



# **3416-003 Web Development Using Angular 8 and TypeScript**

## **Module 1: Software to download**



## Module 1: Section 1

# What Is This Course About



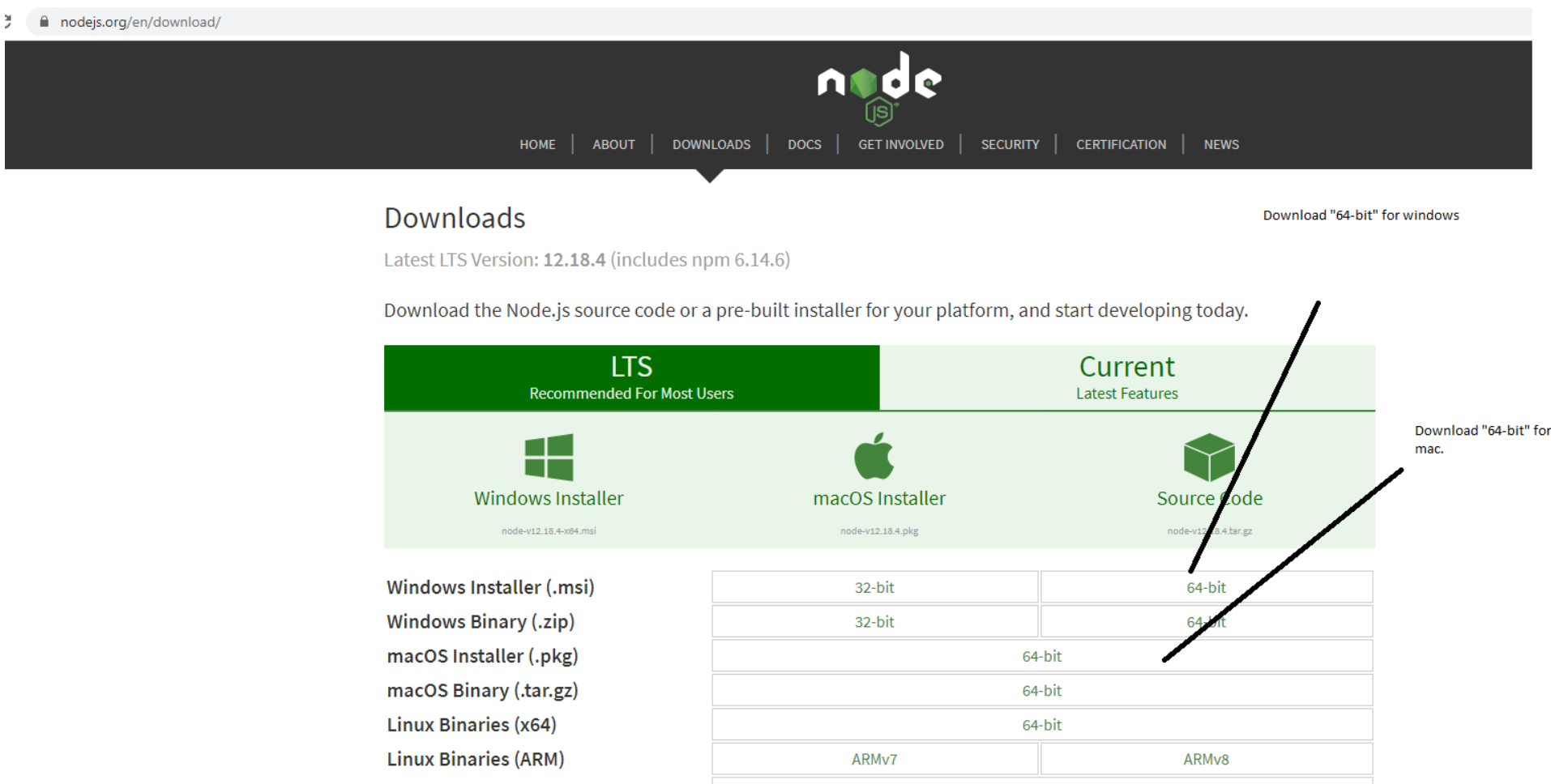
# Learning Outcomes for this Module

- Download NodeJS
- Download Microsoft Visual Studio Code

# Node.js

- <https://nodejs.org/en/download/>
- Download “64-bit Windows Installer(msi) for windows” and “macOS Installer(pkg 64-bit) for mac.

nodejs.org/en/download/



node

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## Downloads


Latest LTS Version: **12.18.4** (includes npm 6.14.6)


Download the Node.js source code or a pre-built installer for your platform, and start developing today.


Download "64-bit" for windows

**LTS**  
Recommended For Most Users

**Current**  
Latest Features

  
Windows Installer  
node-v12.18.4-x64.msi

  
macOS Installer  
node-v12.18.4.pkg

  
Source Code  
node-v12.18.4.tar.gz

Download "64-bit" for mac.

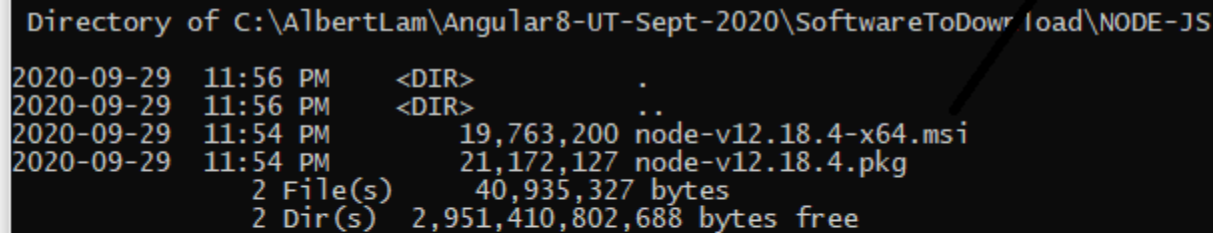
Windows Installer (.msi)  
Windows Binary (.zip)  
macOS Installer (.pkg)  
macOS Binary (.tar.gz)  
Linux Binaries (x64)  
Linux Binaries (ARM)

32-bit	64-bit
32-bit	64-bit
64-bit	
64-bit	
64-bit	
ARMv7	ARMv8

# Installation of Node.js

- For windows user, double click msi file:

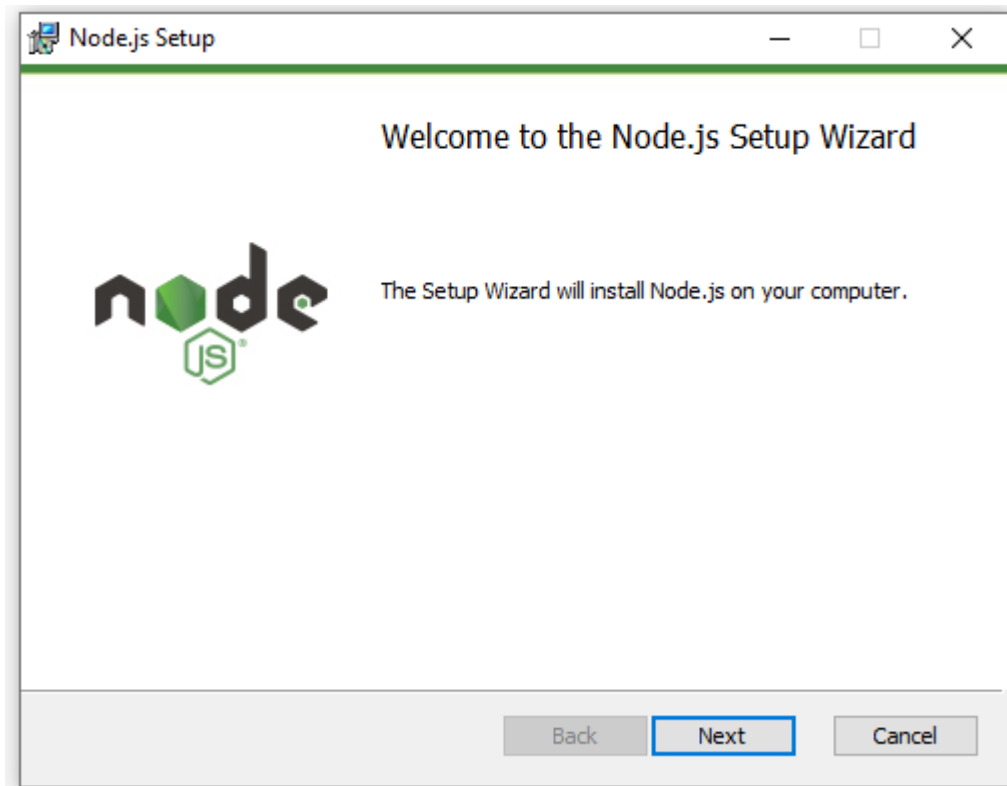
Click ".msi" file for windows



```
Directory of C:\AlbertLam\Angular8-UT-Sept-2020\SoftwareToDownload\NODE-JS
2020-09-29 11:56 PM    <DIR>          .
2020-09-29 11:56 PM    <DIR>          ..
2020-09-29 11:54 PM           19,763,200 node-v12.18.4-x64.msi
2020-09-29 11:54 PM           21,172,127 node-v12.18.4.pkg
                2 File(s)          40,935,327 bytes
                2 Dir(s)  2,951,410,802,688 bytes free
```

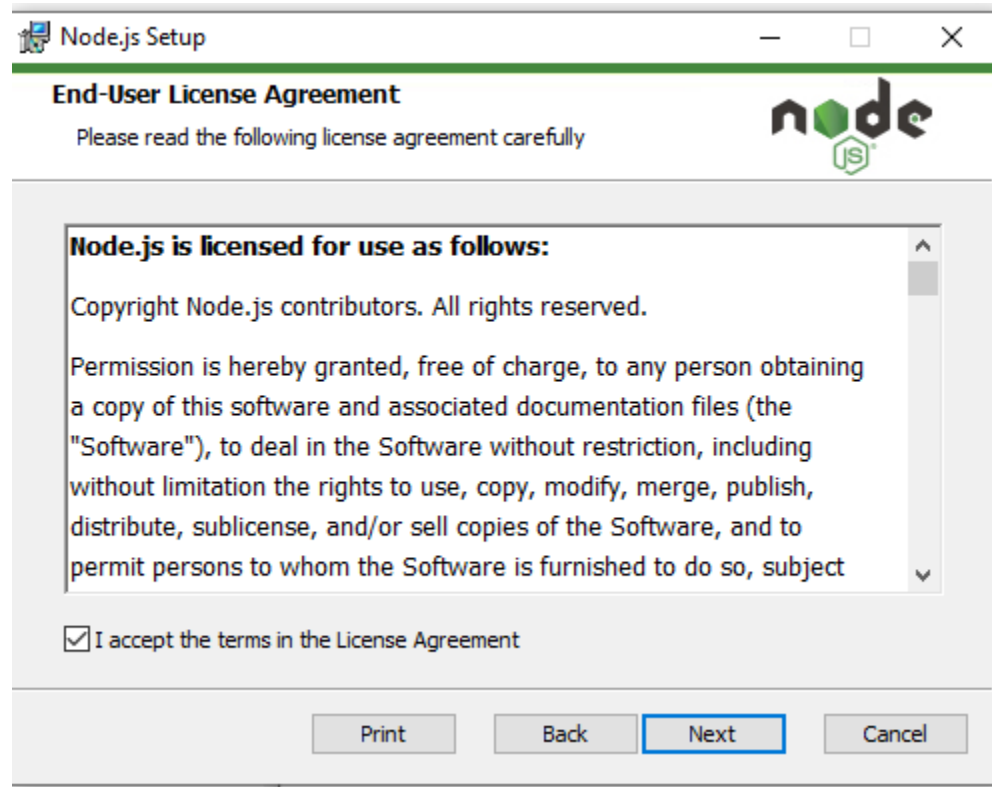
# Installation of Node.js

- Click “Next”.



