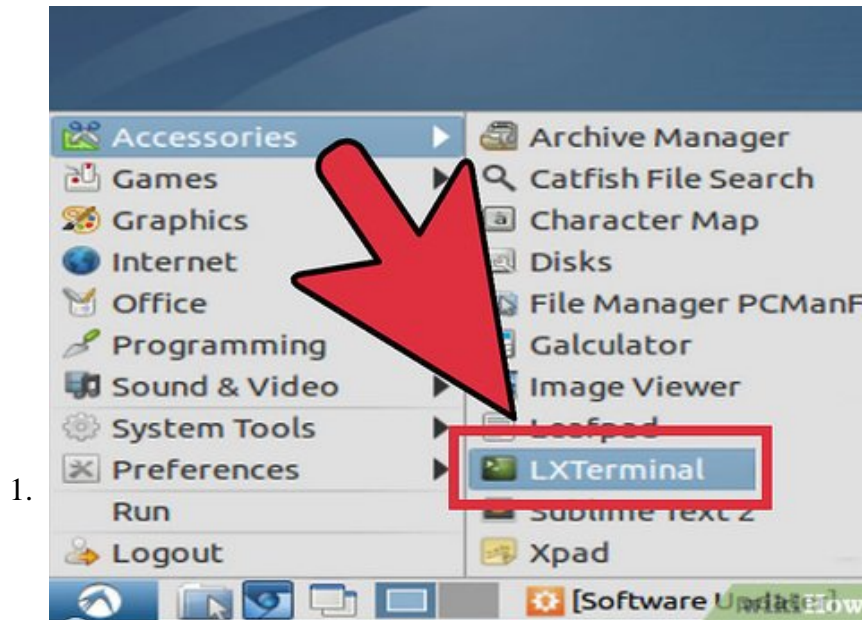


How to Compile a C Program Using the GNU Compiler (GCC)

This wikiHow teaches you how to compile a C program from source code by using the GNU Compiler (GCC) for Linux and Minimalist Gnu (MinGW) for Windows. Open up a terminal window on your Unix system. Its icon usually is a black screen with...

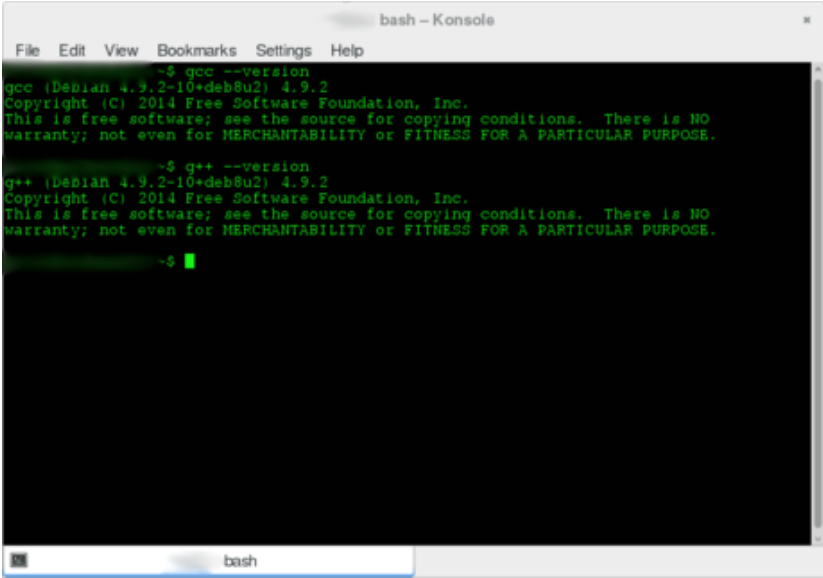
Method 1 of 2:

Using GCC for Unix



Open up a terminal window on your Unix system. Its icon usually is a black screen with some white characters on it.

