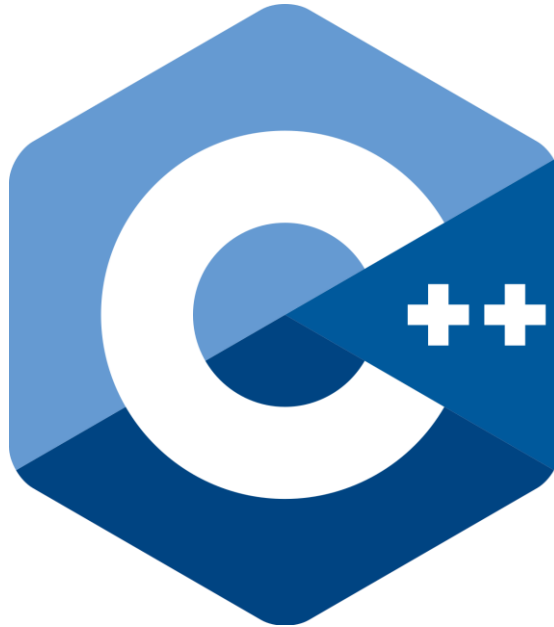




Fundamentals of Programming in C++





Compiled Language

Introduction

- Requires Compilers (not interpreters)
- Entire code compiled or converted to machine understandable code (unlike interpreter where done line by line)
- Extension of C
- Latest version : C++17



Compiler we are going to use :
GCC (GNU Compiler Collection)

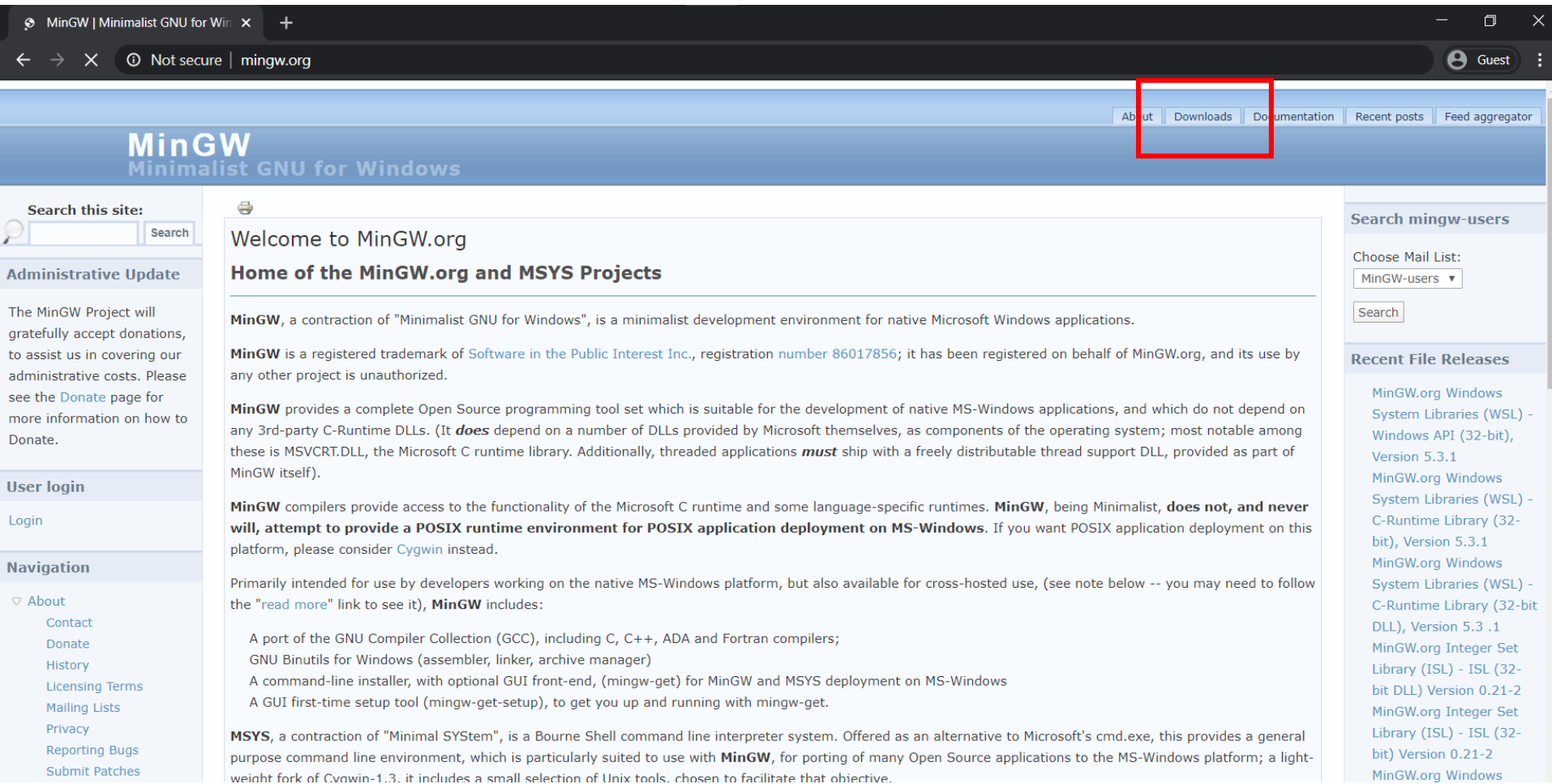
For Windows
MinGW
(Minimalist GNU
for Windows)

<http://www.mingw.org/>



Download Compiler

Visit : <http://www.mingw.org/>



The screenshot shows a web browser window with the address bar displaying "MinGW | Minimalist GNU for Windows" and "Not secure | mingw.org". The website header features the MinGW logo and a navigation menu with links: About, Downloads, Documentation, Recent posts, and Feed aggregator. The "Downloads" link is highlighted with a red rectangular box. The main content area is titled "Welcome to MinGW.org" and "Home of the MinGW.org and MSYS Projects". It contains several paragraphs of text describing the project, its goals, and its components. The left sidebar includes a search bar, an administrative update, user login options, and a navigation menu. The right sidebar includes a search bar for mingw-users, a mail list selection, and a list of recent file releases.

MinGW | Minimalist GNU for Windows

Search this site: Search

Administrative Update

The MinGW Project will gratefully accept donations, to assist us in covering our administrative costs. Please see the [Donate](#) page for more information on how to Donate.

User login

Login

Navigation

- About
- Contact
- Donate
- History
- Licensing Terms
- Mailing Lists
- Privacy
- Reporting Bugs
- Submit Patches

Welcome to MinGW.org

Home of the MinGW.org and MSYS Projects

MinGW, a contraction of "Minimalist GNU for Windows", is a minimalist development environment for native Microsoft Windows applications.

MinGW is a registered trademark of [Software in the Public Interest Inc.](#), registration number 86017856; it has been registered on behalf of MinGW.org, and its use by any other project is unauthorized.

MinGW provides a complete Open Source programming tool set which is suitable for the development of native MS-Windows applications, and which do not depend on any 3rd-party C-Runtime DLLs. (It **does** depend on a number of DLLs provided by Microsoft themselves, as components of the operating system; most notable among these is MSVCRT.DLL, the Microsoft C runtime library. Additionally, threaded applications **must** ship with a freely distributable thread support DLL, provided as part of MinGW itself).

MinGW compilers provide access to the functionality of the Microsoft C runtime and some language-specific runtimes. **MinGW**, being Minimalist, **does not, and never will, attempt to provide a POSIX runtime environment for POSIX application deployment on MS-Windows**. If you want POSIX application deployment on this platform, please consider [Cygwin](#) instead.

Primarily intended for use by developers working on the native MS-Windows platform, but also available for cross-hosted use, (see note below -- you may need to follow the "read more" link to see it), **MinGW** includes:

- A port of the GNU Compiler Collection (GCC), including C, C++, ADA and Fortran compilers;
- GNU Binutils for Windows (assembler, linker, archive manager)
- A command-line installer, with optional GUI front-end, (mingw-get) for MinGW and MSYS deployment on MS-Windows
- A GUI first-time setup tool (mingw-get-setup), to get you up and running with mingw-get.

MSYS, a contraction of "Minimal SYStem", is a Bourne Shell command line interpreter system. Offered as an alternative to Microsoft's cmd.exe, this provides a general purpose command line environment, which is particularly suited to use with **MinGW**, for porting of many Open Source applications to the MS-Windows platform; a light-weight fork of Cwosin-1.3. It includes a small selection of Unix tools. chosen to facilitate that objective.

Search mingw-users

Choose Mail List:

MinGW-users

Search

Recent File Releases

- MinGW.org Windows System Libraries (WSL) - Windows API (32-bit), Version 5.3.1
- MinGW.org Windows System Libraries (WSL) - C-Runtime Library (32-bit), Version 5.3.1
- MinGW.org Windows System Libraries (WSL) - C-Runtime Library (32-bit DLL), Version 5.3.1
- MinGW.org Integer Set Library (ISL) - ISL (32-bit DLL) Version 0.21-2
- MinGW.org Integer Set Library (ISL) - ISL (32-bit) Version 0.21-2
- MinGW.org Windows

Download Compiler

Visit : <http://www.mingw.org/>

The screenshot shows the MinGW.org website. The browser's address bar displays `osdn.net/projects/mingw/releases/`. The website's navigation bar includes links for Download, Magazine, Develop, and Contribute. The main heading is "MinGW - Minimalist GNU for Windows", with buttons for Fork and Donation. A category dropdown is set to "Software", and a search bar is present. The "Download List" tab is active, showing a table of download packages. The first package, "mingw-get-setup.exe", is highlighted with a red box. To the right, a review section shows a 3.7 star rating from 29 reviews. The footer indicates the page is for the "MinGW Installation Manager (mingw-get)" with 1 item listed.

Download File List - MinGW - Mi x +

osdn.net/projects/mingw/releases/ Guest

Download Magazine Develop Contribute Account Language Help

OSDN > Find Software > Software Development > Code Generators > MinGW - Minimalist GNU for Windows > Download File List

Category: Software

MinGW - Minimalist GNU for Windows Fork Donation

Description Downloads Source Code Ticket Communication News

Download List

Project Description

This is the official download site for the latest packages originating from the [MinGW.org Project](#).