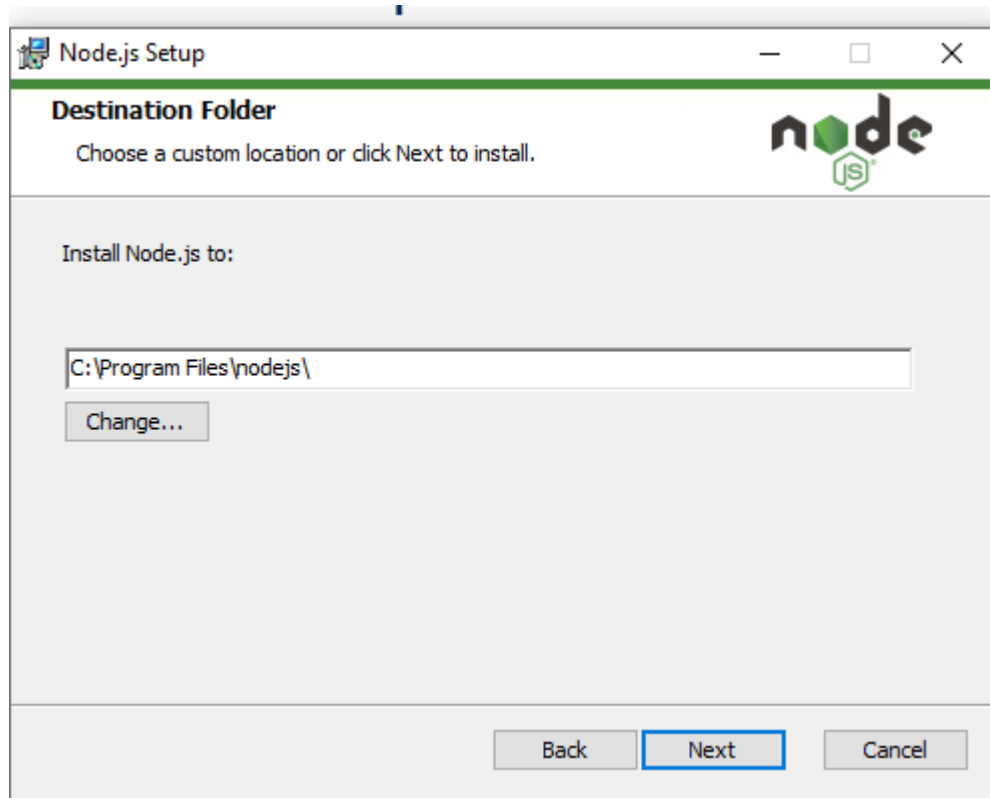
# Installation of Node.js

- Click “I accept the terms in License Agreement” and Click “Next”.



# Installation of Node.js

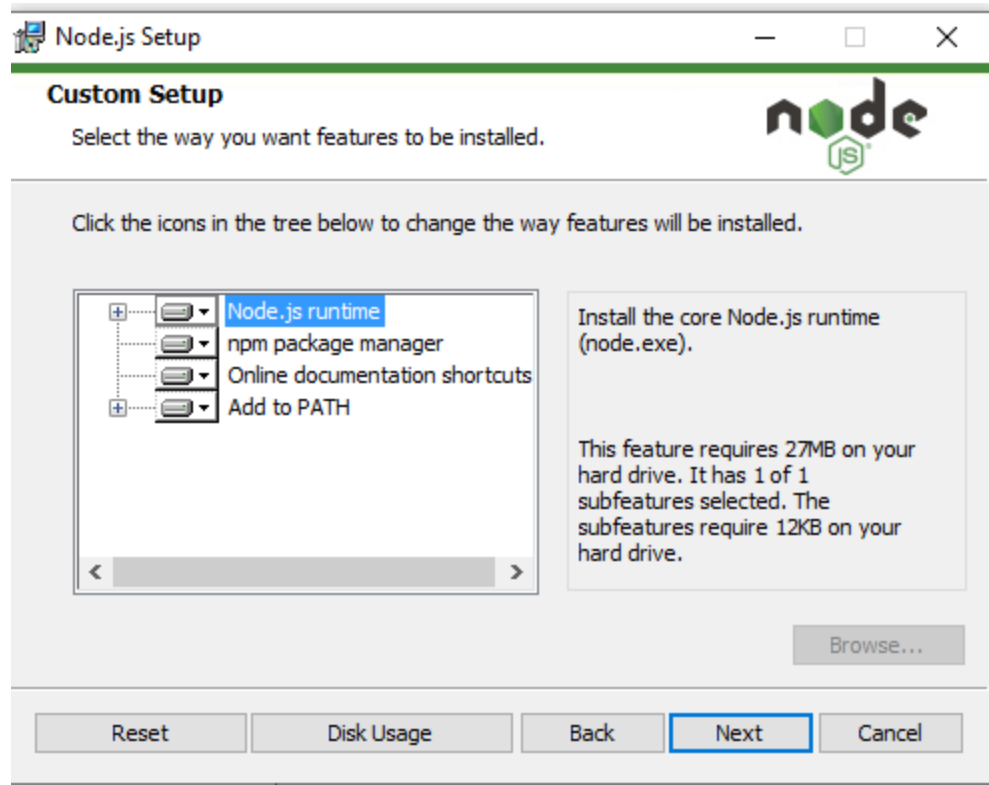
- Click “Next”.





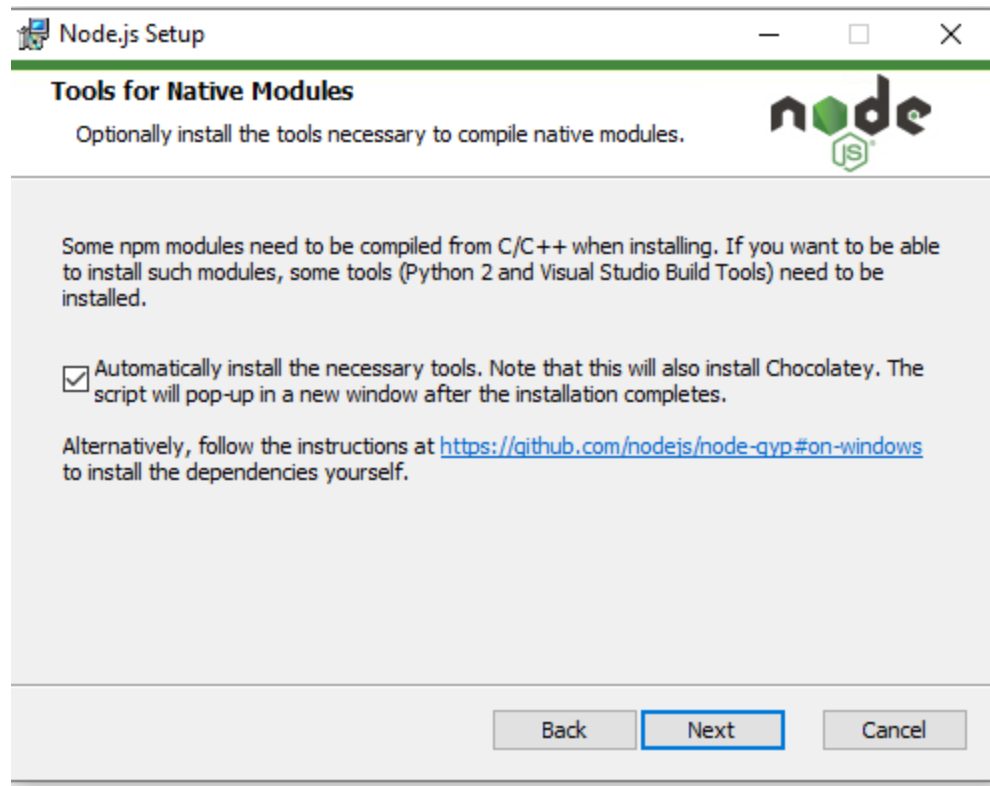
# Installation of Node.js

- Click “Next”.



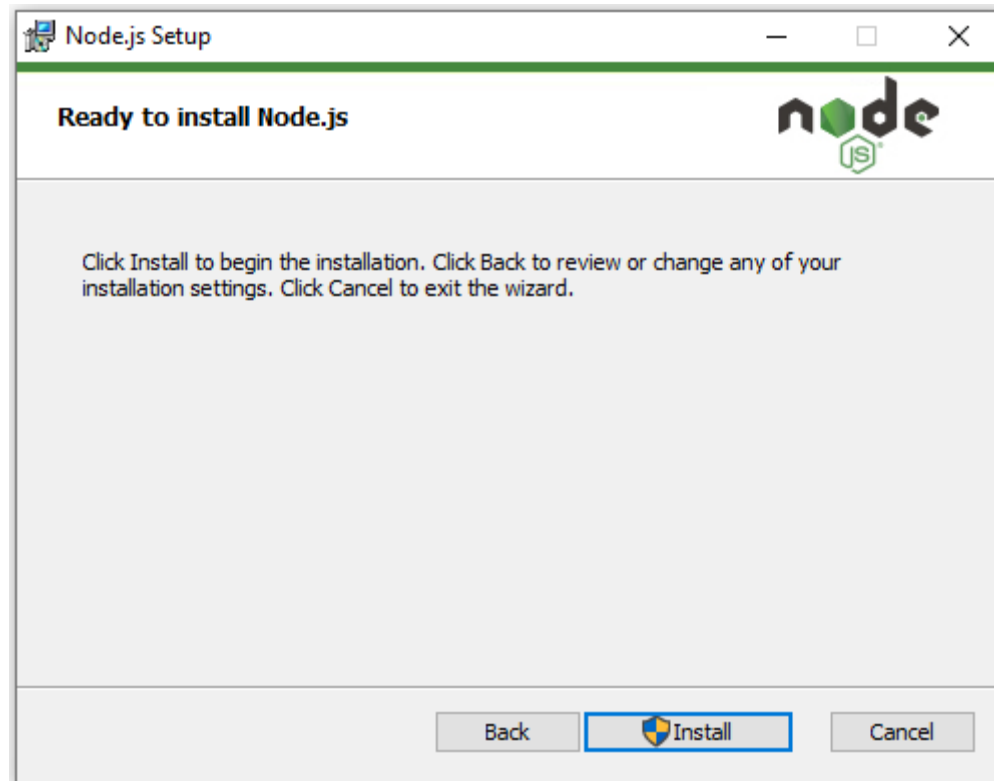
# Installation of Node.js

- Click “Automatically installed the necessary tools”.
- Click “Next”.

