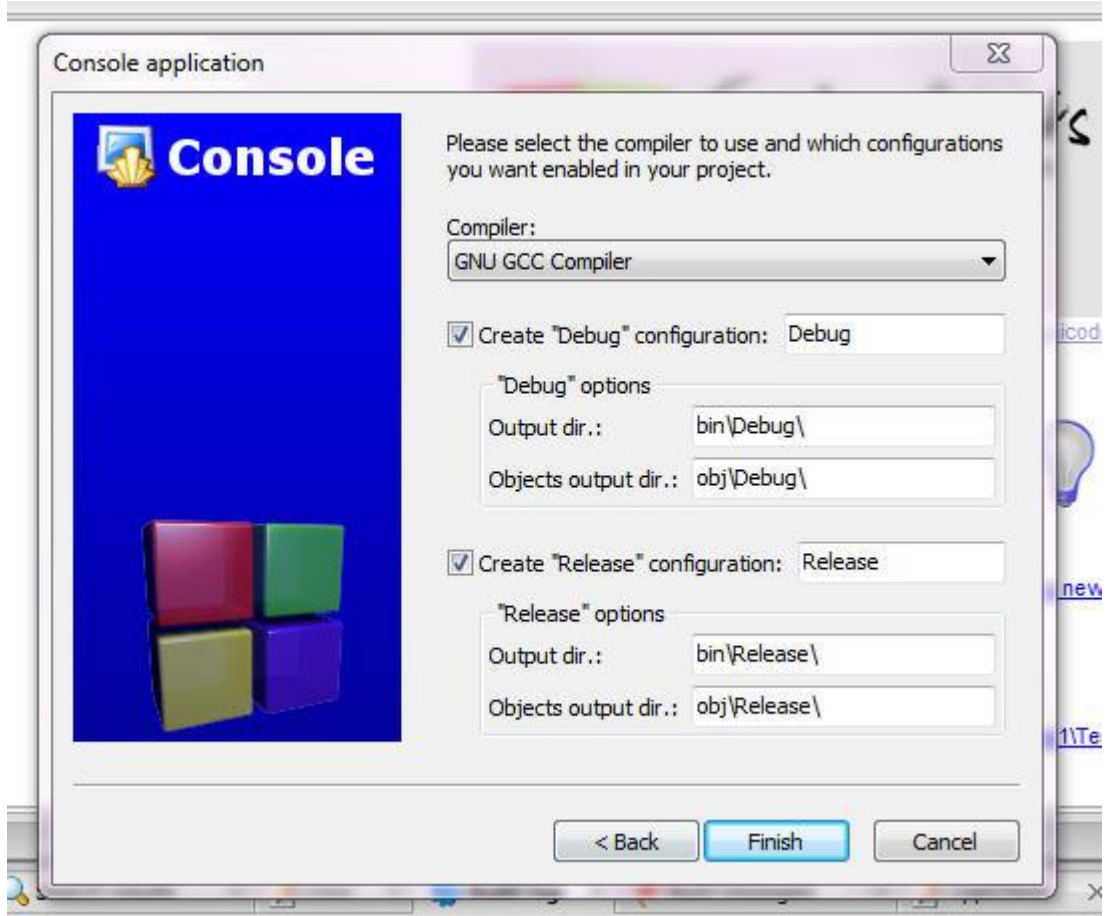
# Project Creation

- NO SPACES



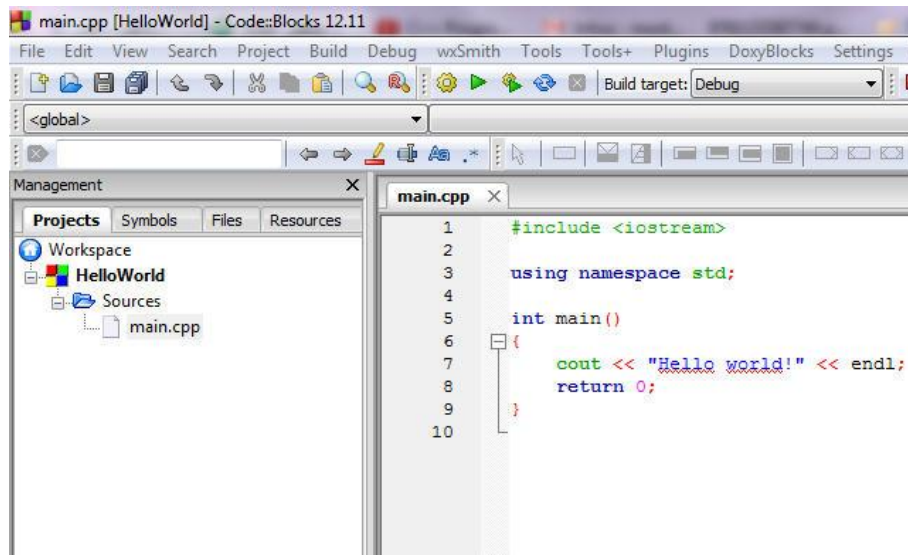
# Project Creation

- GCC



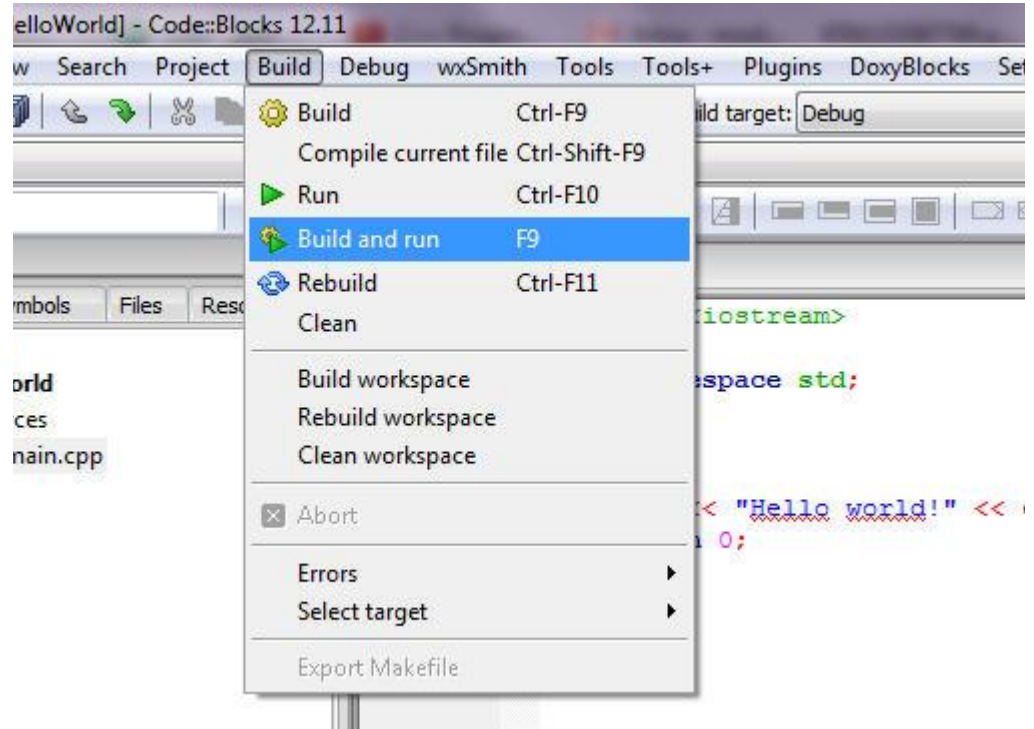
# Running code

- Always remember we need 2 steps
  - Compile (or build)
  - The Run
- If run doesn't reflect code updates
  - It was not compiled
- You typically
  - Click on compile/run button
  - Or right click for menu options
  - Or use short-cut



