Installing and Configuring the CLion IDE with GCC Compiler and Toolchain

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There are four necessary steps explained in this guide that you MUST do in order to make things go smoothly.

- 1. Downloading MinGW GCC and toolchain
- 2. Getting a free one year student license for CLion
- 3. Installing CLion
- 4. Automatically configuring CLion to work with GCC and creating your first project.

Please follow these steps in the order they appear in.

1. Downloading MinGW GCC

This link downloads MinGW GCC Get downloader. https://sourceforge.net/projects/mingw/files/latest/download

When you open the tool, this screen will appear. Press Install.

MinGW Installation Manager Setup Tool

mingw-get version 0.6.2-beta-20131004-1
2
Written by Keith Marshall
Copyright © 2009-2013, MinGW.org Project
http://mingw.org
 This is free software; see the product documentation or source code, for copying and redistribution conditions. There is NO WARRANTY; not even an implied WARRANTY OF MERCHANTABILITY, nor of FITNESS FOR ANY PARTICULAR PURPOSE. This tool will guide you through the first time setup of the MinGW Installation Manager software (mingw-get) on your computer; additionally, it will offer you the opportunity to install some other common components of the MinGW software distribution. After first time setup has been completed, you should invoke the MinGW Installation Manager directly, (either the CLI mingw-get.exe variant, or its GUI counterpart, according to your preference), when you wish to add or to remove components, or to upgrade your MinGW software installation.
View Licence Install Cancel

Keep the settings in the install screen as is. Do not change any. Press Continue.

MinGW Installation Manager Setup Tool

mingw-ge	t version 0.6	.2-beta-20131004-1	
	1	•	
Step 1: 5	Specify Inst	allation Preferences	
Installation Directory			
C:\MinGW			Change
If you elect to change this, yo includes white space within the			
User Interface Options			
Both command line and graphic is always supported; the altern also install support for th	ative only i	f you choose the follo	
Program shortcuts for launching ● just for me (the current ✓ in the start menu, and/o	user), or r ☑	 for all users * on the desktop. 	
* selection of this option requ	ires adminis	trative privilege.	
View Licence		Continue	Cancel
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MinGW Installation Manager Setup Tool			
mingw-ge	t version 0.6	o.2-beta-20131004-1	
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mingw-get-setup-0.6.2-mingw	32-beta-20	131004-1-xml.tar.xz	
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			~
View Licence		Continue	Quit

When the download is done. The "Continue" button is enabled. Press Continue.

linGW Installation Manager Setup Tool			
mingw-ge	version 0.6.2	-beta-20131004-1	
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Download Progress			
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The following screen is the screen that we will use to install MinGW GCC Toolchain. We need to only install: <u>mingw32-base</u> and <u>mingw32-gcc-g++.</u>

nstallation Package Settin	25					He
Basic Setup	Package	Class	Installed Version	Repository Version	Description	
All Packages	mingw-developer-toolkit	bin		2013072300	An MSYS Installation for MinGW Developers (meta)	
	mingw32-base	bin		2013072200	A Basic MinGW Installation	
	mingw32-gcc-ada	bin		6.3.0-1	The GNU Ada Compiler	
	mingw32-gcc-fortran	bin		6.3.0-1	The GNU FORTRAN Compiler	
	mingw32-gcc-g++	bin		6.3.0-1	The GNU C++ Compiler	
	mingw32-gcc-objc	bin		6.3.0-1	The GNU Objective-C Compiler	
	msys-base	bin		2013072300	A Basic MSYS Installation (meta)	
	<					

Click on : mingw32-base then select "Mark for Installation".

Click on mingw32-gcc-g++. then select "Mark for Installation."

Package	Class	Installed Version
mingw-developer-toolkit	bin	
minaw32 haea	hin	
Unmark		
Mark for Installation		
Mark for Reinstallation		
Mark for Upgrade		L
Mark for Removal		-

If you do it correctly, then they should look like this:

Package	Class	Installed Version
mingw-developer-toolkit	bin	
mingw32-base	bin	
mingw32-gcc-ada	bin	
mingw32-gcc-fortran	bin	
mingw32-gcc-g++	bin	
mingw32-gcc-objc	bin	
msys-base	bin	

Finally, Go to Installation, then "Apply Changes."