2.



```
bash - Konsole
File Edit View Bookmarks Settings Help
~$ gcc --version
gcc (Debian 4.9.2-10+deb8u2) 4.9.2
Copyright (C) 2014 Free Software Foundation, Inc.
This is free software; see the source for copying conditions. There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

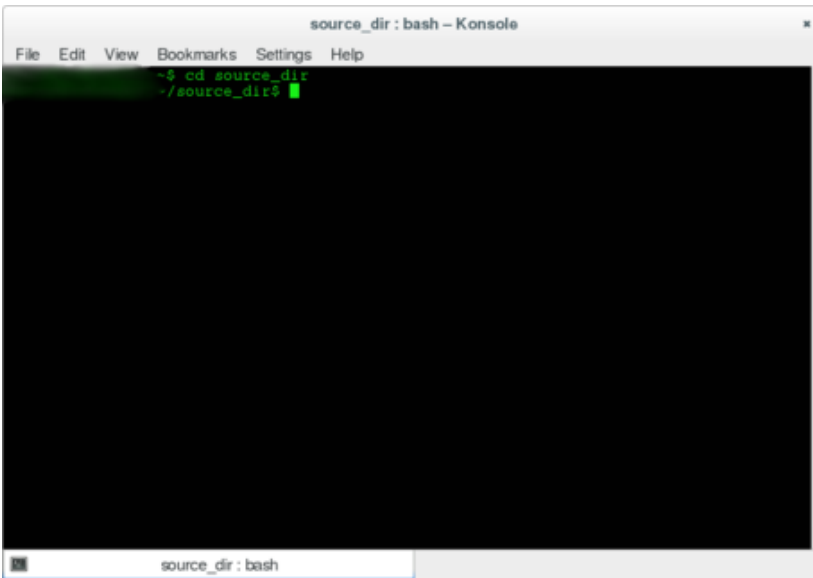
~$ g++ --version
g++ (Debian 4.9.2-10+deb8u2) 4.9.2
Copyright (C) 2014 Free Software Foundation, Inc.
This is free software; see the source for copying conditions. There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

~$
```

Type `gcc --version` and press `? Enter`. This should return the version number of the C compiler. If the command is not found, it is likely that GCC isn't installed.^[1]

1. If it's not installed, consult the documentation for your Linux distribution to learn how to get the correct package.
2. If you're compiling a C++ program, use 'g++' instead of 'gcc.'

3.

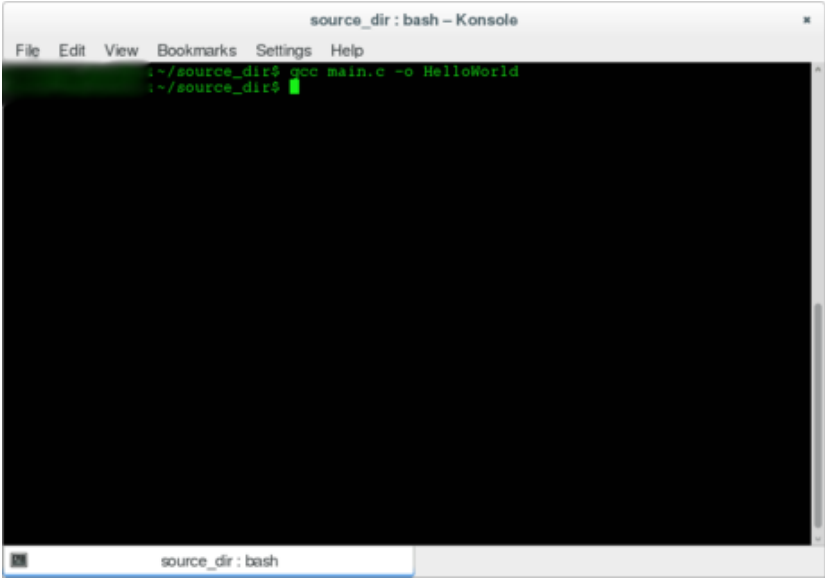


```
source_dir : bash - Konsole
File Edit View Bookmarks Settings Help
~$ cd source_dir
~/source_dir$
```

Navigate to the directory where your source code is saved.

1. For example, if your source code file, 'main.c', is located in /usr/wikiHow/source, type `cd /usr/wikiHow/source`.

4.