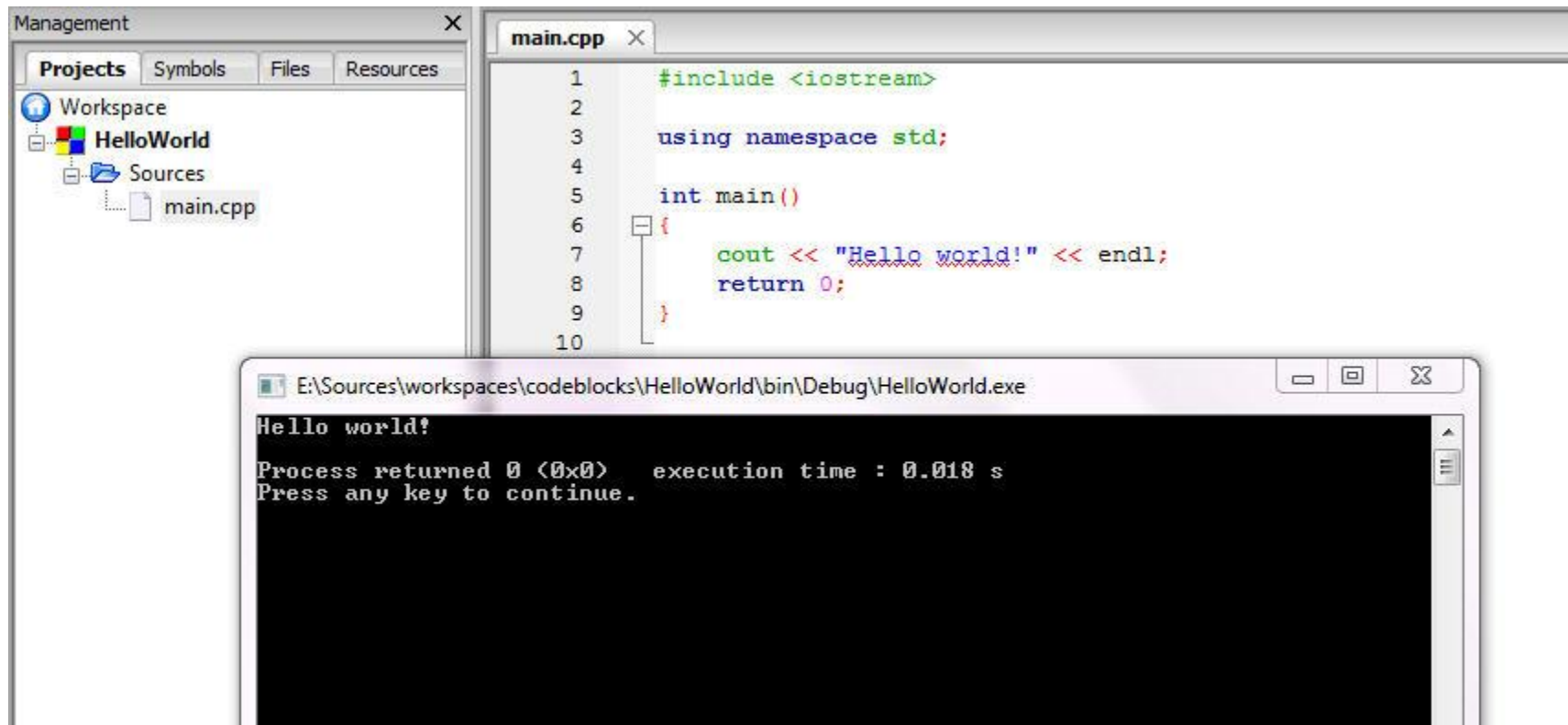
# Project Building

- F9
- Or From Menu
  - Build and Run
- Getting same old results?
  - You did not build/compile