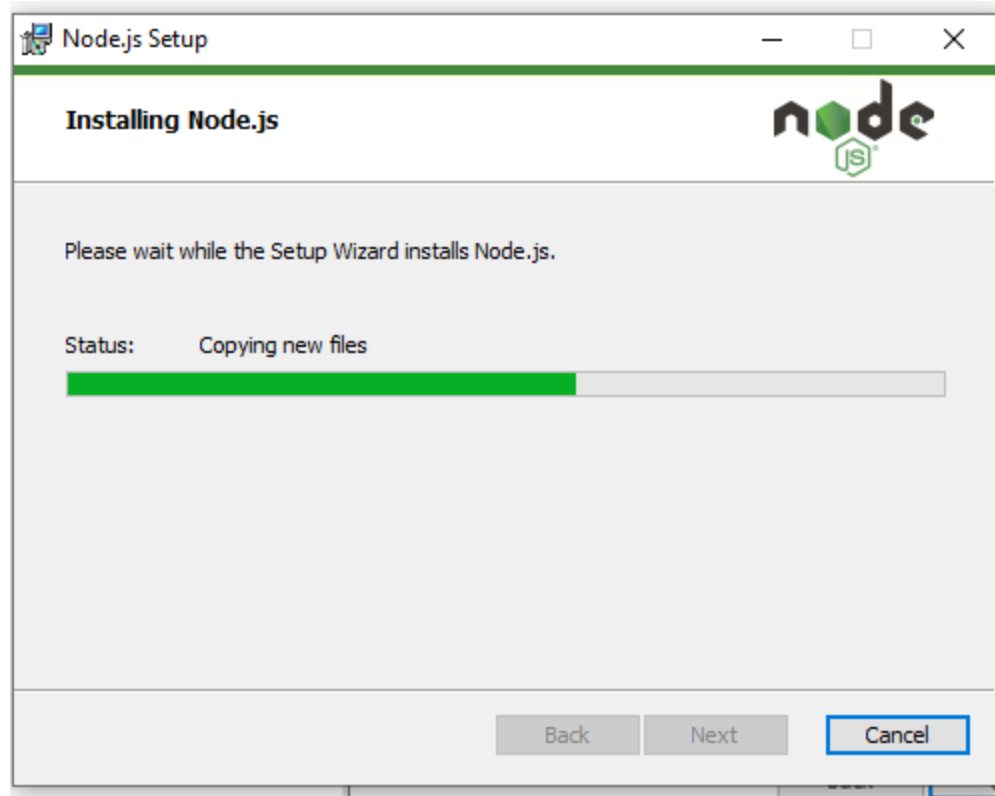


# Installation of Node.js

- Click “Install”.

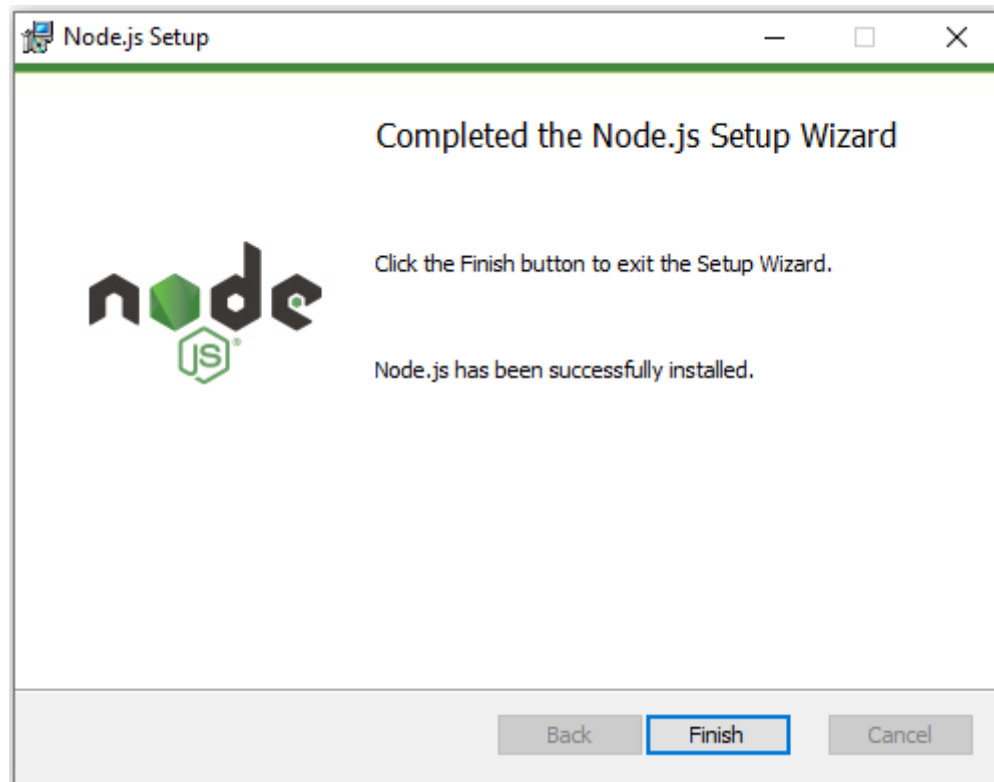


# Installation of Node.js



# Installation of Node.js

- Click Finish.



# Installation of Node.js

- Press space-bar.

CA Install Additional Tools for Node.js

```
=====
Tools for Node.js Native Modules Installation Script
=====

This script will install Python and the Visual Studio Build Tools, necessary
to compile Node.js native modules. Note that Chocolatey and required Windows
updates will also be installed.

This will require about 3 Gb of free disk space, plus any space necessary to
install Windows updates. This will take a while to run.

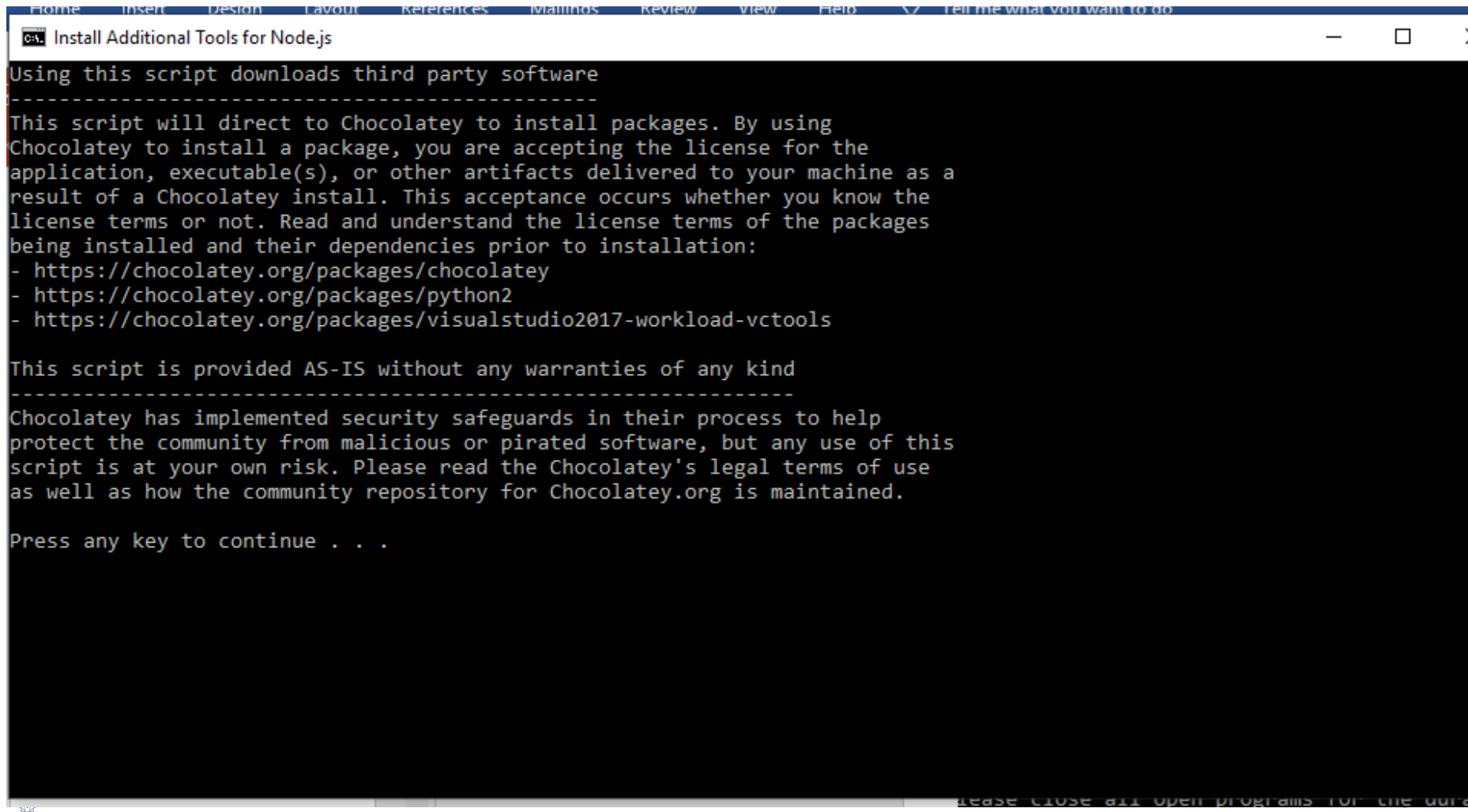
Please close all open programs for the duration of the installation. If the
installation fails, please ensure Windows is fully updated, reboot your
computer and try to run this again. This script can be found in the
Start menu under Node.js.

You can close this window to stop now. Detailed instructions to install these
tools manually are available at https://github.com/nodejs/node-gyp#on-windows

Press any key to continue . . .
```