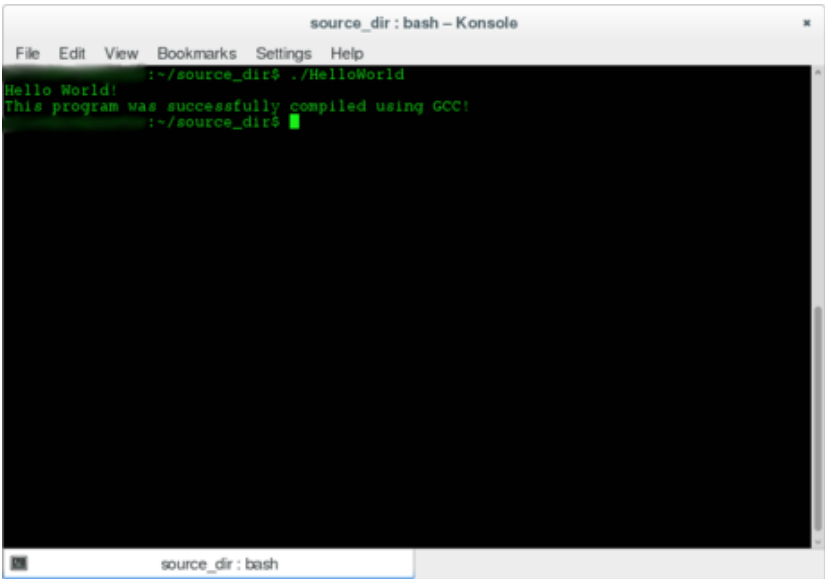


```
source_dir: bash - Konsole
File Edit View Bookmarks Settings Help
~/source_dir$ gcc main.c -o HelloWorld
~/source_dir$
```

Type `gcc main.c -o HelloWorld`. Replace 'main.c' with the name of your source code file, and 'HelloWorld' with the name of your finished program. The program will now compile.

1. If you see errors and want to see more information about them, use `gcc -Wall -o errorlog file1.c`. Then, view the 'errorlog' file in the current directory with `cat errorlog`.
2. To compile one program from multiple source code files, use `gcc -o outputfile file1.c file2.c file3.c`.
3. To compile multiple programs at once with multiple source code files, use `gcc -c file1.c file2.c file3.c`.

5.

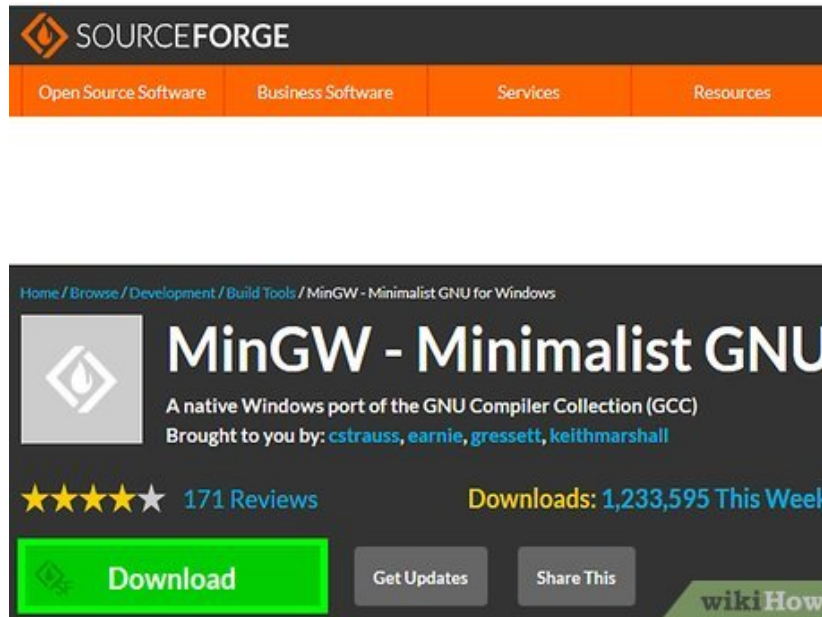


```
source_dir: bash - Konsole
File Edit View Bookmarks Settings Help
~/source_dir$ ./HelloWorld
Hello World!
This program was successfully compiled using GCC!
~/source_dir$
```

Run your newly-compiled program. Type `./HelloWorld` but replace 'HelloWorld' with the name of your program.