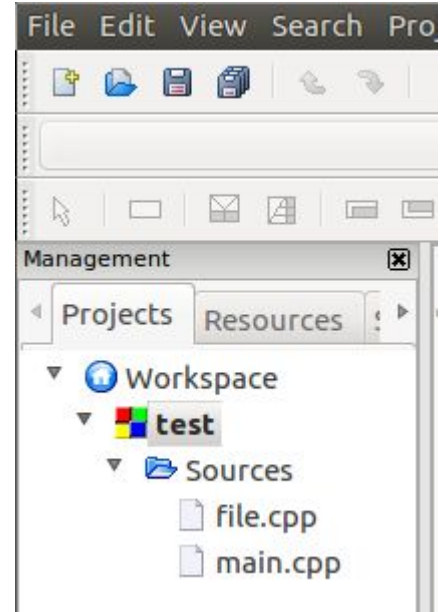


# Project Running



# Create New CPP file

- Select the project (test)
- From File menu
  - File ⇒ New ⇒ Empty file
  - Add to active project? Yes
    - Confirm directory
  - Select debug/release
- Running error
  - multiple definition of main
  - Rename the old file
    - E.g. main.cpp to main.cpp\_



# Open Existing Project



[2/11/28 11:40:31] gcc 4.7.1 Windows/unicode - 32 bit

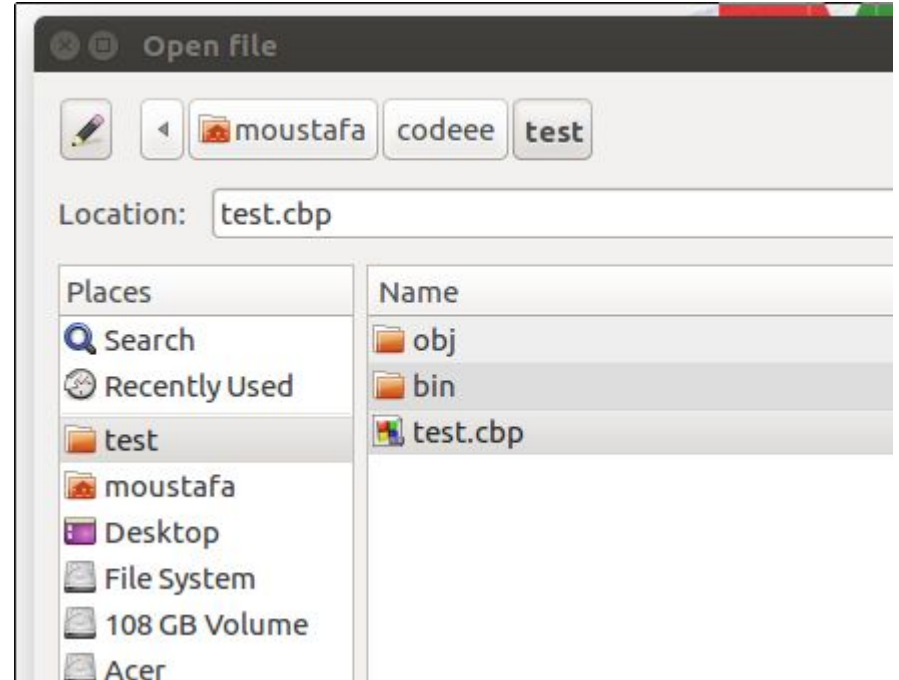


[Open an existing project](#)



[Tip of the Day](#)

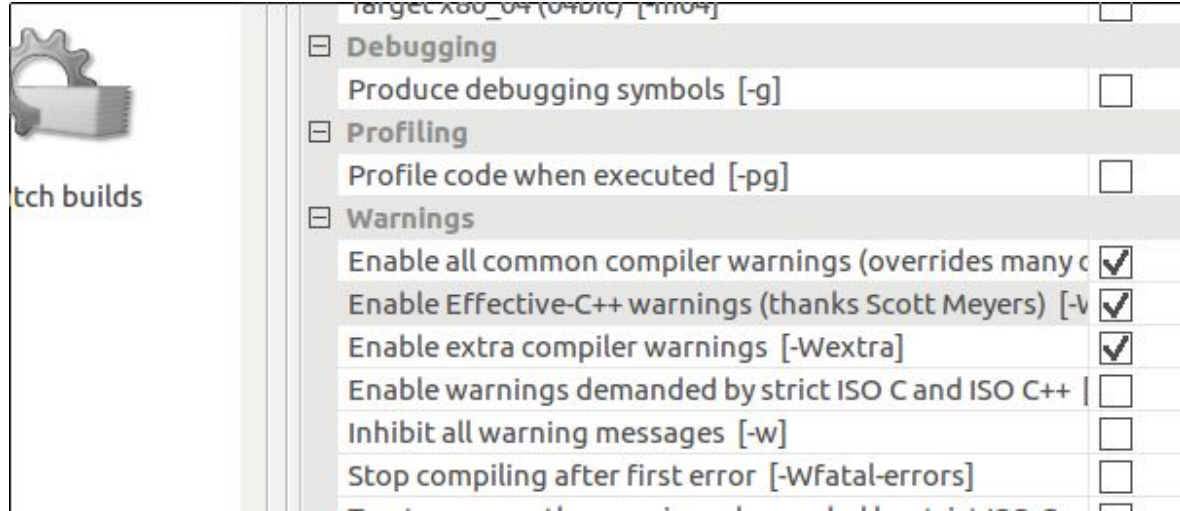
[Blocks forums](#) [Report a bug](#) [Request a new feature](#)