MinGW is a native Windows port of the GNU Compiler Collection (GCC), with freely distributable import libraries and header files for building native Windows applications; includes extensions to the MSVC runtime to support C functionality. Although (currently) offering only a 32-bit compiler suite, all of MinGW's software will execute on the 64bit Windows platforms.

MinGW is a registered trademark of [Software in the Public Interest Inc.](#), registration number 86017856; this trademark has been registered on behalf of the [MinGW.org Project](#), and its use by any other project is unauthorized.

System Requirements

Operating System: Windows

Review

3.7
29 Reviews
[Review this project](#)

mingw-get-setup.exe (Date: 2017-09-06, Size: 91.00 KB)

Download Package list

MinGW Installation Manager (mingw-get) (1 items) Show

Install Compiler

MinGW Installation Manager Setup Tool

mingw-get version 0.6.3-pre-20170905-1



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

Install Compiler

MinGW Installation Manager Setup Tool

mingw-get version 0.6.3-pre-20170905-1



Step 1: Specify Installation Preferences

Installation Directory

C:\MinGW Change

If you elect to change this, you are advised to avoid any choice of directory which includes white space within the absolute representation of its path name.

User Interface Options

Both command line and graphical options are available. The command line interface is always supported; the alternative only if you choose the following option to ...

☒ ... also install support for the graphical user interface.

Program shortcuts for launching the graphical user interface should be installed ...

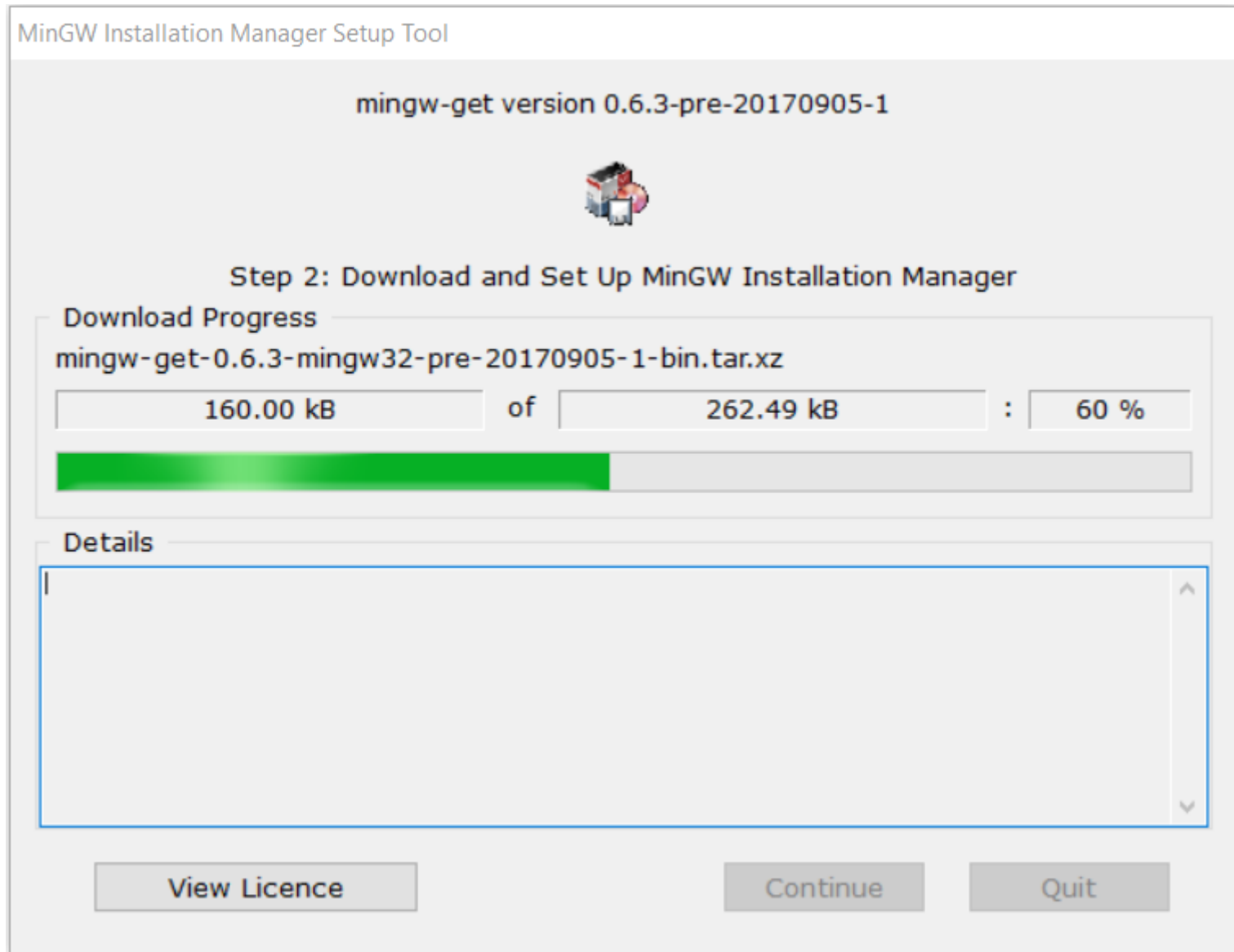
☒ ... just for me (the current user), or ... ☐ ... for all users * ...

☒ ... in the start menu, and/or ... ☒ ... on the desktop.

* selection of this option requires administrative privilege.

View Licence Continue Cancel

Install Compiler



Install Compiler

MinGW Installation Manager Setup Tool

mingw-get version 0.6.3-pre-20170905-1



Step 2: Download and Set Up MinGW Installation Manager

Download Progress

Catalogue update completed; please check 'Details' pane for errors.

Processed 113

of

113 items

:

100 %

Details

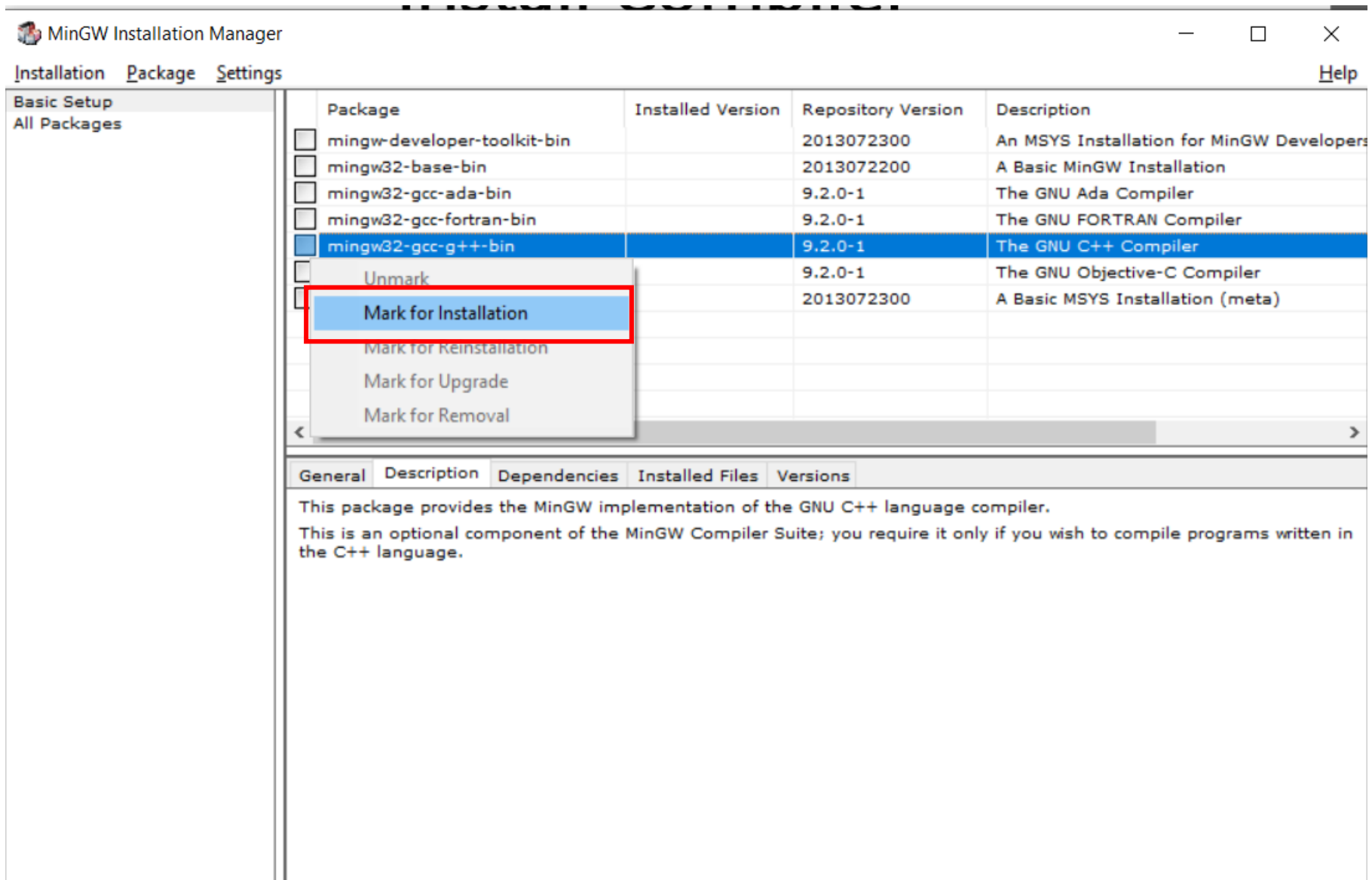
```
mingw-get: *** INFO *** setup: unpacking mingw-get-setup-0.6.3-mingw32-pre-20170905-1-xml.tar.xz
mingw-get: *** INFO *** setup: updating installation database
mingw-get: *** INFO *** setup: register mingw-get-0.6.3-mingw32-pre-20170905-1-bin.tar.xz
mingw-get: *** INFO *** setup: register mingw-get-0.6.3-mingw32-pre-20170905-1-gui.tar.xz
mingw-get: *** INFO *** setup: register mingw-get-0.6.3-mingw32-pre-20170905-1-lic.tar.xz
mingw-get: *** INFO *** setup: installation database updated
```