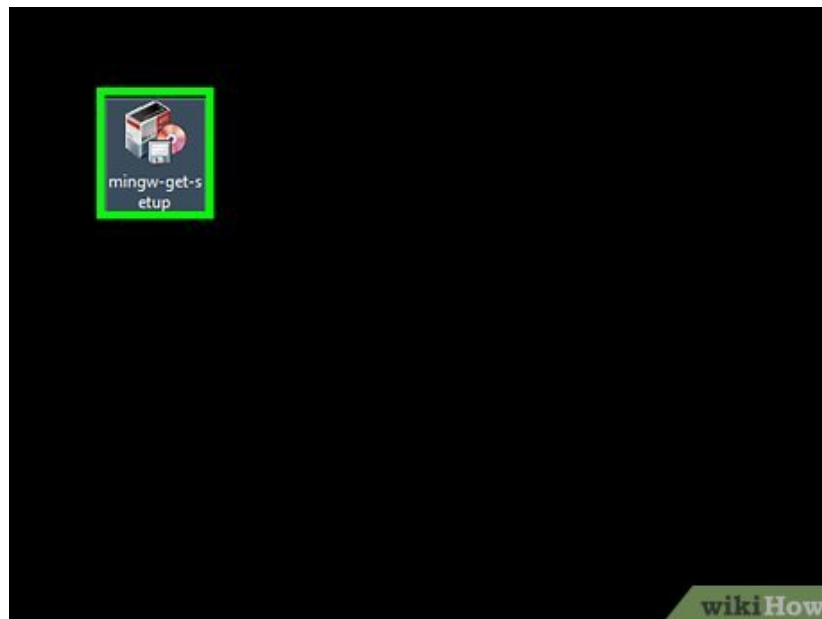
Method 2 of 2:

Using MinGW for Windows



1.

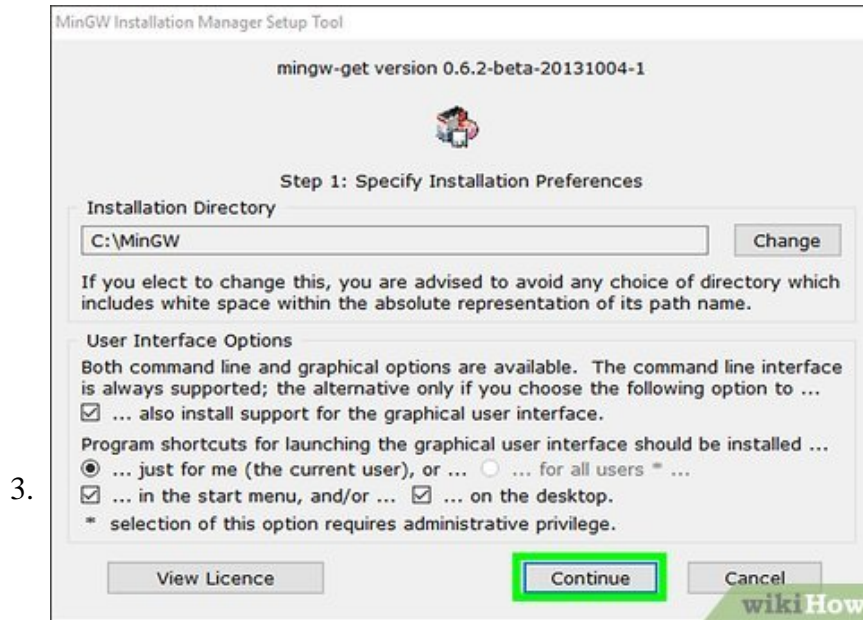
Download Minimalist GNU for Windows (MinGW). This is an easy-to-install version of GCC for Windows. You can download the installer from <https://sourceforge.net/projects/mingw/>.^[2]



2.