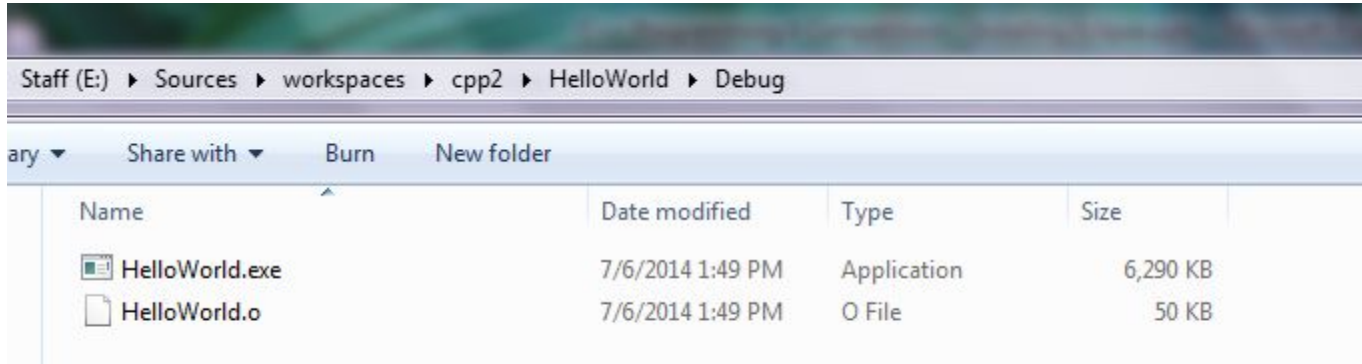
*Optional but useful*



# Enable warnings

- From Top menu
- Settings => Compiler



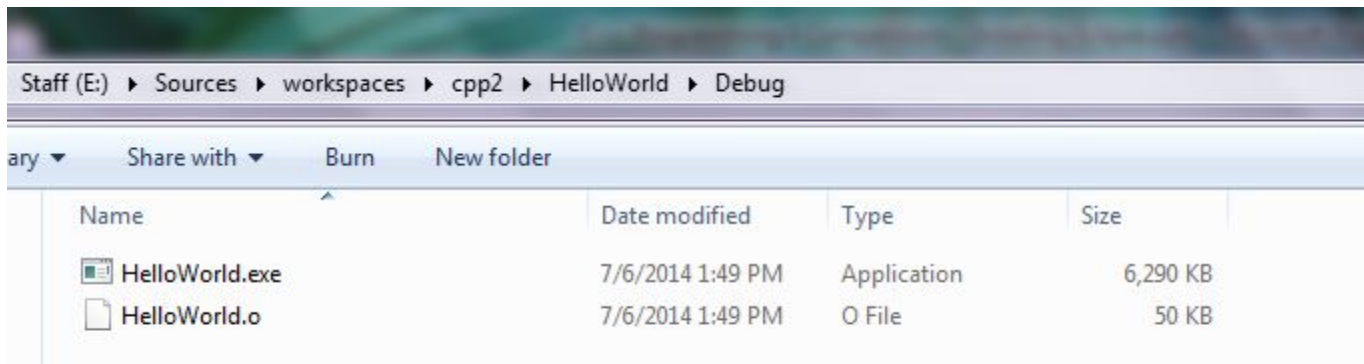
# Object File





Staff (E:) > Sources > workspaces > cpp2 > HelloWorld > Debug				
Share with ▾ Burn New folder				
Name	Date modified	Type	Size	
 HelloWorld.exe	7/6/2014 1:49 PM	Application	6,290 KB	
 HelloWorld.o	7/6/2014 1:49 PM	O File	50 KB	