View Licence

Continue

Quit

Install Compiler



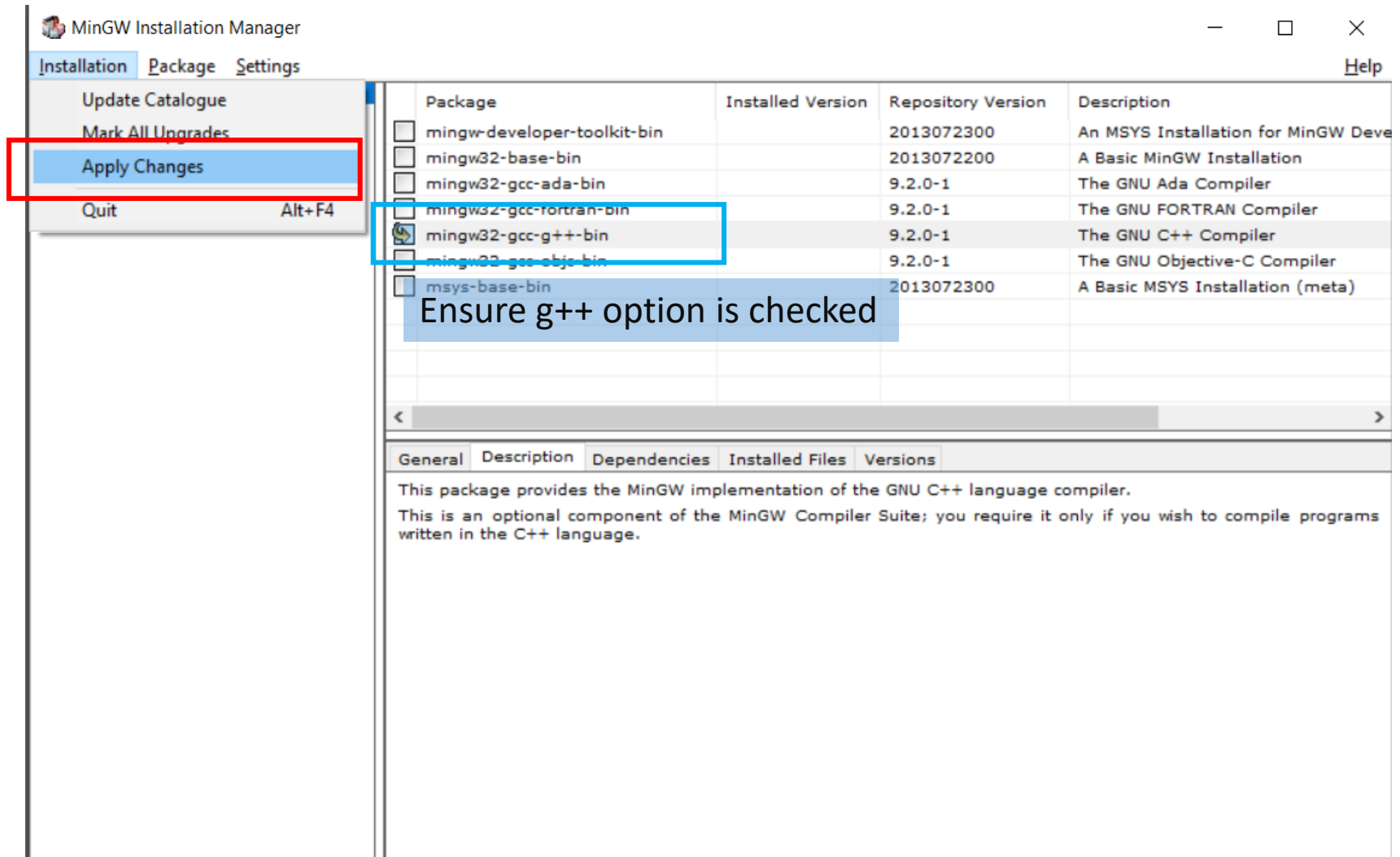
The screenshot shows the MinGW Installation Manager window. The 'Installation' tab is active, displaying a list of packages. The package 'mingw32-gcc-g++-bin' is selected, and a context menu is open with 'Mark for Installation' highlighted. The package list includes:

| Package | Installed Version | Repository Version | Description |
|---|-------------------|--------------------|---|
| <input type="checkbox"/> mingw-developer-toolkit-bin | | 2013072300 | An MSYS Installation for MinGW Developers |
| <input type="checkbox"/> mingw32-base-bin | | 2013072200 | A Basic MinGW Installation |
| <input type="checkbox"/> mingw32-gcc-ada-bin | | 9.2.0-1 | The GNU Ada Compiler |
| <input type="checkbox"/> mingw32-gcc-fortran-bin | | 9.2.0-1 | The GNU FORTRAN Compiler |
| <input checked="" type="checkbox"/> mingw32-gcc-g++-bin | | 9.2.0-1 | The GNU C++ Compiler |
| <input type="checkbox"/> Unmark | 9.2.0-1 | | The GNU Objective-C Compiler |
| <input type="checkbox"/> Mark for Installation | 2013072300 | | A Basic MSYS Installation (meta) |
| <input type="checkbox"/> Mark for Reinstallation | | | |
| <input type="checkbox"/> Mark for Upgrade | | | |
| <input type="checkbox"/> Mark for Removal | | | |

The 'Description' tab is also visible, showing the following text:

This package provides the MinGW implementation of the GNU C++ language compiler.
This is an optional component of the MinGW Compiler Suite; you require it only if you wish to compile programs written in the C++ language.

Install Compiler



Schedule of Pending Actions

Installation begins

The screenshot shows the MinGW Installation Manager window. The 'Basic Setup' tab is active, and the 'All Packages' list is displayed. The package 'mingw-developer-toolkit-bin' is selected. A 'Download Package' dialog is open, showing the download progress for 'libiconv-1.14-4-mingw32-dll-2.tar.xz'. The progress bar indicates that 160.00 kB of 642.41 kB has been downloaded, which is 24%.

Install Compiler

Applying Scheduled Changes

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

☐ Close dialogue automatically, when activity is complete.

Close

Details

```
mingw-get: *** ERROR *** cannot install libquadmath-9.2.0-1-mingw32-dll-0.tar.xz
mingw-get: *** ERROR *** due to previous download failure
install: libgomp-9.2.0-1-mingw32-dll-1.tar.xz
mingw-get: *** ERROR *** required package file is not available
mingw-get: *** ERROR *** cannot install libgomp-9.2.0-1-mingw32-dll-1.tar.xz
mingw-get: *** ERROR *** due to previous download failure
install: libssp-9.2.0-1-mingw32-dll-0.tar.xz
installing libssp-9.2.0-1-mingw32-dll-0.tar.xz
install: w32api-5.3.1-mingw32-dev.tar.xz
installing w32api-5.3.1-mingw32-dev.tar.xz
install: mingwrt-5.3.1-mingw32-dev.tar.xz
installing mingwrt-5.3.1-mingw32-dev.tar.xz
install: libmpc-1.1.0-1-mingw32-dll-3.tar.xz
installing libmpc-1.1.0-1-mingw32-dll-3.tar.xz
install: binutils-2.32-1-mingw32-bin.tar.xz
installing binutils-2.32-1-mingw32-bin.tar.xz
install: libisl-0.21-2-mingw32-dll-21.tar.xz
mingw-get: *** ERROR *** required package file is not available
mingw-get: *** ERROR *** cannot install libisl-0.21-2-mingw32-dll-21.tar.xz
mingw-get: *** ERROR *** due to previous download failure
install: gcc-core-9.2.0-1-mingw32-bin.tar.xz
installing gcc-core-9.2.0-1-mingw32-bin.tar.xz
install: gcc-c++-9.2.0-1-mingw32-bin.tar.xz
installing gcc-c++-9.2.0-1-mingw32-bin.tar.xz
```

Installation begins

MingGW Installation Manager

Installation Package Settings

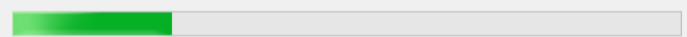
Basic Setup
All Packages

| Package | Installed Version | Repository Version | Desc |
|--|-------------------|--------------------|------|
| <input type="checkbox"/> mingw-developer-toolkit-bin | | 2013072300 | An M |