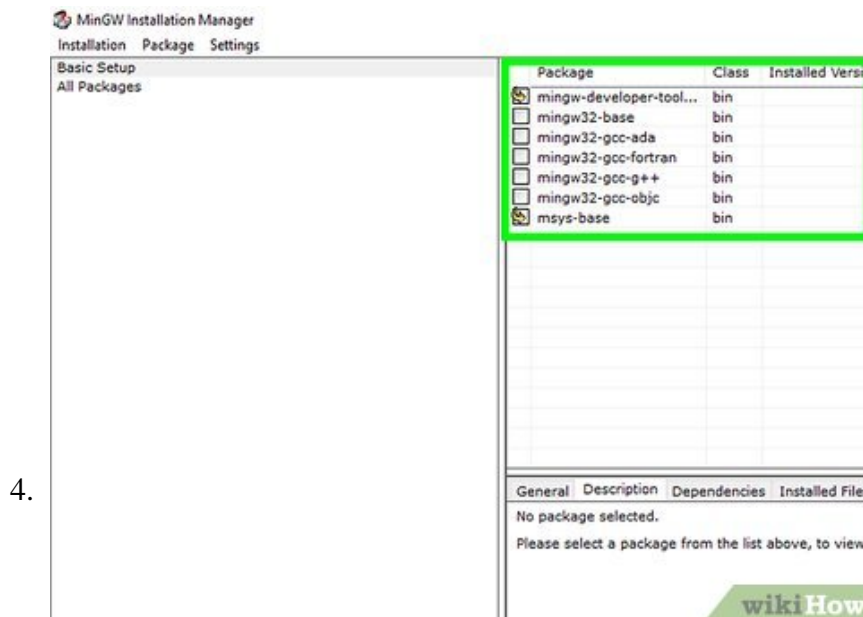
Run the MinGW installer.

1. If the file doesn't open by itself, double-click it in your downloads folder, then click Install.



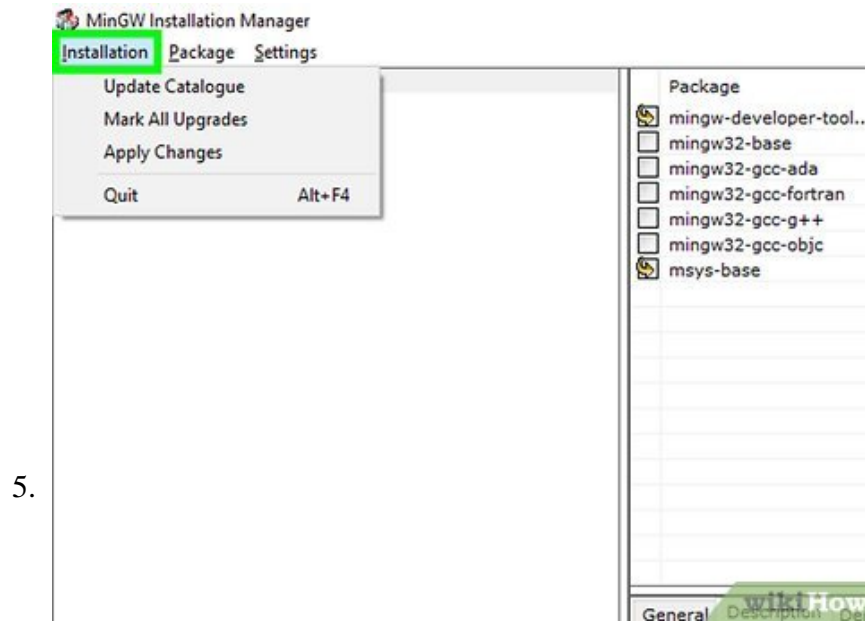
Select your install preferences and click **Continue**.

1. MinGW recommends using the default installation folder (`C:\MinGW`). If you must change the folder, don't use a folder with spaces in the name (e.g. 'Program Files').^[3]

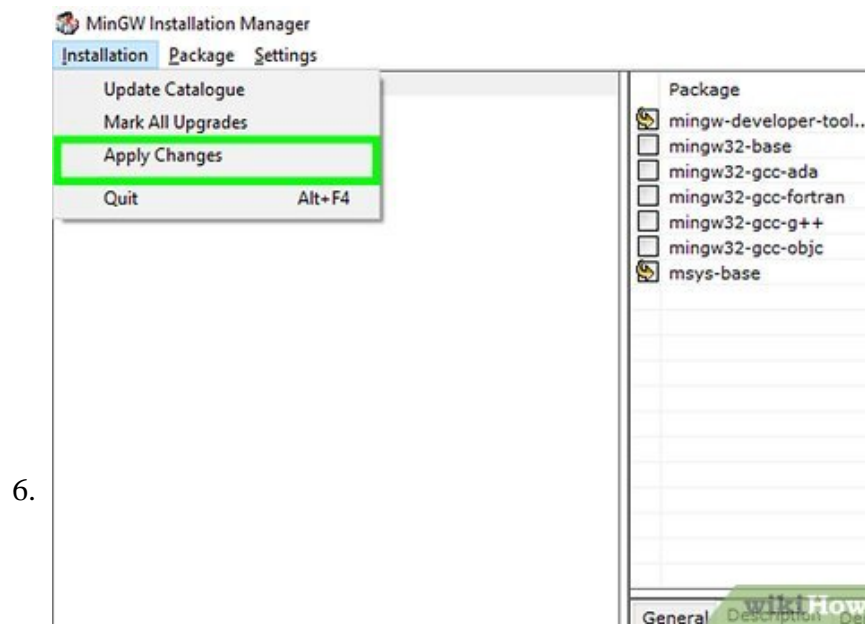


Select which compilers to install.