# Installation of Node.js

- Press space-bar.



```
Home Insert Design Layout References Mailings Review View Help Tell me what you want to do
CA: Install Additional Tools for Node.js

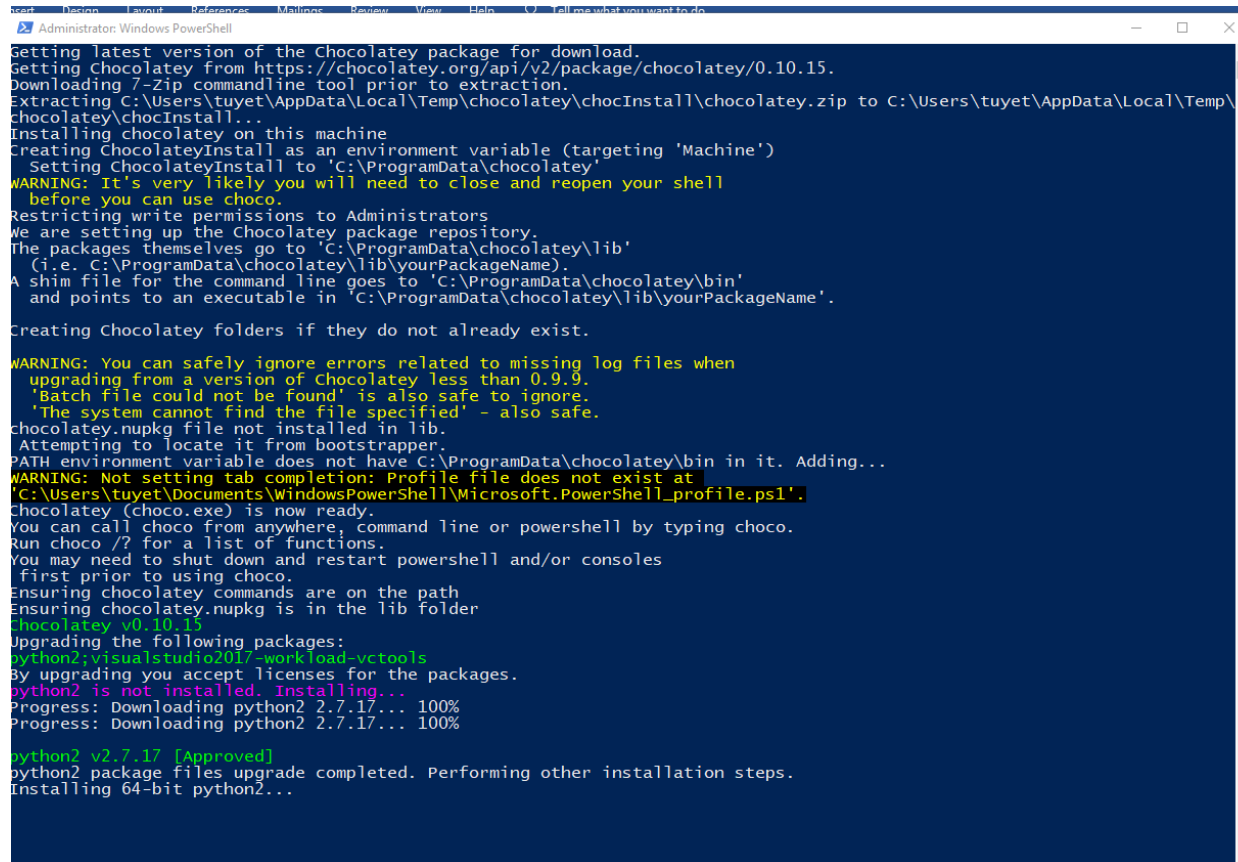
Using this script downloads third party software
-----
This script will direct to Chocolatey to install packages. By using
Chocolatey to install a package, you are accepting the license for the
application, executable(s), or other artifacts delivered to your machine as a
result of a Chocolatey install. This acceptance occurs whether you know the
license terms or not. Read and understand the license terms of the packages
being installed and their dependencies prior to installation:
- https://chocolatey.org/packages/chocolatey
- https://chocolatey.org/packages/python2
- https://chocolatey.org/packages/visualstudio2017-workload-vctools

This script is provided AS-IS without any warranties of any kind
-----
Chocolatey has implemented security safeguards in their process to help
protect the community from malicious or pirated software, but any use of this
script is at your own risk. Please read the Chocolatey's legal terms of use
as well as how the community repository for Chocolatey.org is maintained.

Press any key to continue . . .
```

# Installation of Node.js

- Should see this:



```
Administrator: Windows PowerShell

Getting latest version of the Chocolatey package for download.
Getting Chocolatey from https://chocolatey.org/api/v2/package/chocolatey/0.10.15.
Downloading 7-Zip commandline tool prior to extraction.
Extracting C:\Users\tuyet\AppData\Local\Temp\chocolatey\chocInstall\chocolatey.zip to C:\Users\tuyet\AppData\Local\Temp\chocolatey\chocInstall...
Installing chocolatey on this machine
Creating ChocolateyInstall as an environment variable (targeting 'Machine')
Setting ChocolateyInstall to 'C:\ProgramData\chocolatey'
WARNING: It's very likely you will need to close and reopen your shell
before you can use choco.
Restricting write permissions to Administrators
We are setting up the Chocolatey package repository.
The packages themselves go to 'C:\ProgramData\chocolatey\lib'
(i.e. C:\ProgramData\chocolatey\lib\yourPackageName).
A shim file for the command line goes to 'C:\ProgramData\chocolatey\bin'
and points to an executable in 'C:\ProgramData\chocolatey\lib\yourPackageName'.

Creating Chocolatey folders if they do not already exist.

WARNING: You can safely ignore errors related to missing log files when
upgrading from a version of Chocolatey less than 0.9.9.
'Batch file could not be found' is also safe to ignore.
'The system cannot find the file specified' - also safe.
chocolatey.nupkg file not installed in lib.
Attempting to locate it from bootstrapper.
PATH environment variable does not have C:\ProgramData\chocolatey\bin in it. Adding...
WARNING: Not setting tab completion: Profile file does not exist at
'C:\Users\tuyet\Documents\WindowsPowerShell\Microsoft.PowerShell_profile.ps1'.
Chocolatey (choco.exe) is now ready.
You can call choco from anywhere, command line or powershell by typing choco.
Run choco /? for a list of functions.
You may need to shut down and restart powershell and/or consoles
first prior to using choco.
Ensuring chocolatey commands are on the path
Ensuring chocolatey.nupkg is in the lib folder
Chocolatey v0.10.15
Upgrading the following packages:
python2;visualstudio2017-workload-vctools
By upgrading you accept licenses for the packages.
python2 is not installed. Installing...
Progress: Downloading python2 2.7.17... 100%
Progress: Downloading python2 2.7.17... 100%

python2 v2.7.17 [Approved]
python2 package files upgrade completed. Performing other installation steps.
Installing 64-bit python2...
```



# Installation of Node.js

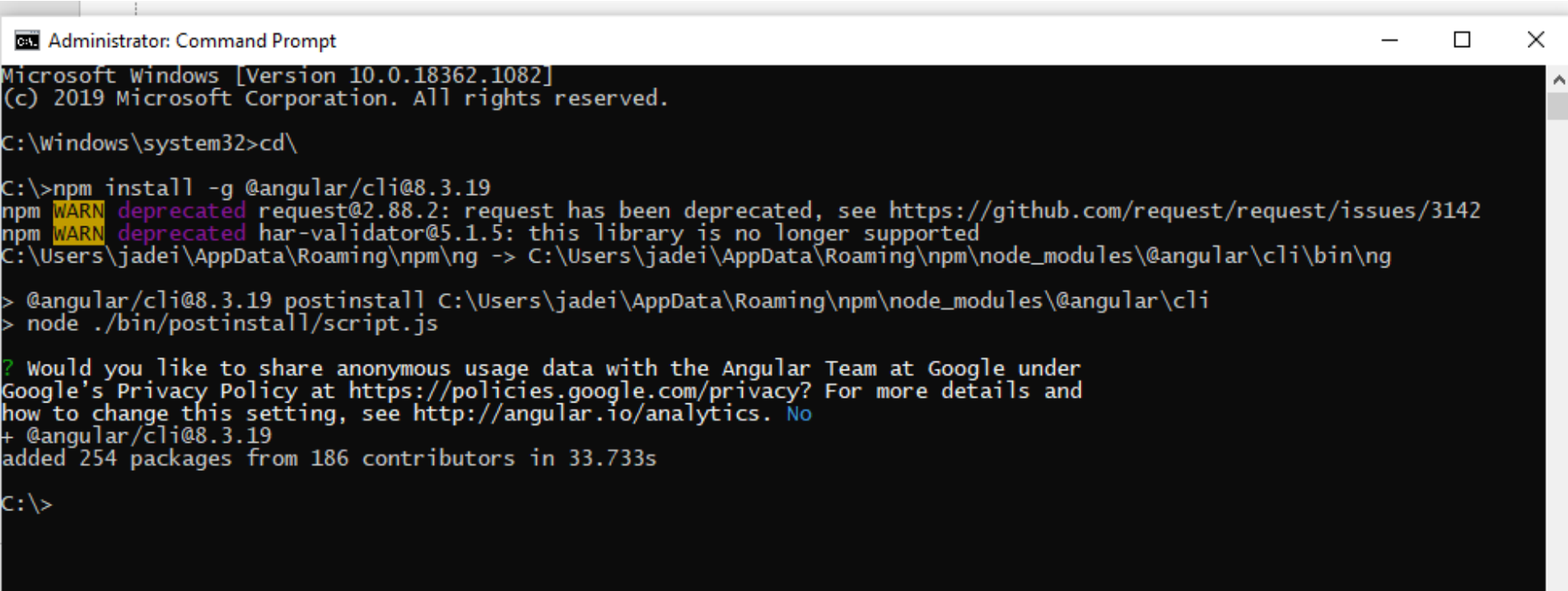
- If don't see previous screen, go to url: <https://github.com/nodejs/node-gyp#on-windows>

# Install Angular CLI

- The following command:
- `npm install -g @angular/cli@8.3.19`
- mac user:
- The following command:
- Command:`sudo npm install -g @angular/cli@8.3.19`