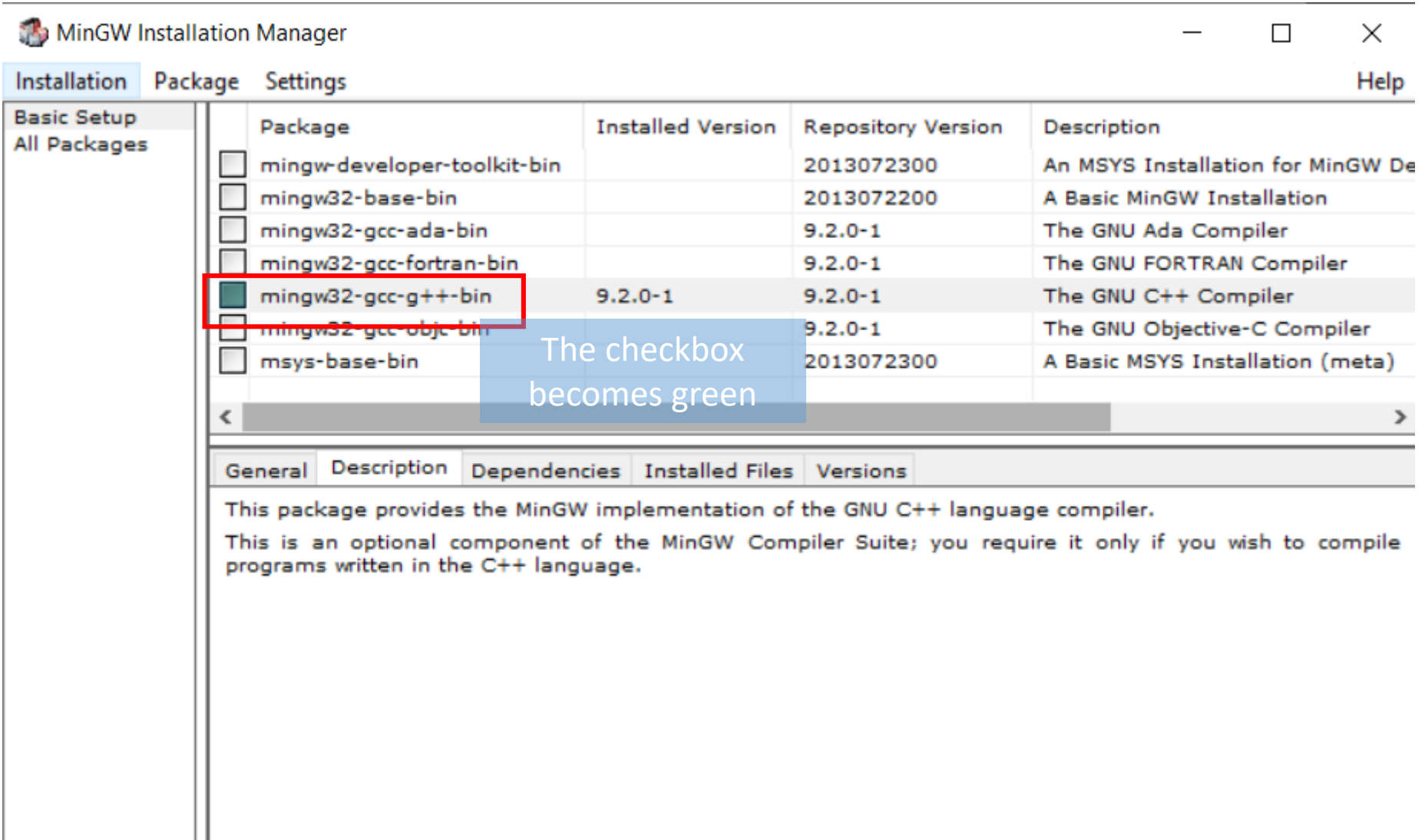
Download Package

libiconv-1.14-4-mingw32-dll-2.tar.xz

160.00 kB of 642.41 kB : 24 %



Install Compiler



MinGW Installation Manager

Installation Package Settings Help

Basic Setup
All Packages

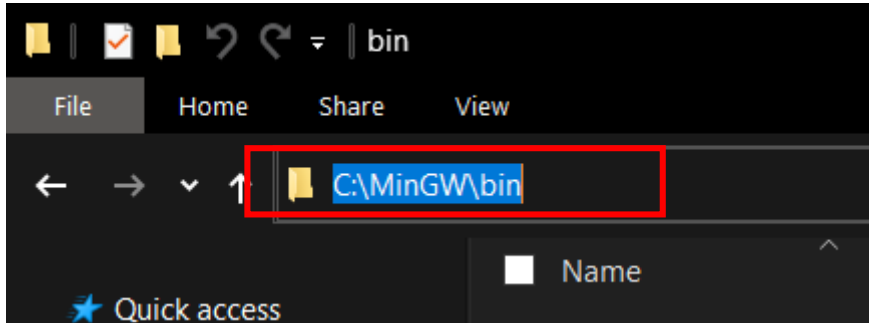
| Package | Installed Version | Repository Version | Description |
|---|-------------------|--------------------|-----------------------------------|
| <input type="checkbox"/> mingw-developer-toolkit-bin | | 2013072300 | An MSYS Installation for MinGW De |
| <input type="checkbox"/> mingw32-base-bin | | 2013072200 | A Basic MinGW Installation |
| <input type="checkbox"/> mingw32-gcc-ada-bin | | 9.2.0-1 | The GNU Ada Compiler |
| <input type="checkbox"/> mingw32-gcc-fortran-bin | | 9.2.0-1 | The GNU FORTRAN Compiler |
| <input checked="" type="checkbox"/> mingw32-gcc-g++-bin | 9.2.0-1 | 9.2.0-1 | The GNU C++ Compiler |
| <input type="checkbox"/> mingw32-gcc-objc-bin | | 9.2.0-1 | The GNU Objective-C Compiler |
| <input type="checkbox"/> msys-base-bin | | 2013072300 | A Basic MSYS Installation (meta) |

< >

General Description Dependencies Installed Files Versions

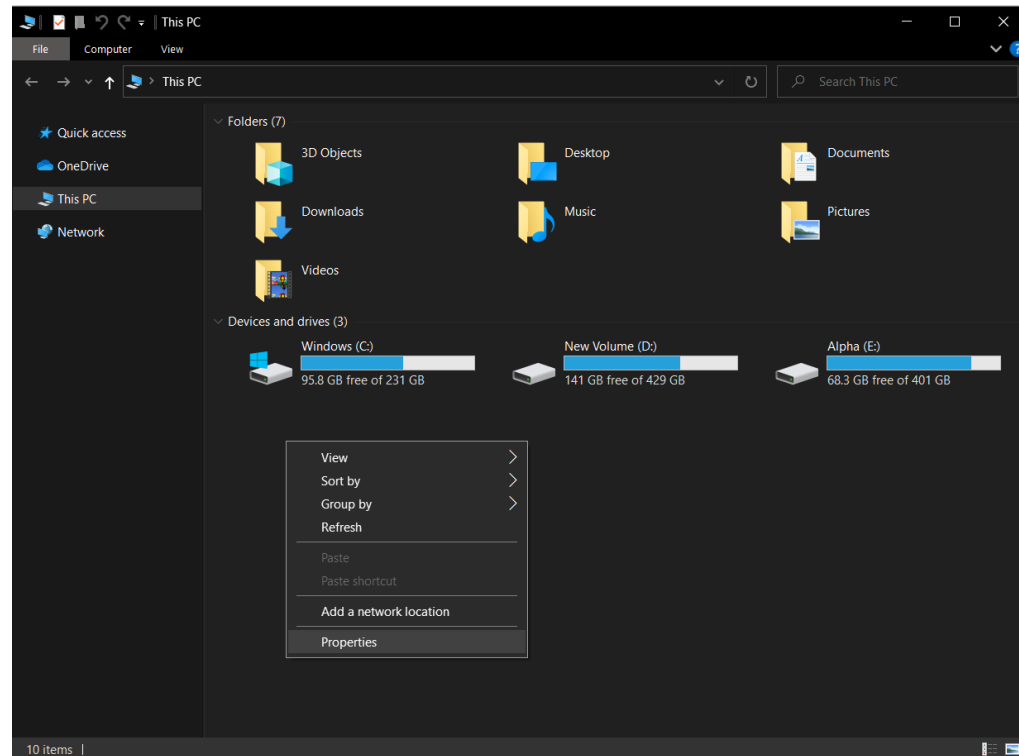
This package provides the MinGW implementation of the GNU C++ language compiler.
This is an optional component of the MinGW Compiler Suite; you require it only if you wish to compile programs written in the C++ language.

Add to PATH



- Open the file explorer
- Navigate to C:\MinGW\bin
- And copy the path

- Open “This PC”
- Right click -> Properties



Add to PATH

The screenshot shows the Windows System Properties dialog box with the 'Advanced' tab selected. The 'Environment Variables...' button at the bottom is highlighted with a red rectangle. In the background, the Control Panel 'System' page is visible, with 'Advanced system settings' highlighted by a red rectangle. Two green callout boxes provide instructions: '1. Click on "Advanced System Settings"' and '2. Environment Variables'.

System

← → ▾ ↑ > Control Panel > System and Security > System

Control Panel Home

View basic information about your computer

- Device Manager
- Remote settings
- System protection
- Advanced system settings**

1. Click on "Advanced System Settings"

System Properties

Computer Name Hardware **Advanced** System Protection Remote

You must be logged on as an Administrator to make most of these changes.

Performance
Visual effects, processor scheduling, memory usage, and virtual memory
Settings...

User Profiles
Desktop settings related to your sign-in
Settings...

Startup and Recovery
System startup, system failure, and debugging information
Settings...

Environment Variables...

2. Environment Variables

OK Cancel Apply

Add to PATH

Environment Variables



User variables for Hp

| Variable | Value |
|--------------------------|---|
| ChocolateyLastPathUpdate | 132250061970617317 |
| CLASSPATH | E:\KETAN\IIIT Sri City\Sem 3\OOP\json-simple-1.1.jar |
| IntelliJ IDEA | D:\Data\IntelliJ IDEA 2019.2.3\bin; |
| OneDrive | C:\Users\Hp\OneDrive |
| OneDriveConsumer | C:\Users\Hp\OneDrive |
| Path | C:\Program Files\Python37;C:\Program Files\Python37\Scripts;... |
| PyCharm | C:\Program Files\JetBrains\PyCharm 2019.1.2\bin; |
| OT_DEVICE_LEVEL_PATH | |

New...

Edit...

Delete

1. Click on "Path" in
System Variables

System variables

| Variable | Value |
|-------------------------|--|
| OS | Windows_NT |
| Path | C:\Program Files (x86)\Python37-32\;C:\Program Files (x86)\Py... |
| PATHEXT | .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC;.PY;.PYW |
| platformcode | KV |
| PROCESSOR_ARCHITECTU... | AMD64 |
| PROCESSOR_IDENTIFIER | Intel64 Family 6 Model 158 Stepping 10, GenuineIntel |
| PROCESSOR_LEVEL | 6 |
| PROCESSOR_REVISION | 0 0 |

New...