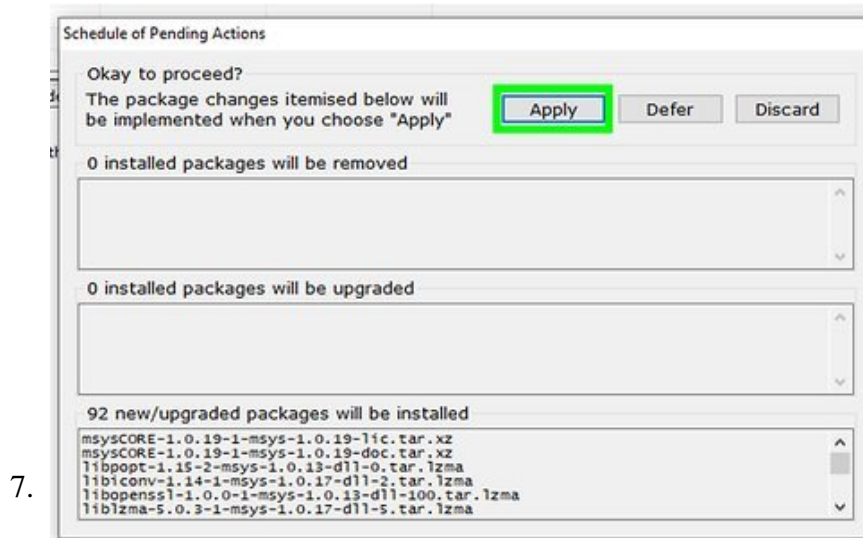
1. At the minimum, choose **Basic Setup** on the left panel, then place check marks next to all of the listed compilers in the right main panel.
2. More advanced users can choose **All Packages** and select additional compilers.



Click the **Installation** menu. It's at the top left corner of MinGW.

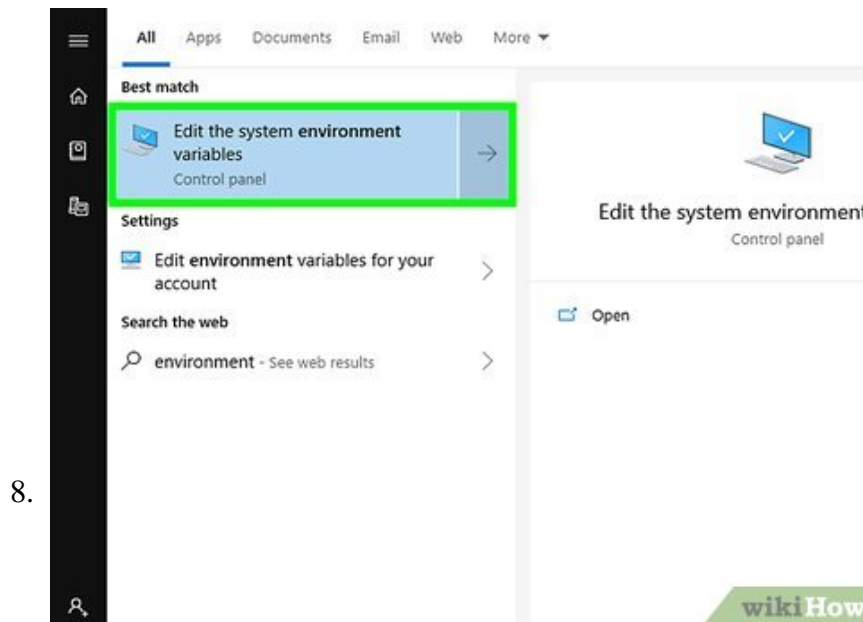


Click **Apply Changes**.



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Click **Apply**. The compilers will now download and install.