# Install Angular CLI

- The following command:
- `npm install -g @angular/cli@8.3.19`



```
C:\> Administrator: Command Prompt
Microsoft Windows [Version 10.0.18362.1082]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Windows\system32>cd\

C:\>npm install -g @angular/cli@8.3.19
npm WARN deprecated request@2.88.2: request has been deprecated, see https://github.com/request/request/issues/3142
npm WARN deprecated har-validator@5.1.5: this library is no longer supported
C:\Users\jadei\AppData\Roaming\npm\ng -> C:\Users\jadei\AppData\Roaming\npm\node_modules\@angular\cli\bin\ng

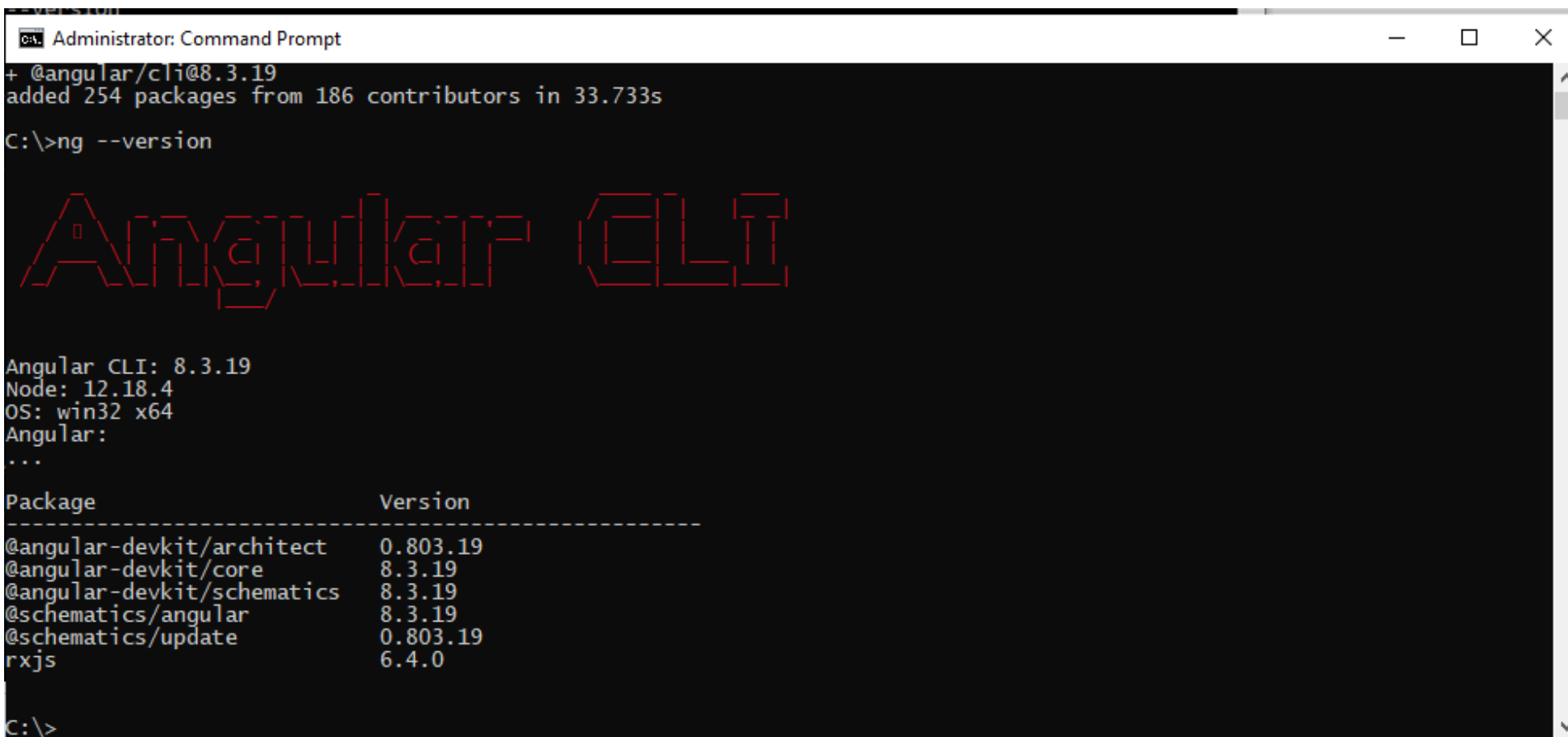
> @angular/cli@8.3.19 postinstall C:\Users\jadei\AppData\Roaming\npm\node_modules\@angular\cli
> node ./bin/postinstall/script.js

? Would you like to share anonymous usage data with the Angular Team at Google under
Google's Privacy Policy at https://policies.google.com/privacy? For more details and
how to change this setting, see http://angular.io/analytics. No
+ @angular/cli@8.3.19
added 254 packages from 186 contributors in 33.733s

C:\>
```

# Install Angular CLI

- Check version of CLI:
- Command: `ng --version`



The screenshot shows a Windows Command Prompt window titled "Administrator: Command Prompt". The prompt displays the following text:

```
+ @angular/cli@8.3.19
added 254 packages from 186 contributors in 33.733s

C:\>ng --version
```

Below the command prompt, the Angular CLI logo is displayed in a stylized red font. Underneath the logo, the following information is shown:

```
Angular CLI: 8.3.19
Node: 12.18.4
OS: win32 x64
Angular:
...
```

At the bottom, a table lists the installed packages and their versions:

Package	Version
@angular-devkit/architect	0.803.19
@angular-devkit/core	8.3.19
@angular-devkit/schematics	8.3.19
@schematics/angular	8.3.19
@schematics/update	0.803.19
rxjs	6.4.0

The prompt ends with `C:\>`.

# Uninstall existing Angular CLI

- If have cli already do the following:
- ->npm uninstall -g @angular/cli
- ->npm cache clean
- ->npm install -g @angular/cli@latest

# Install Typescript

- `npm install typescript@3.5.3 -g`



The screenshot shows a Windows Command Prompt window titled "Administrator: Command Prompt". The window displays the Angular CLI version 8.3.19 and the Node.js version 12.18.4. Below this, a table lists the installed packages and their versions. The command `npm install typescript@3.5.3 -g` is entered, and the output shows that the typescript package is being installed globally. The command prompt then shows the path to the typescript binary and the server binary, and finally, it shows that 1 package was added from 1 contributor in 6.116s.

```
Administrator: Command Prompt

Angular CLI: 8.3.19
Node: 12.18.4
OS: win32 x64
Angular:
...

Package                Version
-----
@angular-devkit/architect 0.803.19
@angular-devkit/core      8.3.19
@angular-devkit/schematics 8.3.19
@schematics/angular       8.3.19
@schematics/update        0.803.19
rxjs                      6.4.0

C:\>npm install typescript@3.5.3 -g
C:\Users\jadei\AppData\Roaming\npm\tsc -> C:\Users\jadei\AppData\Roaming\npm\node_modules\typescript\bin\tsc
C:\Users\jadei\AppData\Roaming\npm\tsserver -> C:\Users\jadei\AppData\Roaming\npm\node_modules\typescript\bin\tsserver
+ typescript@3.5.3
added 1 package from 1 contributor in 6.116s

C:\>
```

# Check type of Typescript

- Command to check version of typescript installed:
- Command:tsc -v

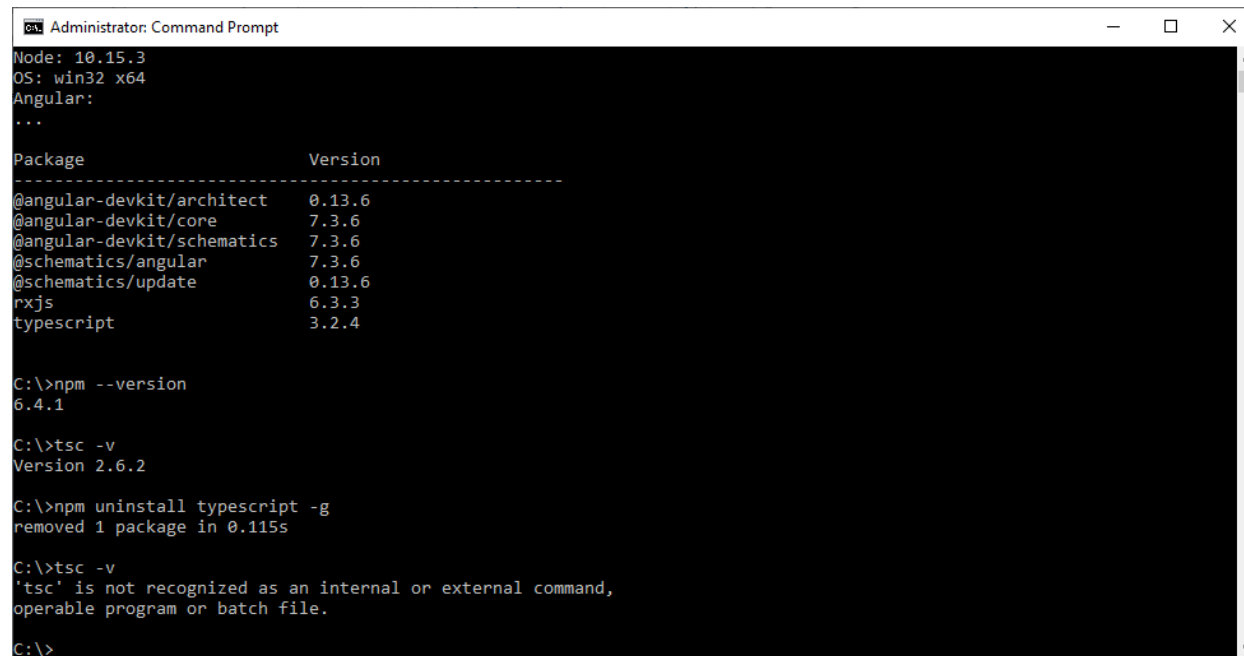
```
C:\>npm install typescript@3.5.3 -g
C:\Users\jadei\AppData\Roaming\npm\tsc -> C:\Users\jadei\AppData\Roaming\npm\node_modules\typescript\bin\tsc
C:\Users\jadei\AppData\Roaming\npm\tsserver -> C:\Users\jadei\AppData\Roaming\npm\node_modules\typescript\bin\tsserver
+ typescript@3.5.3
added 1 package from 1 contributor in 6.116s

C:\>tsc -v
Version 3.5.3

C:\>
```

# Uninstall existing typescript

- If have existing type can uninstall:
- Command: `npm uninstall typescript -g`



```
Administrator: Command Prompt
Node: 10.15.3
OS: win32 x64
Angular:
...
Package      Version
-----
@angular-devkit/architect    0.13.6
@angular-devkit/core        7.3.6
@angular-devkit/schematics   7.3.6
@schematics/angular         7.3.6
@schematics/update           0.13.6
rxjs                        6.3.3
typescript                3.2.4

C:\>npm --version
6.4.1

C:\>tsc -v
Version 2.6.2

C:\>npm uninstall typescript -g
removed 1 package in 0.115s

C:\>tsc -v
'tsc' is not recognized as an internal or external command,
operable program or batch file.

C:\>
```



# Microsoft Visual Studio Code:

- Download Microsoft Visual Studio Code:
- <https://code.visualstudio.com/download>
- Download 64 bit system installer:
- The basic differences user version vs system version between the two is that the system version installs on the file system like every other app. The user install is basically a click-once (or web installer) version that installs in the User folder of the machine.
- The settings made to VS Code in the system version save for Everybody on the computer and the user version the settings are only for the user

# Microsoft Visual Studio Code:

code.visualstudio.com/download#

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Download


Version 1.49 is now available! Read about the new features and fixes from August.