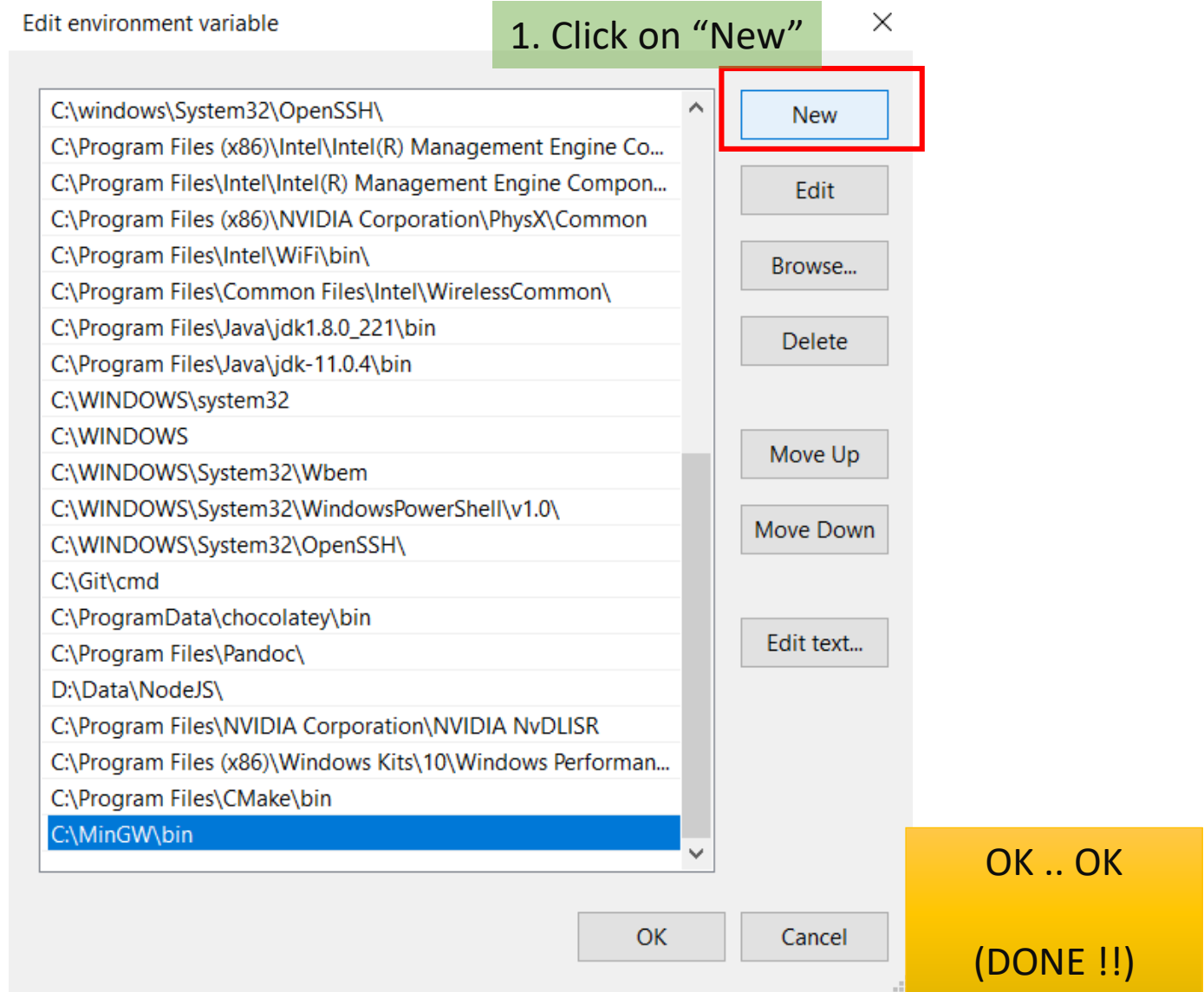
Edit...

Delete

OK

Cancel

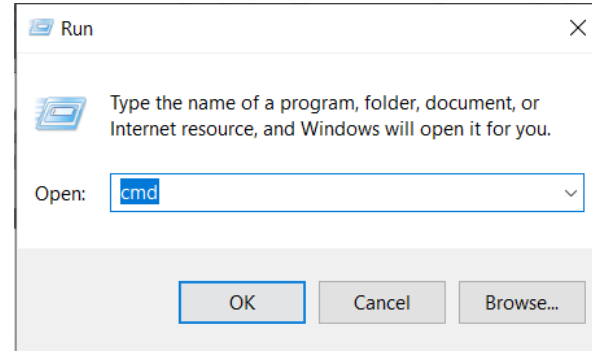
Add to PATH



Confirm Installation

Open CMD

- Win+R
- Type "cmd"
- OK



```
gcc --version
```

```
C:\Users\Hp>g++ --version
g++ (MinGW.org GCC-8.2.0-3) 8.2.0
Copyright (C) 2018 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.
```



Install Text Editor



<https://www.sublimetext.com/>

Install Text Editor

<https://www.sublimetext.com/>

The image shows the Sublime Text website and the editor interface. The website header includes the Sublime Text logo and navigation links: Download, Buy, Support, News, and Forum. The main content area features the tagline "A sophisticated text editor for code, markup and prose" and a red-bordered button labeled "DOWNLOAD FOR WINDOWS". To the right, there is a section for "Introducing our Git client" with a "Sublime Merge" link. Below the website, the Sublime Text editor interface is shown, displaying a file named "base64.cc" with C++ code. The left sidebar shows a file explorer with folders like "tensorflow", "third_party", and "tools", and files like ".gitignore", "ACKNOWLEDGMENTS", and "ADOPTERS.md".

Sublime Text - A sophisticated text editor

sublimetext.com

Sublime Text

Download Buy Support News Forum

A sophisticated text editor for code, markup and prose

DOWNLOAD FOR WINDOWS

Sublime Text 3 (Build 3211) [Changelog](#)