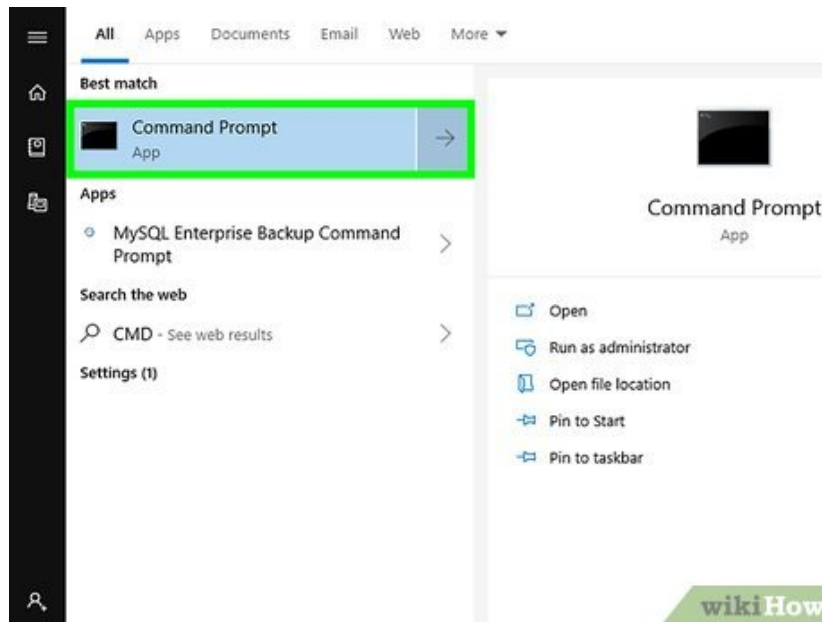


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Add the path to MinGW to system environment variables. Here's how:

1. Press **Win + S** to launch search, then type `environment`.
2. Click **Edit the system environment variables** in the search results.
3. Click **Environment Variables**
4. Click **Edit** beneath the top box (under 'User Variables')
5. Scroll to the end of the 'Variable Value' box.
6. Type `;C:MinGWbin` right after the last letter in the box. Note that if you installed MinGW to a different directory, enter `;C:path-to-that-directorybin`.
7. Click **OK**, and then **OK** again. Click the one remaining **OK** button to close the window.

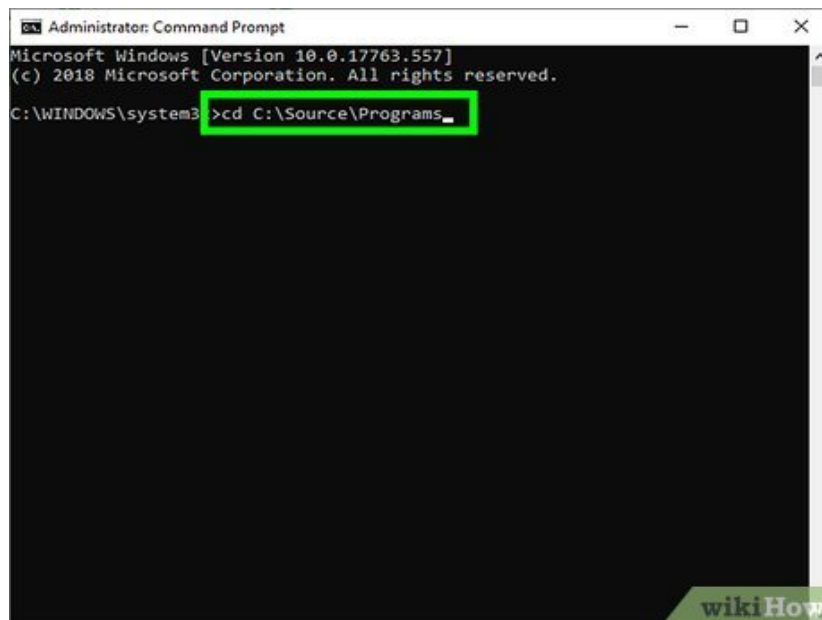
9.



Open the command prompt as an administrator. To do this:

1. Press `Win + S` and type `cmd`.
2. Right-click **Command Prompt** in the search results, then select **Run As Administrator**.
3. Click **Yes** to allow changes.