🏇 MinGW Insta	llation Manager			
Installation Pac	kage Settings			
Update Cata	logue	Г	Package	Class
Mark All Up	grades		mingw-developer-toolkit	bin
Apply Chan	ges	6	mingw32-base	bin
	J		mingw32-gcc-ada	bin
Quit	Alt+F4		mingw32-gcc-fortran	bin
		18	mingw32-gcc-g++	bin
			mingw32-gcc-objc	bin
			msys-base	bin

Confirm the Installation by Clicking Apply

asic Setup	Package	Class	Installed Version	Repository
Schedule of Pending Actions				
Okay to proceed? The package changes its be implemented when yo		Apply	Defer	Discard
0 installed packages will	be removed			
				~
- 0 installed packages will	he ungraded			Ŷ
0 installed packages will	be upgraded			
0 installed packages will	be upgraded			<u></u>
0 installed packages will	be upgraded			<u></u>
0 installed packages will				<u></u>
	ges will be installed	3.tar.xz		<u></u>

It will take few minutes to finalize the download and installation. Please be patient.

Download Package

Connecting to prdownload	s.sourceforge.	net /	
204.17 kB	of	204.17 kB	: 100 %

When this screen shows up, this means the compiler and all the toolchain has been setup successfully.

Applying Scheduled Changes

All changes were applied successfully; you may now close this dialogue.

Close dialogue automatically, when activity is complete.

Details

install: w32api-5.0.2-mingw32-dev.tar.xz
install: mingwrt-5.0.2-mingw32-dev.tar.xz
install: mingwrt-5.0.2-mingw32-dev.tar.xz
install: binutils-2.28-1-mingw32-dev.tar.xz
install: binutils-2.28-1-mingw32-dil-1.tar.xz
installing binutils-2.28-1-mingw32-dil-1.tar.xz
installing libatomic-6.3.0-1-mingw32-dil-6.tar.xz
install: libstdc++-6.3.0-1-mingw32-dil-6.tar.xz
installing libstdc++-6.3.0-1-mingw32-dil-6.tar.xz
installing libstdc++-6.3.0-1-mingw32-dil-1.tar
installing gb-7.6.1-1-mingw32-dil-1.tar
installing gb-7.6.1-1-mingw32-dil-1.tar
installing gb-7.6.1-1-mingw32-bin.tar.lzma
installing gc-ce+-6.3.0-1-mingw32-bin.tar.xz
installing gc-ce+-4.8.2-mingw32-dev.tar.meta
installing gc-ce++6.3.0-1-mingw32-bin.tar.xz
installing gc-ce++6.

1. Getting a free license for CLion

Use this link to apply for a free 1-year account to use CLion. Please remember the email and password you use to apply because you will need them later to activate the license.

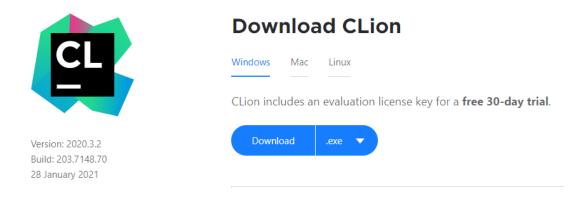
Apply with:	UNIVERSITY EMAIL ADDRESS	ISIC/ITIC MEMBERSHIP	OFFICIAL DOCUMENT	GITHUB
Status:	 I'm a student I'm a teacher 			
Level of study:	Undergraduate		Ŧ	
	Is Computer Science or Enginee Yes No	ring your major field of stu	udy?	
Graduation date:	Choose Choose expected graduation date.			
Email address:	University email address, e.g.	js@mit.edu		
	l certify that the university email addre and belongs to me.	ss provided above is valid		
Name:	Your real name as it appears ir other legal documents.	n your passport, driver's lic	ense, or	
	First Name	Last Name		
Country / region:	Jordan		Ŧ	
	I am under 13 years old			

https://www.jetbrains.com/shop/eform/students

2. Downloading the Jetbrains CLion IDE

Use this link to download CLion. The IDE is around 451 MB in size.

https://www.jetbrains.com/clion/download/#section=windows



After Downloading the IDE, click on the installer. <u>If</u> this screen appears, choose Install anyway.