- Build Command updates this file and then the exe
- Compiler generates Object file, and linker use it to generate executable (exe)

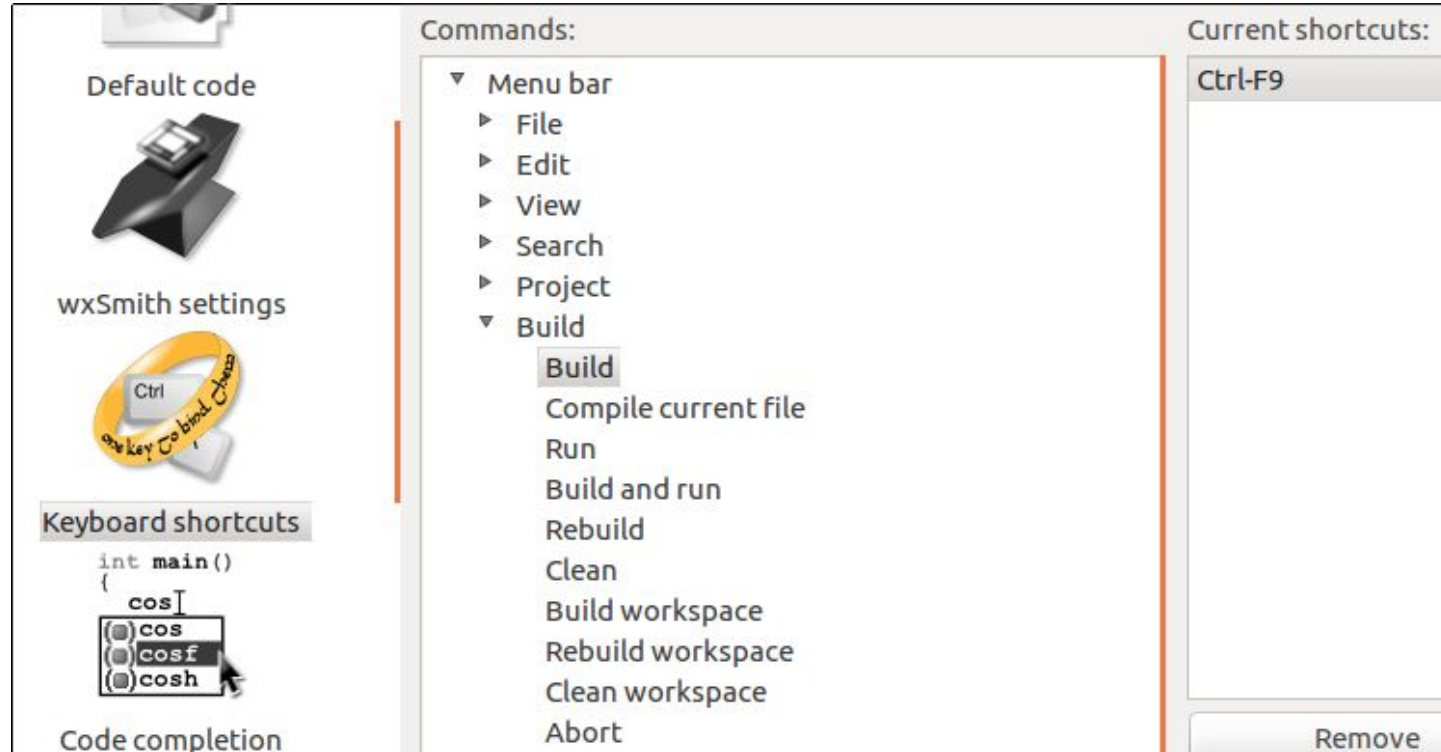
# Executable



Staff (E:) > Sources > workspaces > cpp2 > HelloWorld > Debug				
Share with ▾ Burn New folder				
Name	Date modified	Type	Size	
 HelloWorld.exe	7/6/2014 1:49 PM	Application	6,290 KB	
 HelloWorld.o	7/6/2014 1:49 PM	O File	50 KB	