## Download Visual Studio Code


Free and built on open source. Integrated Git, debugging and extensions.

Download "System Installer 64 bit".

Download "Mac".

  
[↓ Windows](#)  
Windows 7, 8, 10


User Installer	64 bit	32 bit	ARM
System Installer	64 bit	32 bit	ARM
.zip	64 bit	32 bit	ARM

  
[↓ .deb](#)  
Debian, Ubuntu

[↓ .rpm](#)  
Red Hat, Fedora, SUSE

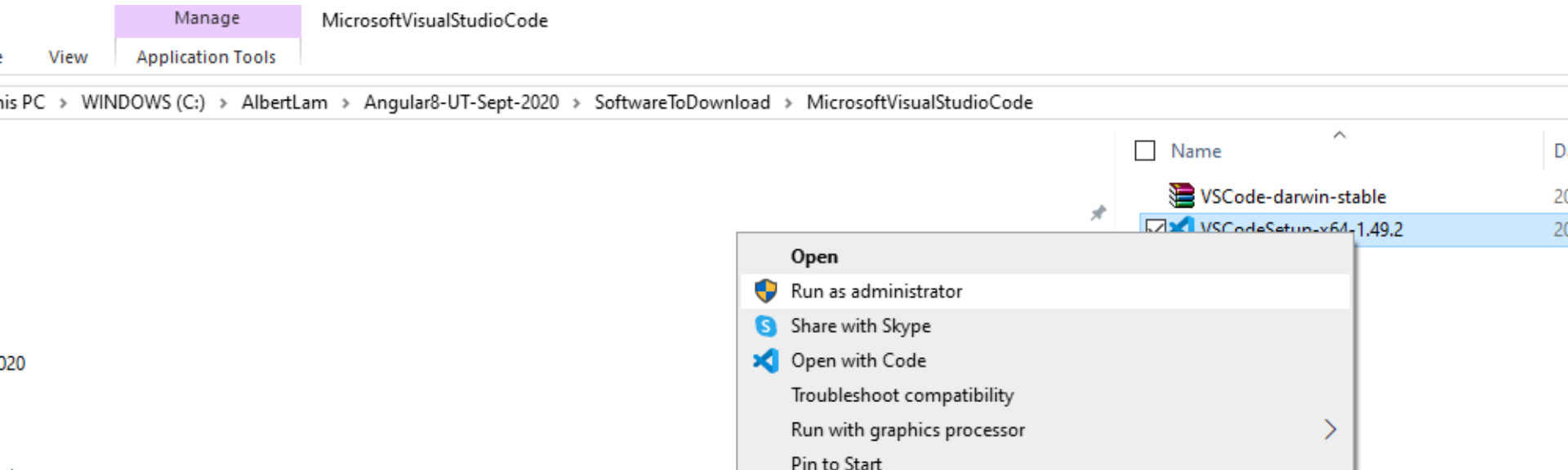
.deb	64 bit
.rpm	64 bit
.tar.gz	64 bit

[Snap Store](#)

  
[↓ Mac](#)  
macOS 10.10+

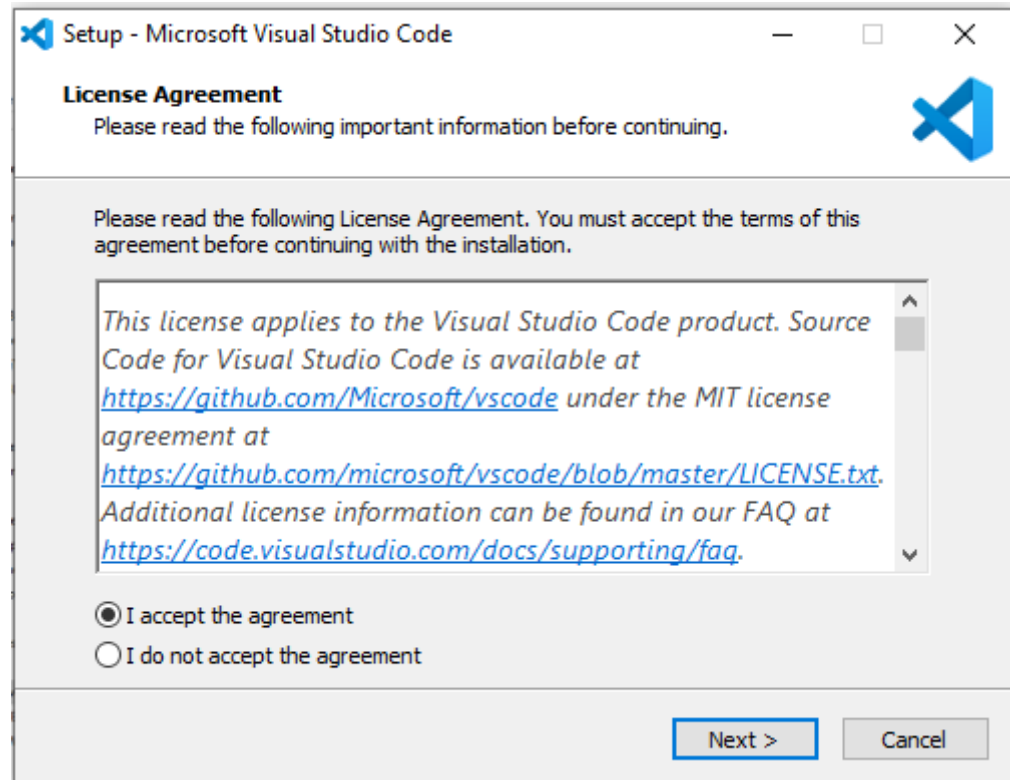
# Microsoft Visual Studio Code:

- Right click VSCodeSetup-x64-1.49.2 file and choose “run as administrator”:



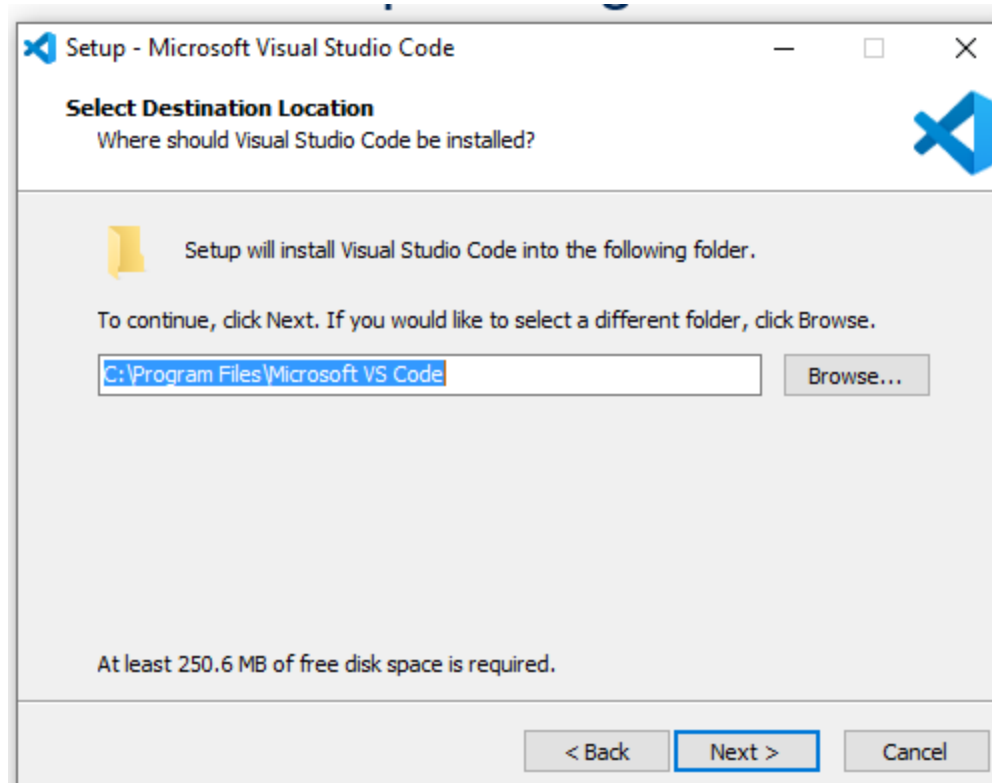
# Microsoft Visual Studio Code:

- Click I accept the agreement and click “Next”:



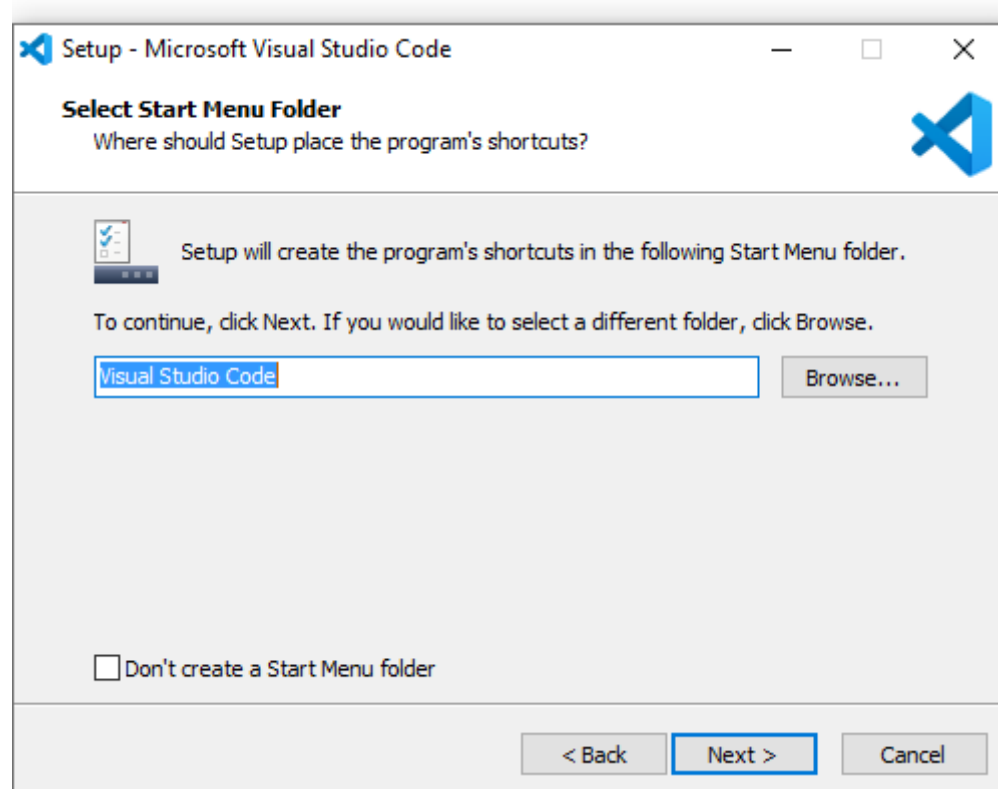
# Microsoft Visual Studio Code:

- Click “Next”:



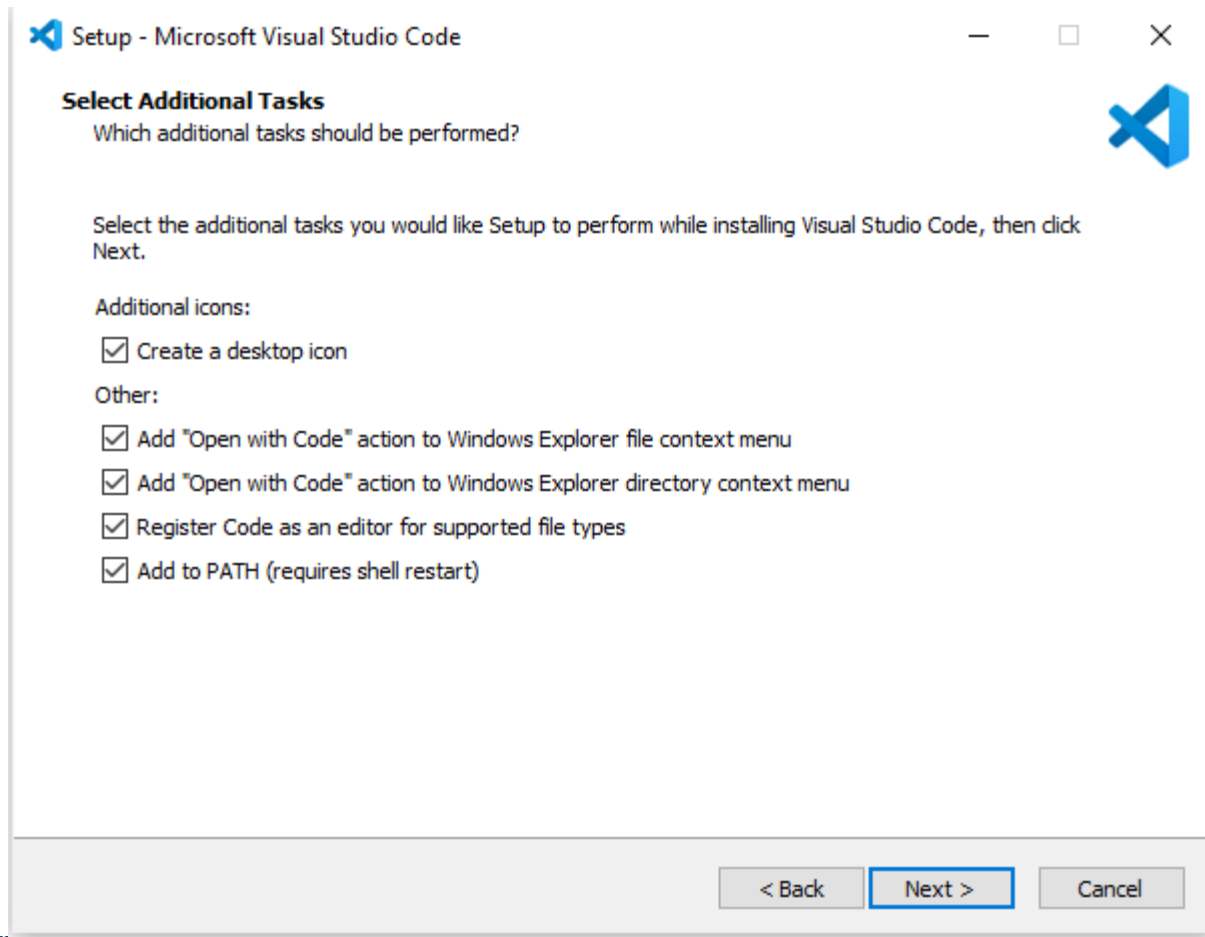
# Microsoft Visual Studio Code:

- Click “Next”:



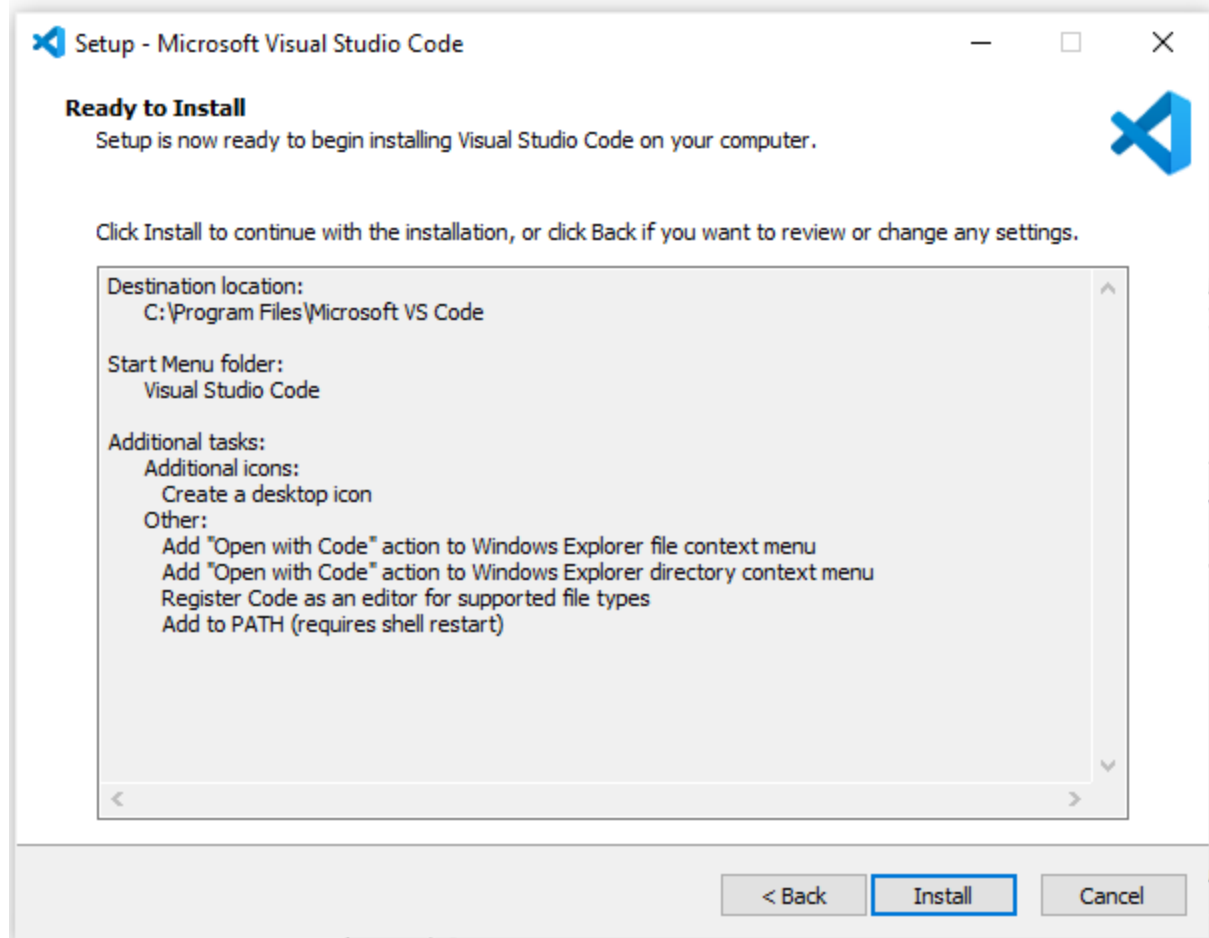
# Microsoft Visual Studio Code:

- Click all of the checkbox and “Next”:



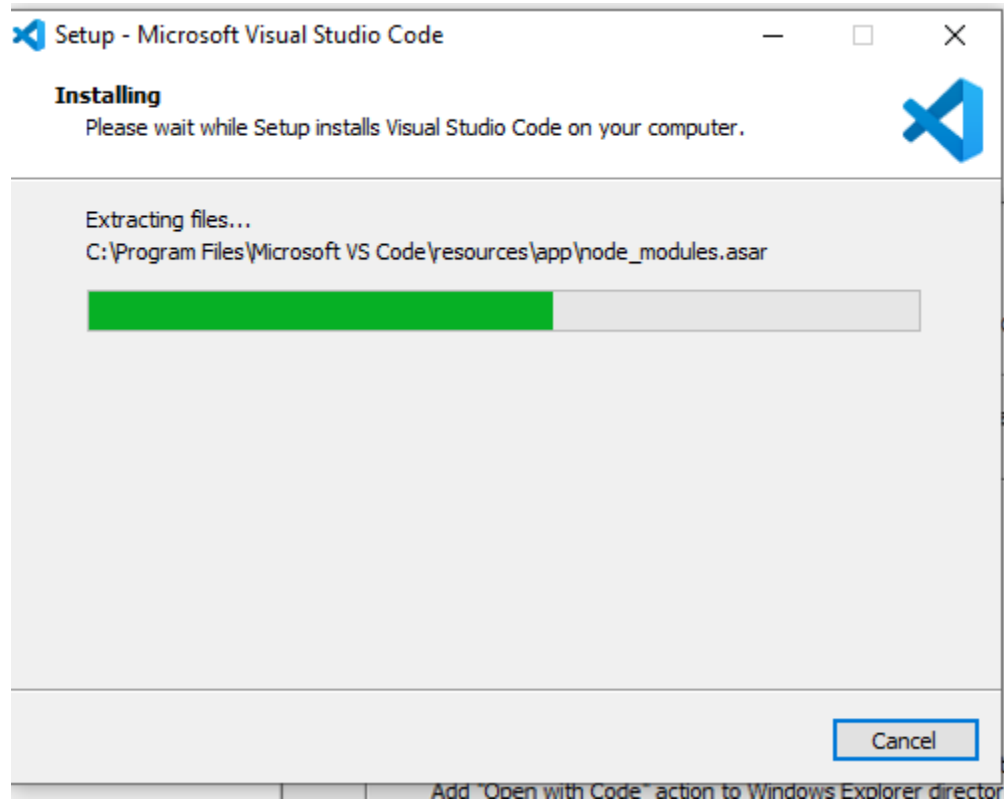
# Microsoft Visual Studio Code:

- Click “Install”.