	×
The app you're trying to install isn't a Microsoft-verified app	
Installing apps from the Store helps protect your PC and keep it running smoothly.	
Get apps from Store Install anyway	
Change my app recommendation settings >	

Click Next on the Welcome Screen

🕵 CLion Setup	- 🗆 X
CL	Welcome to CLion Setup
	Setup will guide you through the installation of CLion.
	It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
	Click Next to continue.
	Next > Cancel
Keep the Destination as is. C	lick Next.
🕒 CLion Setup	- 🗆 ×
1	Choose Install Location
	Choose the folder in which to install CLion.
Setup will install CLion in the another folder. Click Next to	following folder. To install in a different folder, click Browse and select continue.
Destination Folder	
C:\Program Files\JetBrai	ins\CLion 2020.3.2 Browse

C:\Program Files\JetBrains\CLion 2020.3.2 Browse...
Space required: 1.4 GB
Space available: 32.2 GB
Space Available: 32.2 GB
Cancel

Check the 64-bit Installer.

Check the "Add Launcher to Path"

E	CLion Setup		_	
	CL.	Installation Options Configure your CLior		
\langle	Create Desktop Shortcut		Update PATH variable (restar	
	Update context menu Add "Open Folder as Pr	oject"		
	Create Associations	C .cpp	xx .hpp .hxx	
			< Back Next >	Cancel

Click Install

CLion Setup					_		\times
CL			e nu Folder enu folder for the		touto		
	Choose	a Start Me		e CLIOIT SHOI	icuis.		
Select the Start Menu also enter a name to c			ike to create the	program's s	hortcu	ts. You ci	an
JetBrains							
7-Zip							^
AbeAppsDW							
Accessibility							
Accessories Administrative Tools							
Adobe							
Amazon							
Assassin's Creed Chro	nicles Trilogy Pac	k					
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Backup and Sync from	m Google						
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Once done, Reboot your Computer.

🕵 CLion Setup	- 🗆 X
CL	Completing CLion Setup
	Your computer must be restarted in order to complete the installation of CLion. Do you want to reboot now?
	○ Reboot now
	I want to manually reboot later
	< <u>B</u> ack <u>F</u> inish Cancel

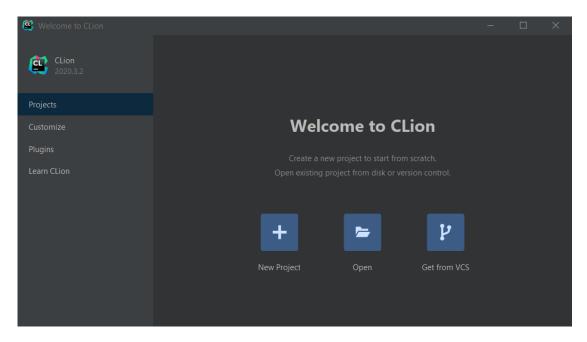
3. Creating your first Project and Making sure CLion is able to detect GCC

When you finish installing CLion, its shortcut will appear on the Desktop. The first time you open CLion, you must agree to the User Agreement, then click Continue.