- When you click Run button, this is what is actually run
  - If code was not compile, older exe is run!
- Always Close EXE to build/run again (hence exe is **replaced** with new one)

# Shortcuts: Setting $\Rightarrow$ Editor / Defaults [link](#)



The screenshot displays the 'Keyboard shortcuts' section of the wxSmith settings dialog. On the left, there are icons for 'Default code', 'wxSmith settings', and 'Keyboard shortcuts'. Below the 'Keyboard shortcuts' icon is a code completion example showing 'int main()' with a list of suggestions: 'cos', 'cosf', and 'cosh'. The main area is titled 'Commands:' and lists a hierarchy of menu items: 'Menu bar' (expanded), 'File', 'Edit', 'View', 'Search', 'Project', and 'Build' (expanded). Under 'Build', the 'Build' command is selected and highlighted. To the right, the 'Current shortcuts:' section shows 'Ctrl-F9' assigned to the selected command. A 'Remove' button is located at the bottom right.

Default code

wxSmith settings

Keyboard shortcuts

```
int main()
{
    cos
```

Code completion

Commands:

- ▼ Menu bar
  - ▶ File
  - ▶ Edit
  - ▶ View
  - ▶ Search
  - ▶ Project
  - ▼ Build
    - Build**
    - Compile current file
    - Run
    - Build and run
    - Rebuild
    - Clean
    - Build workspace
    - Rebuild workspace
    - Clean workspace
    - Abort

Current shortcuts:

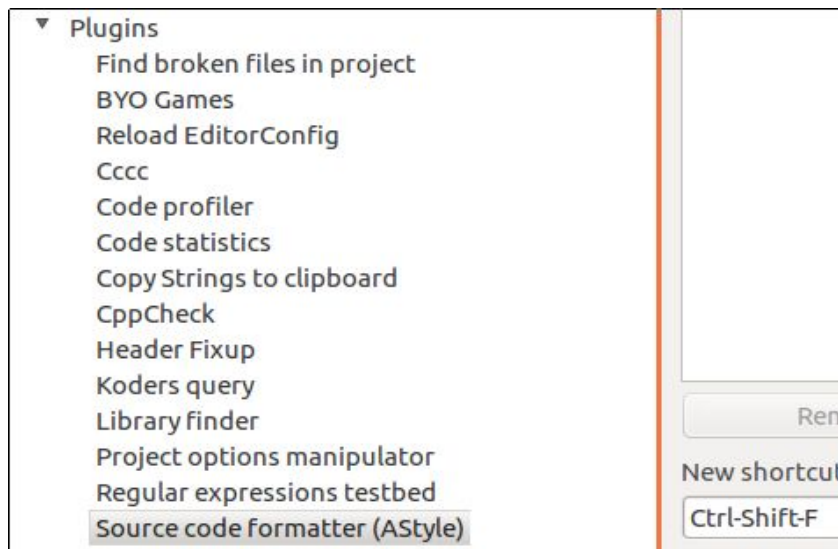
Ctrl-F9

Remove



# Code Format

- Let's add shortcut for code format
- Setting ⇒ Editor ⇒ Shortcuts
- From Plugins ⇒ formatter
- New Shortcut: **Ctrl-Shift-F** ⇒ Add



```
#include <iostream>
using namespace std;

int main() {
    cout << "!!!Hello Worldsdsd!!!";
    int y = 6;
    return 0;
}
```



```
int main() {
    cout << "!!!Hello Worldsdsd!!!";
    int y = 6;
    return 0;
}
```

*“Acquire knowledge and impart it to the people.”*

*“Seek knowledge from the Cradle to the Grave.”*