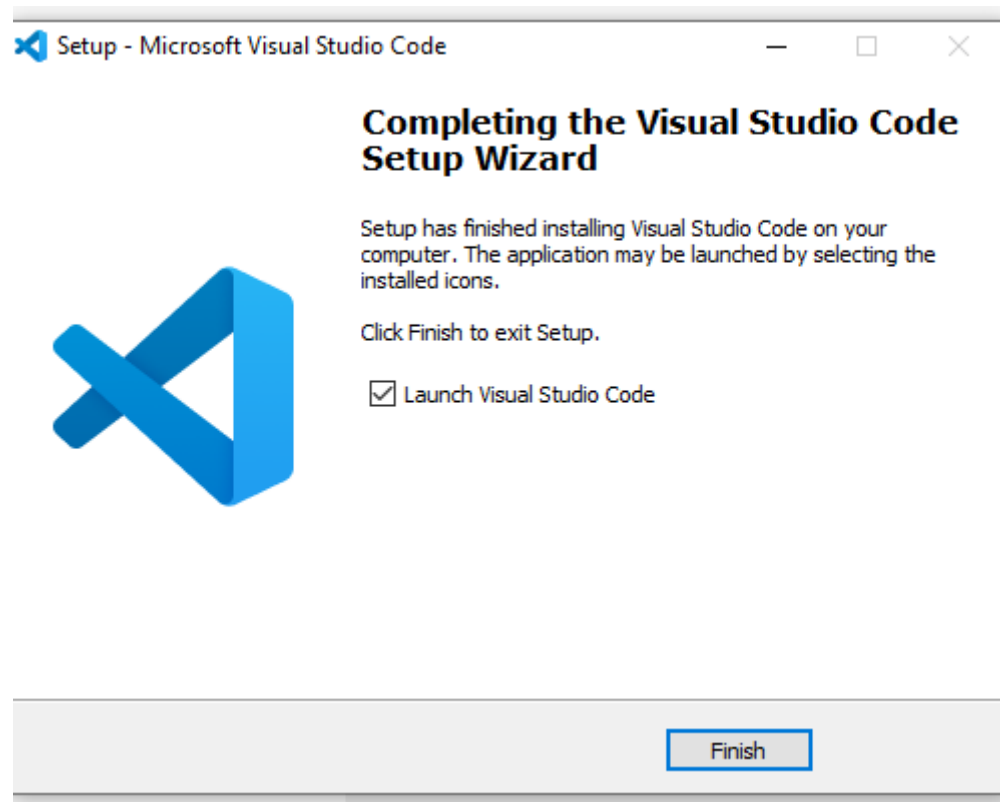


# Microsoft Visual Studio Code:



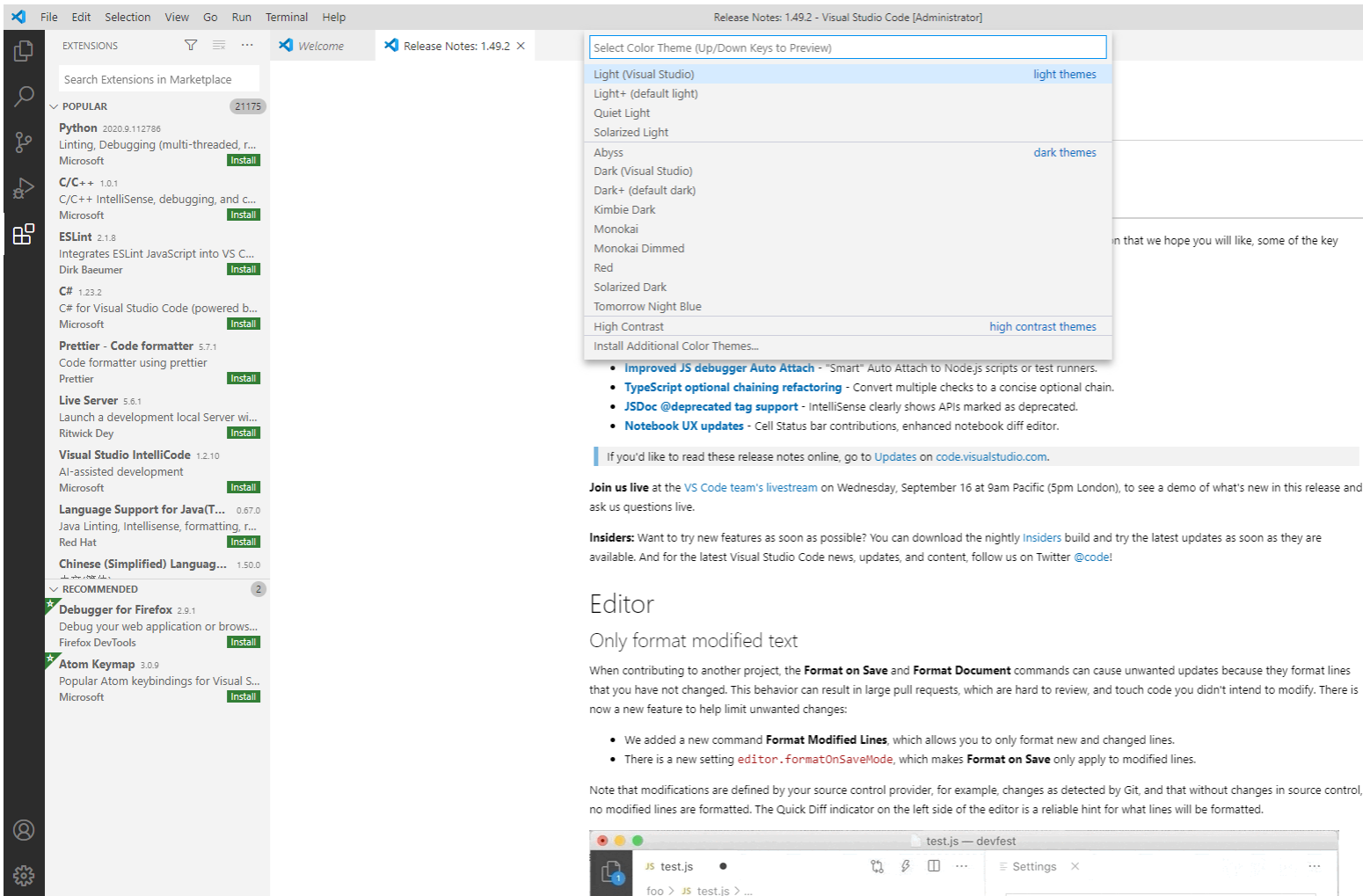
# Microsoft Visual Studio Code:

- Click “Finish”.



# Microsoft Visual Studio Code:

- Click “File/Preferences/Color Theme/Light (Visual Studio)”.



# Microsoft Visual Studio Code:

- Click square for the extension:

The screenshot shows the Microsoft Visual Studio Code interface. On the left, the 'EXTENSIONS' sidebar is open, displaying a list of popular extensions. A black arrow points from the text 'Click "Square" for extension.' to the 'Install' button of the 'Python' extension. The main editor area displays the 'Release Notes: 1.49.2 - Visual Studio Code [Administrator]' page, which includes the title 'August 2020 (version 1.49)' and a list of updates and highlights.

Release Notes: 1.49.2 - Visual Studio Code [Administrator]

## August 2020 (version 1.49)

**Update 1.49.1:** The update addresses these [issues](#).

**Update 1.49.2:** The update addresses these [issues](#).

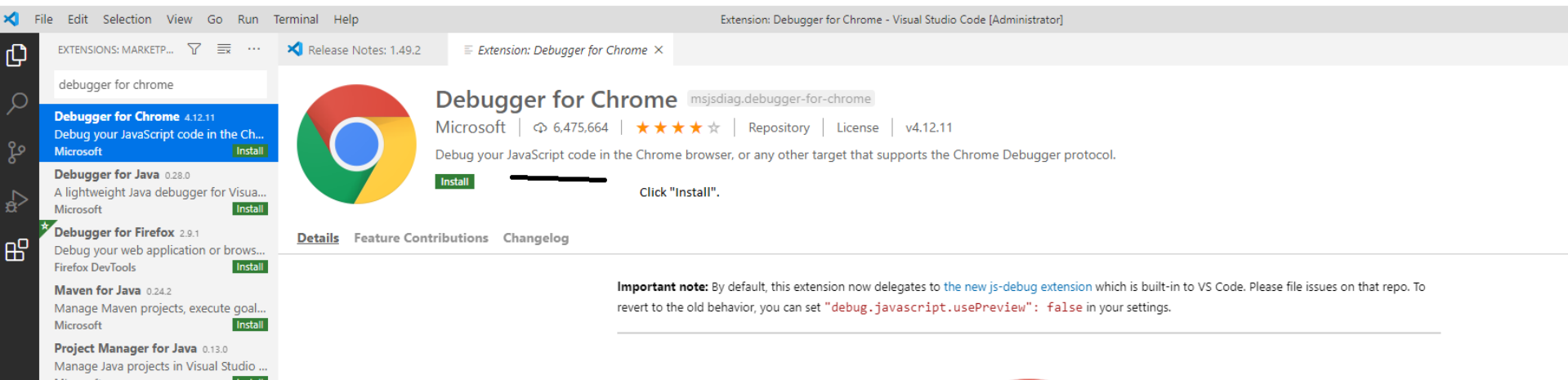
Welcome to the August 2020 release of Visual Studio Code. There are a number of updates in this version that we hope you will like, some of the key highlights include:

- **Format modified text** - Limit formatting to just the code you've changed.
- **Change casing on Search and Replace** - Change text casing during global Search and Replace.
- **Source Control repositories view** - Display pending changes per repository.
- **Filter Debug Console output** - Quickly filter and find debugging output.
- **Improved JS debugger Auto Attach** - "Smart" Auto Attach to Node.js scripts or test runners.
- **TypeScript optional chaining refactoring** - Convert multiple checks to a concise optional chain.
- **JSDoc @deprecated tag support** - IntelliSense clearly shows APIs marked as deprecated.
- **Notebook UX updates** - Cell Status bar contributions, enhanced notebook diff editor.

If you'd like to read these release notes online, go to [Updates](#) on [code.visualstudio.com](https://code.visualstudio.com).

# Microsoft Visual Studio Code:

- Type debugger for chrome and choose “Debugger for Chrome 4.12.11:



# Microsoft Visual Studio Code:

- After installing “Debugger for chrome”.