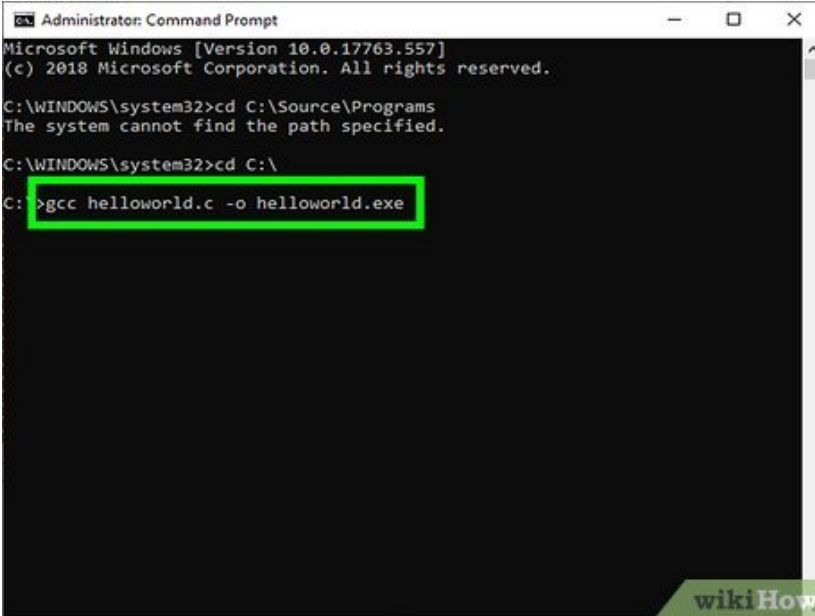
10.



Navigate to the folder where your source code is saved.

1. For example, if your source code file called `helloworld.c` is located in `C:SourcePrograms`, type `cd C:SourcePrograms`.

11.



```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.17763.557]
(c) 2018 Microsoft Corporation. All rights reserved.

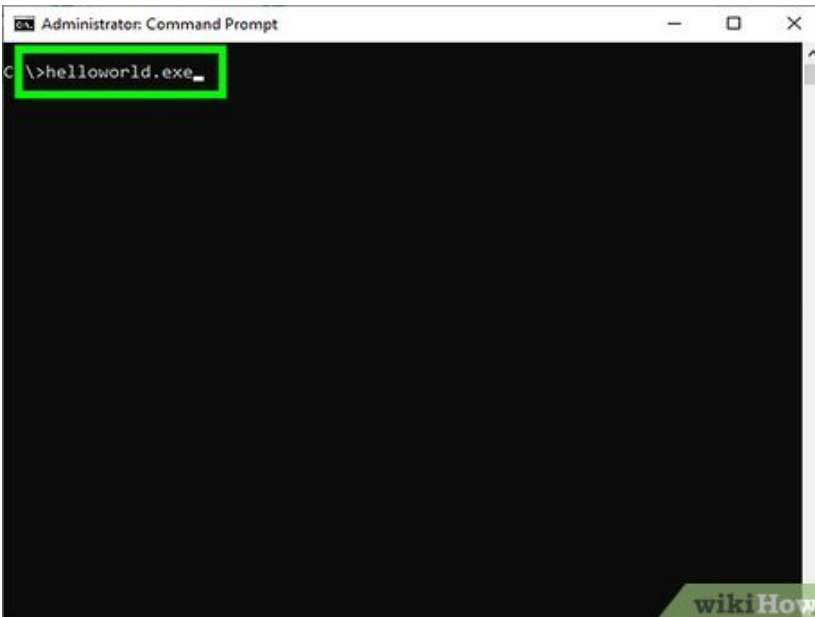
C:\WINDOWS\system32>cd C:\Source\Programs
The system cannot find the path specified.

C:\WINDOWS\system32>cd C:\
C:\>gcc helloworld.c -o helloworld.exe
```

Type `gcc helloworld.c -o helloworld.exe`. Replace 'helloworld' with the name of your source code and application. Once the program is compiled, you'll return to the command prompt without errors.^[4]

1. Any coding errors that appear must be corrected before the program will compile.

12.



```
Administrator: Command Prompt
C:\>helloworld.exe
```

Type the name of your program to run it. If it's called helloworld.exe, type that to start your program.

You finished reading the article "**How to Compile a C Program Using the GNU Compiler (GCC)**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.