😫 CLion User Agreement X JETBRAINS USER AGREEMENT Version 1.2, effective as of January 9th, 2019 IMPORTANT! READ CAREFULLY: THIS IS A LEGAL AGREEMENT. BY CLICKING THE "I AGREE" (OR SIMILAR) BUTTON THAT IS PRESENTED TO YOU AT THE TIME OF YOUR FIRST USE OF THE JETBRAINS SOFTWARE, SUPPORT, OR PRODUCTS, YOU ARE BECOMING A PARTY TO THIS AGREEMENT, YOU DECLARE YOU HAVE THE LEGAL CAPACITY TO ENTER INTO SUCH AGREEMENT, AND YOU ARE CONSENTING TO BE BOUND BY ALL THE TERMS AND CONDITIONS SET FORTH BELOW. 1. PARTIES 1.1. "JetBrains" or "We" means JetBrains s.r.o., having its principal place of business at Na Hrebenech II 1718/10, Prague, 14000, Czech Republic, registered in the Commercial Register maintained by the Municipal Court of Prague, Section C, File 86211, ID. No.: 265 02 275. I confirm that I have read and accept the terms of this User Agreement Exit Continue In this step, use the email and password you used to apply for your license in order to activate it. 😫 License Activation \geq

CL	CLion Activate	• Activate CLion				Buy license 🛪
		Get license from:	JB Account	O Activation code	C License server	
		Username / email:				
		Password:				Forgot? >
			Activate			
					Continue	Exit

You are now almost setup. The Welcome Screen will show up. You can create a new project by pressing the "New Project" icon, or later on by clicking Click File \rightarrow New Project.



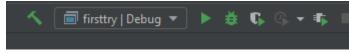
In this screen, choose C++ Executable, then choose a location and a name for your project. Make sure that your compiler version is no less than C++14

😩 New Project				×
C++				
🙏 C++ Executable	Location: C:\Users\Good\CLionProjects\myFirstProject			
C++ Library	Language standard: C++14			
🔺 C Executable				
A C Library				
🛕 CUDA Executable				
 A CUDA Library				
Qt				
🔺 Qt Console Executable				
🔺 Qt Widgets Executable				
Embedded				
😚 STM32CubeMX				
Other				
🧧 HTML5 Boilerplate				
日 React				
B Bootstrap				
日 React Native				
		Create	Can	

A new Project is created for you.

٩	<u>File</u> <u>E</u> dit <u>V</u> iew <u>N</u> avigate <u>C</u> ode <u>R</u> efactor	<u>B</u> uild R <u>u</u> n <u>T</u> ools	s VCS <u>W</u> indow <u>H</u> elp myFirstProject - main.cpp
my			
Project	New Scratch File Ctrl+Alt+Shift+Insert	÷ 🗢 🔺	CMakeLists.txt 🗵 🍓 main.cpp 🔀
Pro	Den Open Recent		<pre>#include <iostream></iostream></pre>
	Close Project		
	✗ Settings Ctrl+Alt+S		<pre>> dint main() { std::cout << "Hello, World!" << std::endl;</pre>
	S Reload CMake Project		return 0;
	File Properties		↓ }
	Local <u>H</u> istory		
	Save All Ctrl+S		
	Reload All from Disk Ctrl+Alt+Y		
	Invalidate Caches / Restart		
	Manage IDE Settings		
	Export		
	🖶 Print		
	Add to F <u>a</u> vorites		
	Power Save Mode		
	E <u>x</u> it		

Make sure the Debug and run buttons are enabled and in green like the figure below.



If they are not, then simply go to Files \rightarrow Settings \rightarrow "Build Execution, Deployment" \rightarrow MinGW. CLion should detect the GCC and toolchain and you must see the green checks. If not, you might not have installed MinGW correctly.

😫 Settings						
Q		Build, Execution, Deployme	Build, Execution, Deployment 👌 Toolchains			
> Appearance & Behavior Keymap		+ − । ि → ▼				
> Editor		📢 Visual Studio				
Plugins			CMake:			
> Version Control 🛛 🖻				Bundled		
✓ Build, Execution, Deployment				✓ Version: 3.17.5		
Toolchains						
CMake						
Compilation Database						
Custom Build Targets						
			Debugger:	Bundled GDB		
Python Debugger				✓ Version: 9.2		
Python Interpreter						
> Deployment						