Introducing our Git client
Sublime Merge

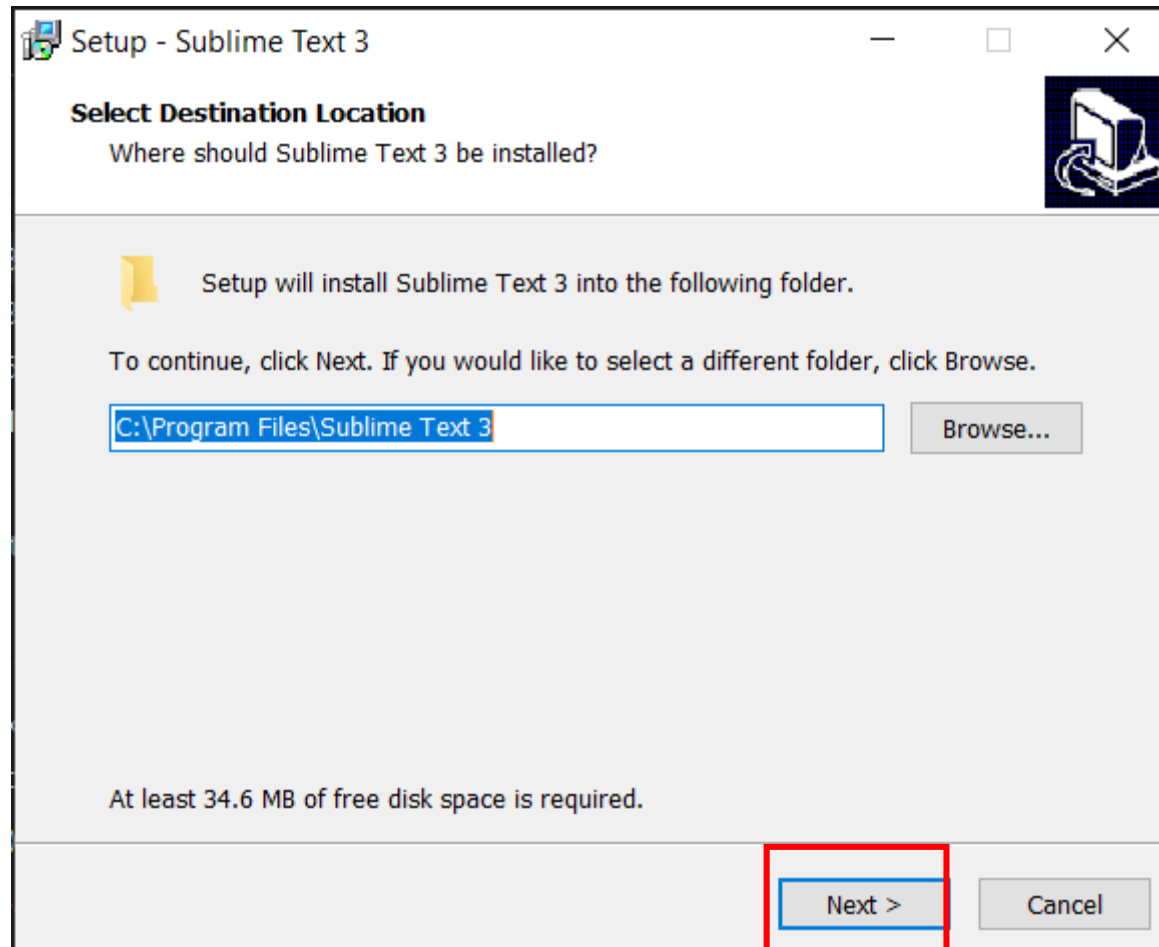
Sublime Text

FOLDERS

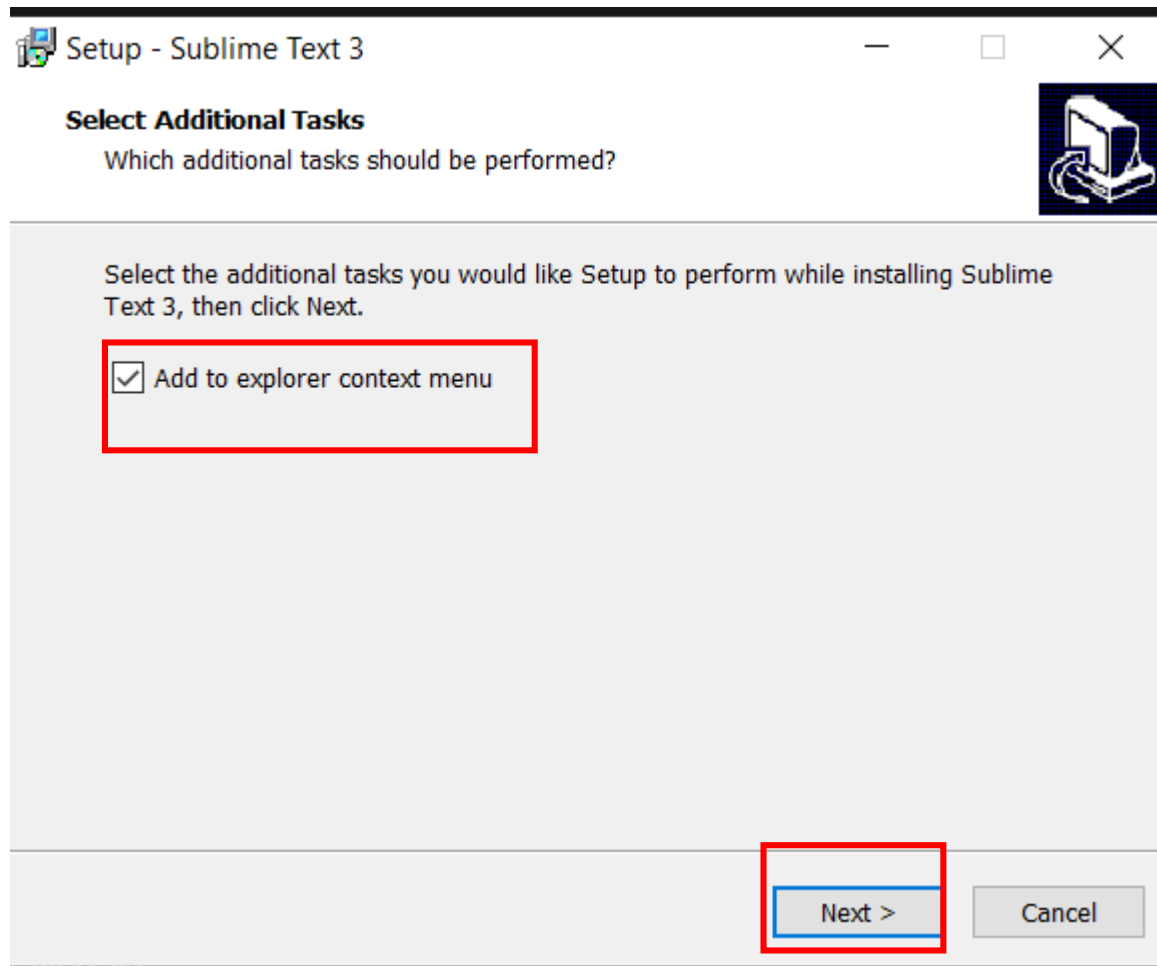
- tensorflow
- tensorflow
- third_party
- tools
- util
- .gitignore
- ACKNOWLEDGMENTS
- ADOPTERS.md
- AUTHORS
- /* BUILD
- CODEOWNERS
- configure
- CONTRIBUTING.md
- ISSUE_TEMPLATE.md
- LICENSE
- /* models.BUILD
- README.md
- RELEASE.md
- WORKSPACE
- sqlite3
- /* shell.c

```
base64.cc
34
35 void base64_encode(const uint8_t * data, size_t length, char * dst,
36                   base64_charset variant)
37 {
38     const char * charset = (variant == base64_charset::URL_SAFE)
39         ? URL_SAFE_CHARSET
40         : STANDARD_CHARSET;
41
42     size_t src_idx = 0;
43     size_t dst_idx = 0;
44     for (; (src_idx + 2) < length; src_idx += 3, dst_idx += 4)
45     {
46         uint8_t s0 = data[src_idx];
47         uint8_t s1 = data[src_idx + 1];
48         uint8_t s2 = data[src_idx + 2];
49
50         dst[dst_idx + 0] = charset[(s0 & 0xfc) >> 2];
51         dst[dst_idx + 1] = charset[((s0 & 0x03) << 4) | ((s1 & 0xf0) >> 4)];
52         dst[dst_idx + 2] = charset[((s1 & 0x0f) << 2) | (s2 & 0xc0) >> 6];
53         dst[dst_idx + 3] = charset[(s2 & 0x3f)];
54     }
55
56     if (src_idx < length)
57     {
58         uint8_t s0 = data[src_idx];
59         uint8_t s1 = (src_idx + 1 < length) ? data[src_idx + 1] : 0;
60
61         dst[dst_idx++] = charset[(s0 & 0xfc) >> 2];
62         dst[dst_idx++] = charset[((s0 & 0x03) << 4) | ((s1 & 0xf0) >> 4)];
63         if (src_idx + 1 < length)
64             dst[dst_idx++] = charset[((s1 & 0x0f) << 2) | (s2 & 0xc0) >> 6];
65     }
```

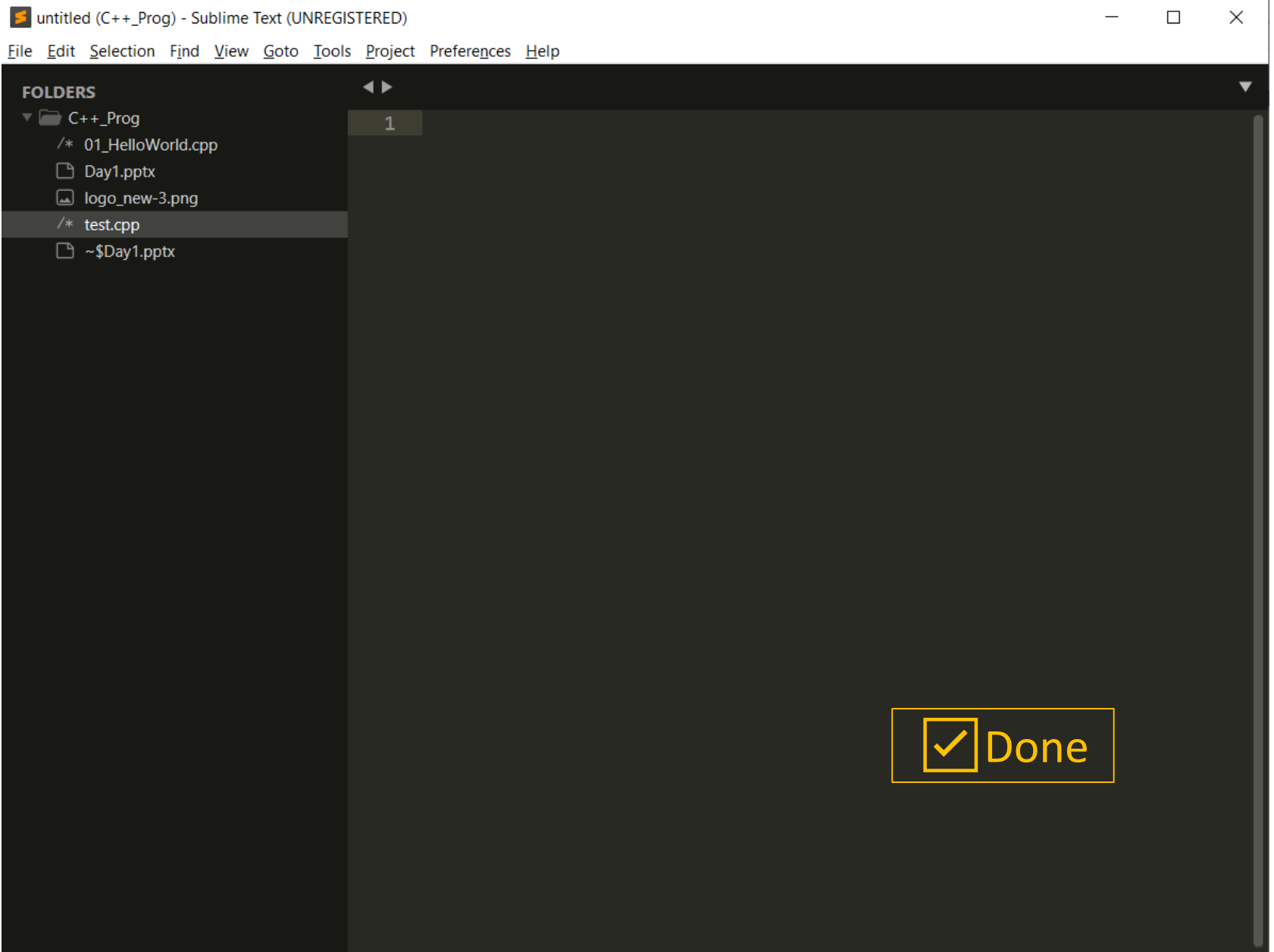
Install Text Editor



Install Text Editor



Then Click Install



Install IDE (Integrated Development Environment)



Visual Studio Code



<https://code.visualstudio.com/>

Install IDE

<https://code.visualstudio.com/>

The image shows the Visual Studio Code website with the headline "Code editing. Redefined." and a "Download for Windows" button highlighted with a red box. Below the button is a link to "Other platforms and Insiders Edition". A text block states: "By using VS Code, you agree to its license and privacy statement."

Overlaid on the bottom right is a screenshot of the Visual Studio Code IDE interface. The "EXTENSIONS: MARKETPLACE" sidebar is open, showing a list of extensions with their versions, download counts, and star ratings. The "Python" extension is at the top, followed by "GitLens", "C/C++", "ESLint", "Debugger for Chrome", "Language Support for Java", "vscode-icons", "Vetur", and "C#". Each extension has an "Install" button. The main editor area shows a JavaScript file named "serviceWorker.js" with a dropdown menu open over the "navigator.serviceWorker" property, listing various methods and properties like "product", "productSub", "removeSiteSpecificTrackingException", etc. The "TERMINAL" panel at the bottom shows the output of a "node" command, displaying the local and network URLs for the development server.

| Extension | Version | Downloads | Stars | Author | Install |
|----------------------|--------------|-----------|-------|-----------------|---------|
| Python | 2019.6.24221 | 54.9M | 4.5 | Microsoft | Install |
| GitLens — Git sup... | 9.8.5 | 23.1M | 5 | Eric Amodio | Install |
| C/C++ | 0.24.0 | 23M | 3.5 | Microsoft | Install |
| ESLint | 1.9.0 | 21.9M | 4.5 | Dirk Baeumer | Install |
| Debugger for Ch... | 4.11.6 | 20.6M | 4 | Microsoft | Install |
| Language Supp... | 0.47.0 | 18.7M | 4.5 | Red Hat | Install |
| vscode-icons | 8.8.0 | 17.2M | 5 | VSCo Icons Team | Install |
| Vetur | 0.21.1 | 17M | 4.5 | Pine Wu | Install |
| C# | 1.21.0 | 15.6M | 4 | Microsoft | Install |

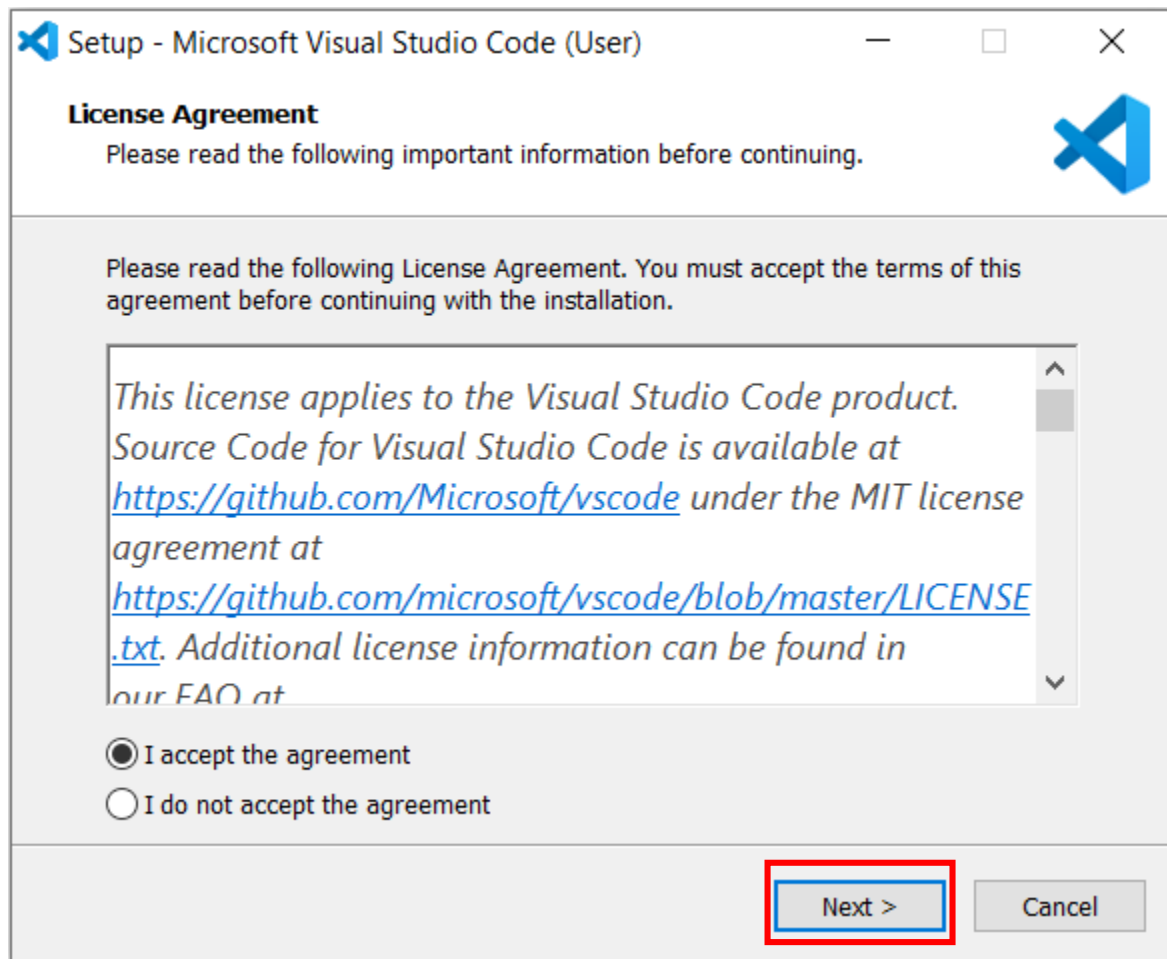
```
src > JS serviceWorker.js > register > window.addEventListener("load") callback
39      checkValidServiceWorker(swUrl, config);
40
41      // Add some additional logging to localhost, per
42      // service worker/PWA documentation.
43      navigator.serviceWorker.ready.then(() => {
44
45        product
46        productSub
47        removeSiteSpecificTrackingException
48        removeWebWideTrackingException
49        requestMediaKeySystemAccess
50        sendBeacon
51        serviceWorker (property) Navigator.serviceWorke...
52        storage
53        storeSiteSpecificTrackingException
54        storeWebWideTrackingException
55        userAgent
56        vendor
57      }
58
59      function registerValidSW(swUrl, config) {
60        navigator.serviceWorker
          .register(swUrl)
          .then(registration => {
```

```
TERMINAL 1: node
You can now view create-react-app in the browser.

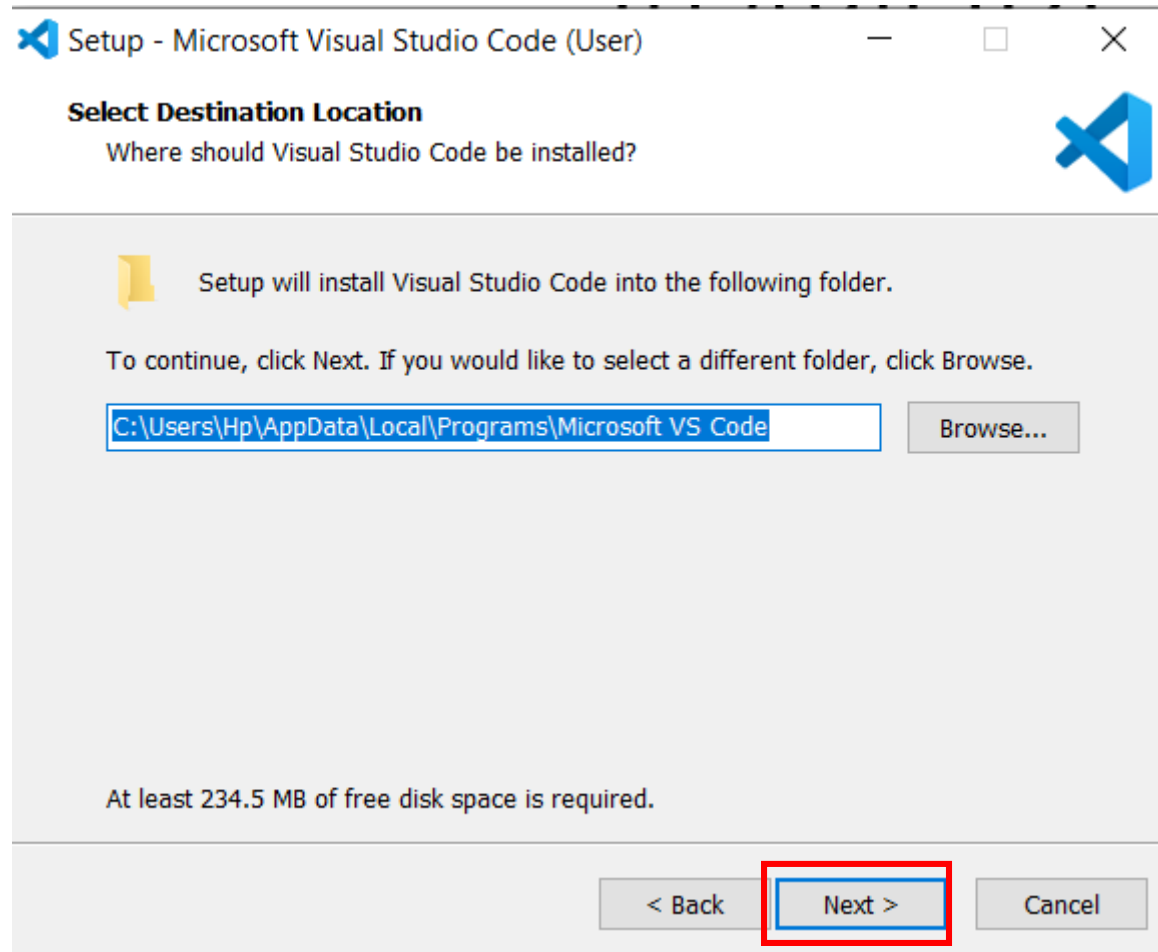
Local:      http://localhost:3000/
On Your Network: http://10.211.55.3:3000/

Note that the development build is not optimized.
```

Install IDE



Install IDE



Then Next

Install IDE

Setup - Microsoft Visual Studio Code (User)

Select Additional Tasks

Which additional tasks should be performed?

Select the additional tasks you would like Setup to perform while installing Visual Studio Code, then click Next.

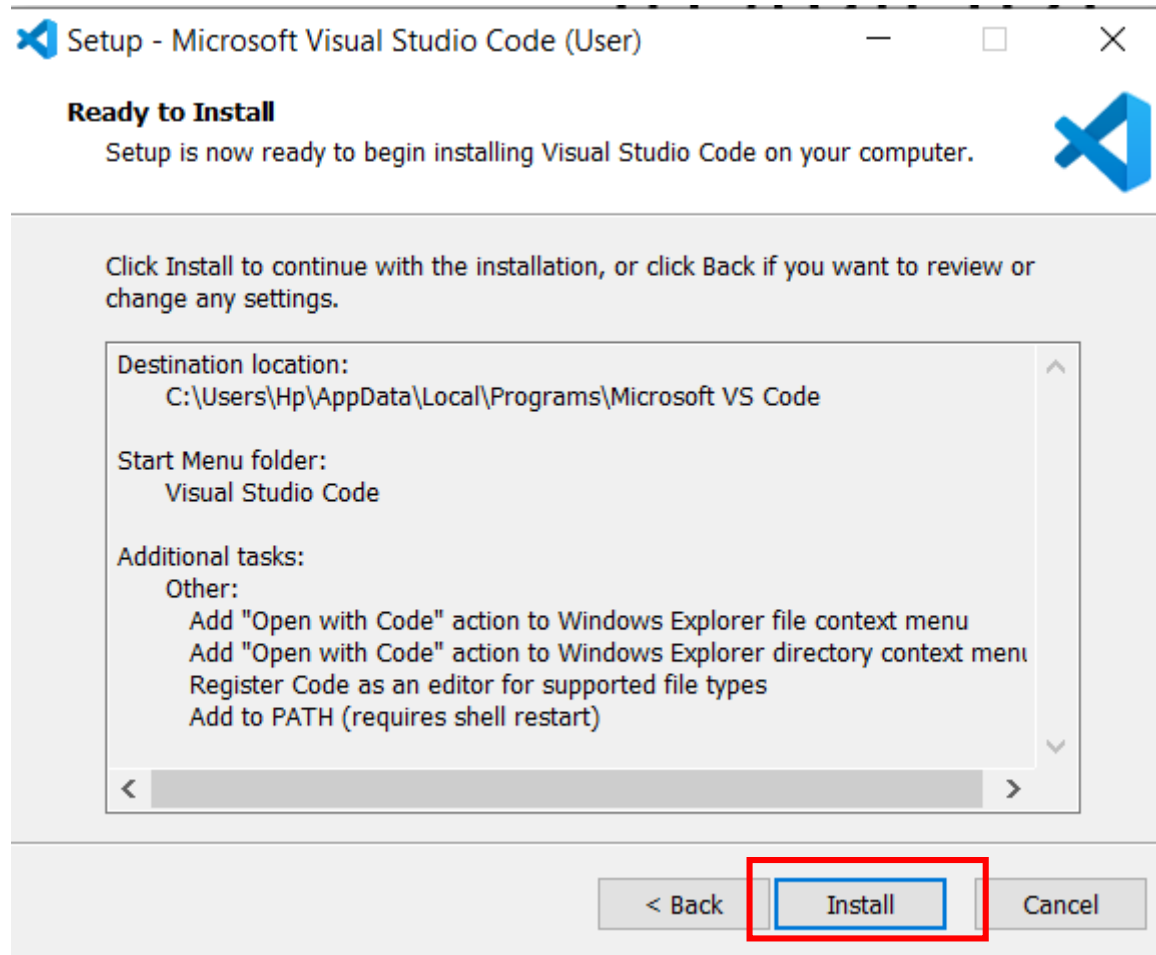
Additional icons:

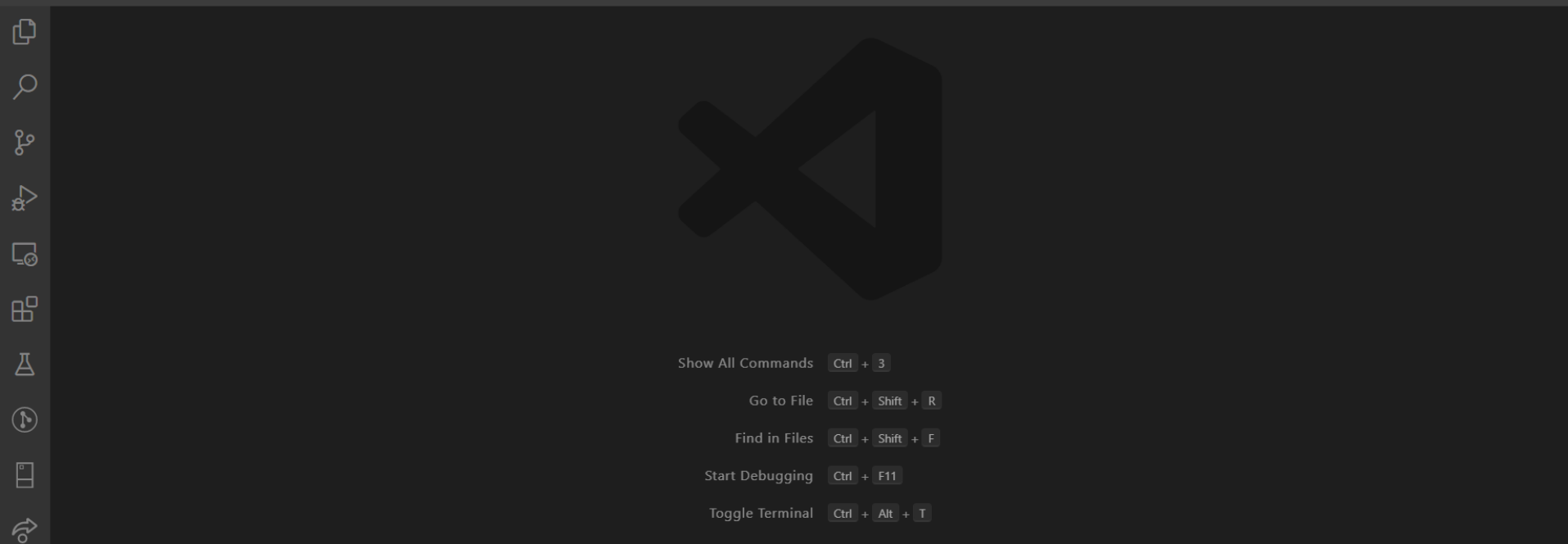
☐ Create a desktop icon

Other:

- ☒ Add "Open with Code" action to Windows Explorer file context menu
- ☒ Add "Open with Code" action to Windows Explorer directory context menu
- ☒ Register Code as an editor for supported file types
- ☒ Add to PATH (requires shell restart)

Install IDE





PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

1: powershell + [] [X] ^ X

Windows PowerShell
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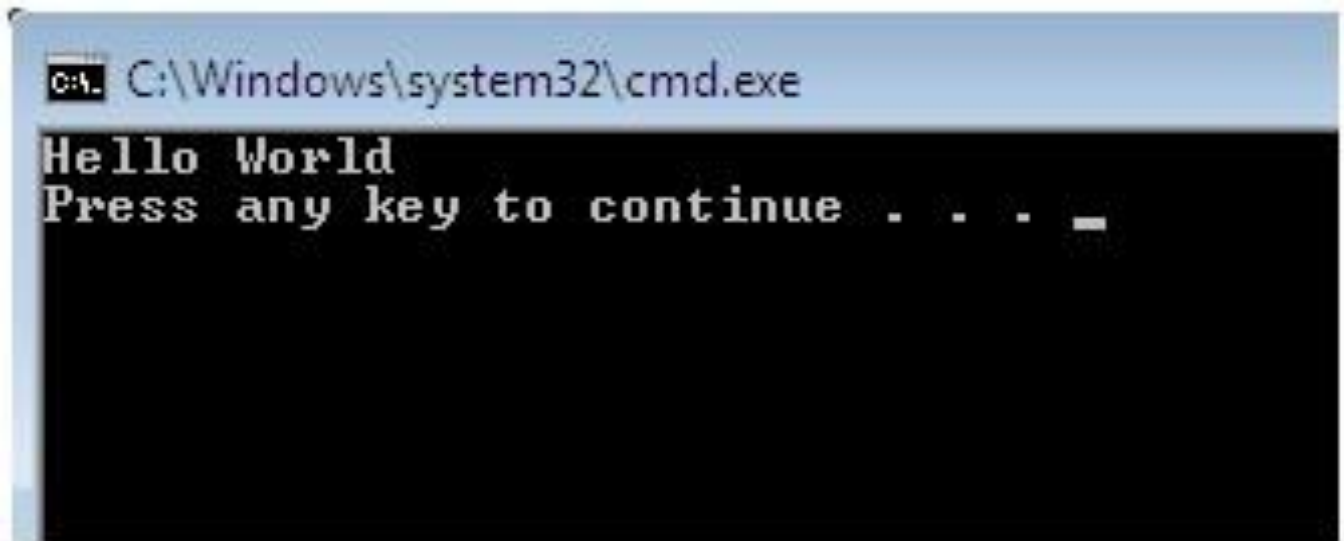
Try the new cross-platform PowerShell <https://aka.ms/pscore6>

PS C:\Users\Hp\Desktop\C++_Prog>

Done ✓

Hello World!

Now Lets Code !!



```
C:\Windows\system32\cmd.exe
Hello World
Press any key to continue . . . _
```

Hello World!

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

int main( )
{
    cout << "Hello World!" << endl;
    return 0;
}
```

C:\Windows\System32\cmd.exe

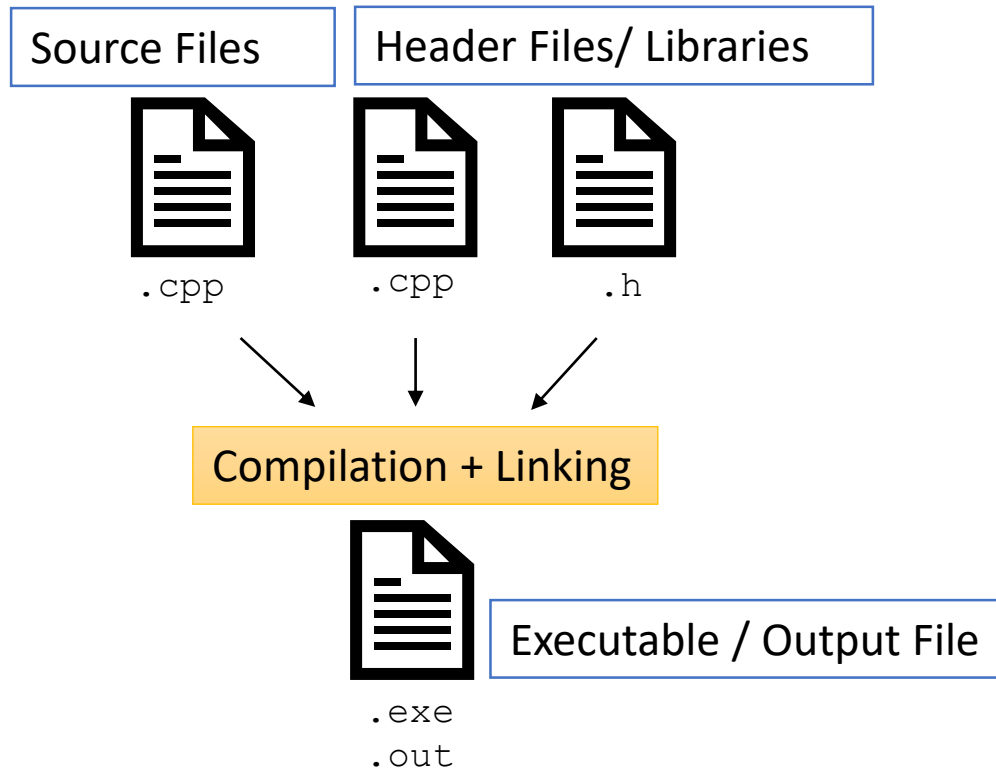
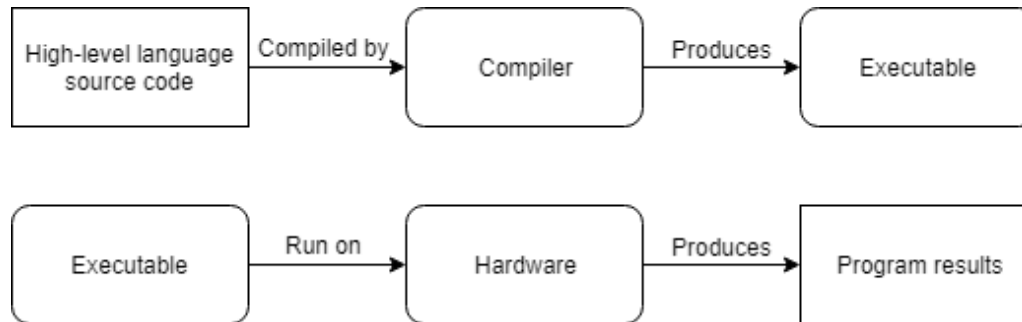
C:\Users\Hp\Desktop\C++_Prog>g++ 01_HelloWorld.cpp

C:\Users\Hp\Desktop\C++_Prog>a.exe

Hello World!

C:\Users\Hp\Desktop\C++_Prog>

How does it work



Variables

```
int age = 20;
```

datatype

value

variable name

```
int date;  
date = 12;
```

```
string name = "Tanmay";
```