

Installing the Pico toolchain on Windows 10

Note: Using Raspberry Pi Pico with Windows 7 or 8 is not officially supported.

To build Pico projects you will need to install the following tools:

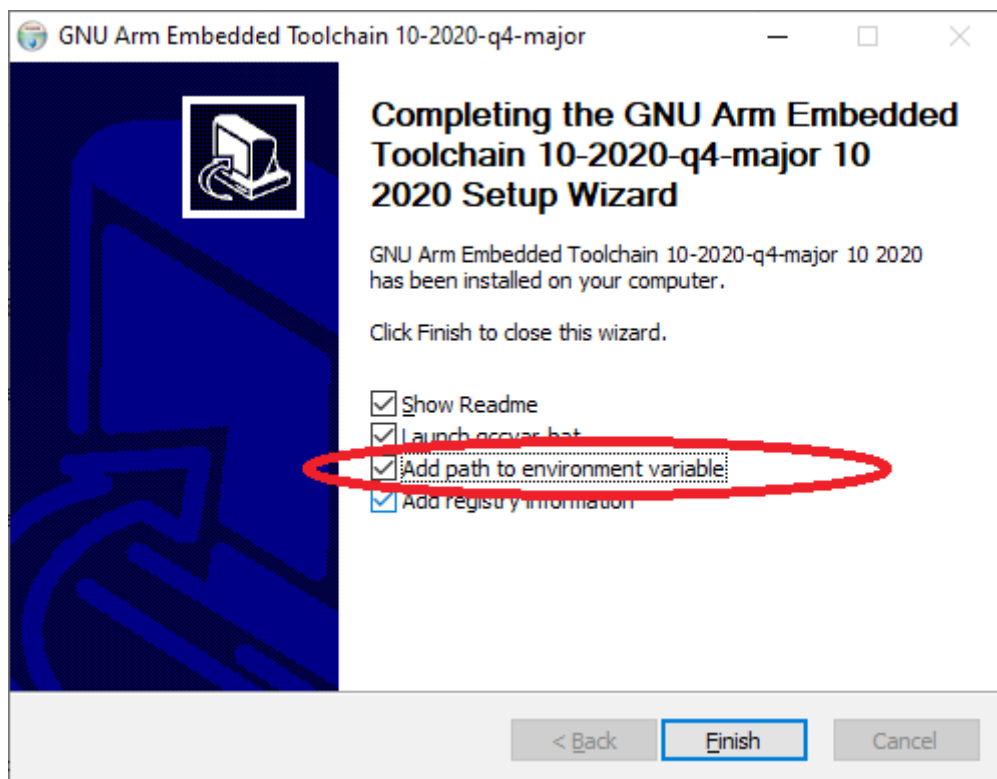
- ARM GCC compiler
- CMake
- Build Tools for Visual Studio 2019
- Python 3
- Git

Installing ARM GCC Compiler

Download the Windows Installer from:

<https://developer.arm.com/tools-and-software/open-source-software/developer-tools/gnu-toolchain/gnu-rm/downloads>

During installation you should tick the box to register the path to the ARM compiler as an environment variable in the Windows shell:

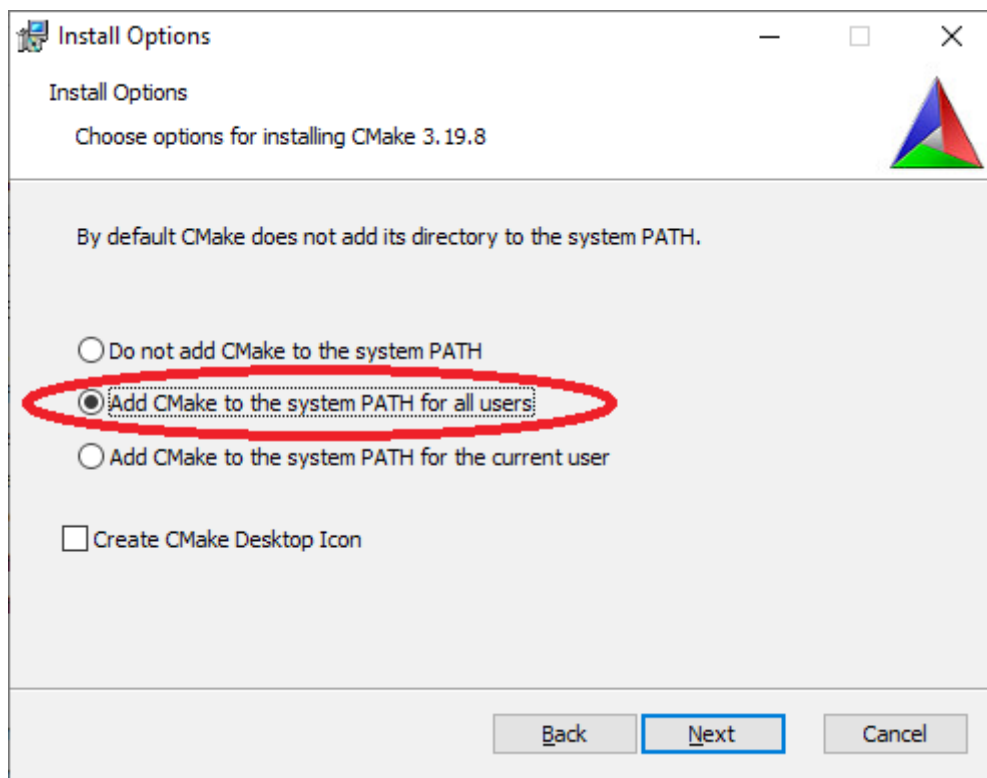


Installing CMake

Download the Windows CMake Installer from: <https://cmake.org/download/>

Note: Version 3.21.0 has problems, please download and use version 3.20.5

During the installation add CMake to the system PATH for all users:

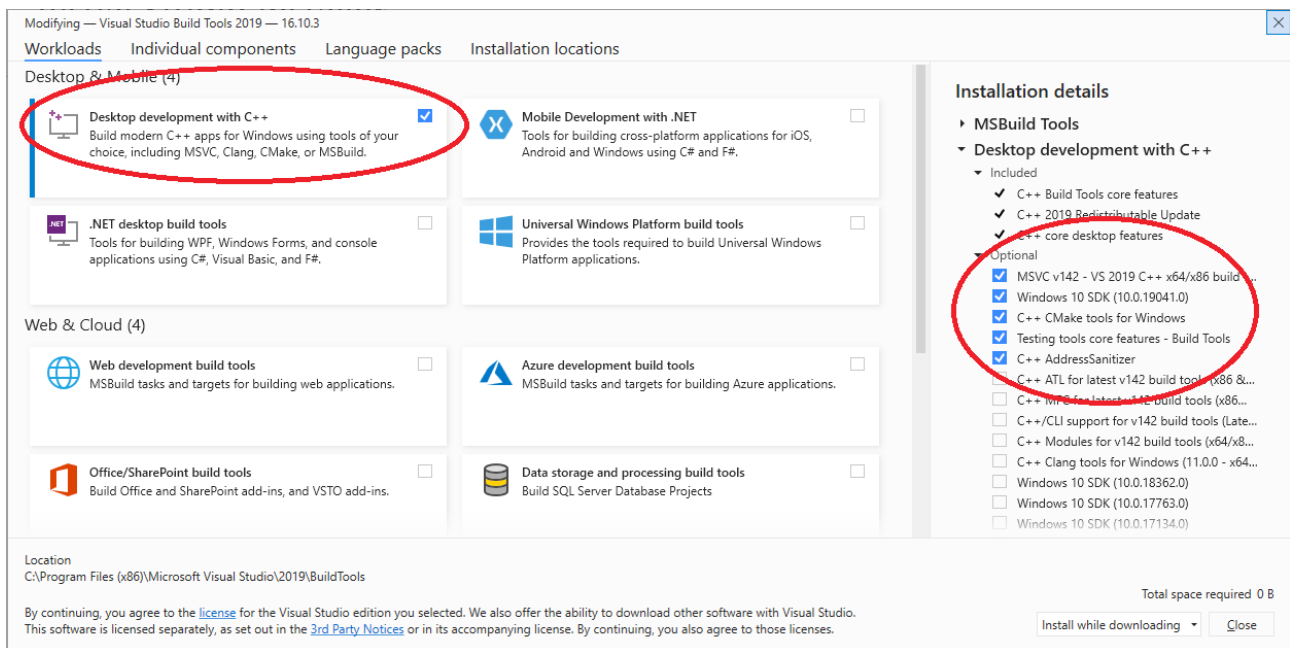


Installing Build Tools for Visual Studio 2019

Download the Windows Installer from:

<https://visualstudio.microsoft.com/downloads/#build-tools-for-visual-studio-2019>

When prompted by the Build Tools for Visual Studio installer you need to install the C++ build tools only. You must install the full "Windows 10 SDK" package:

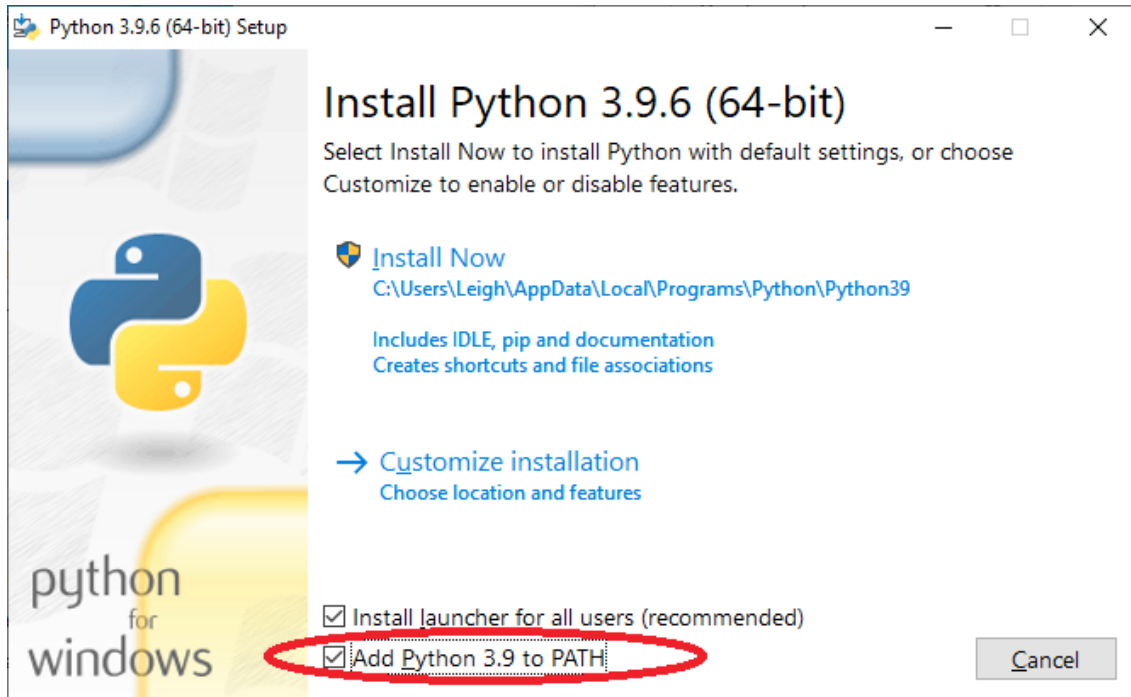


Installing Python 3

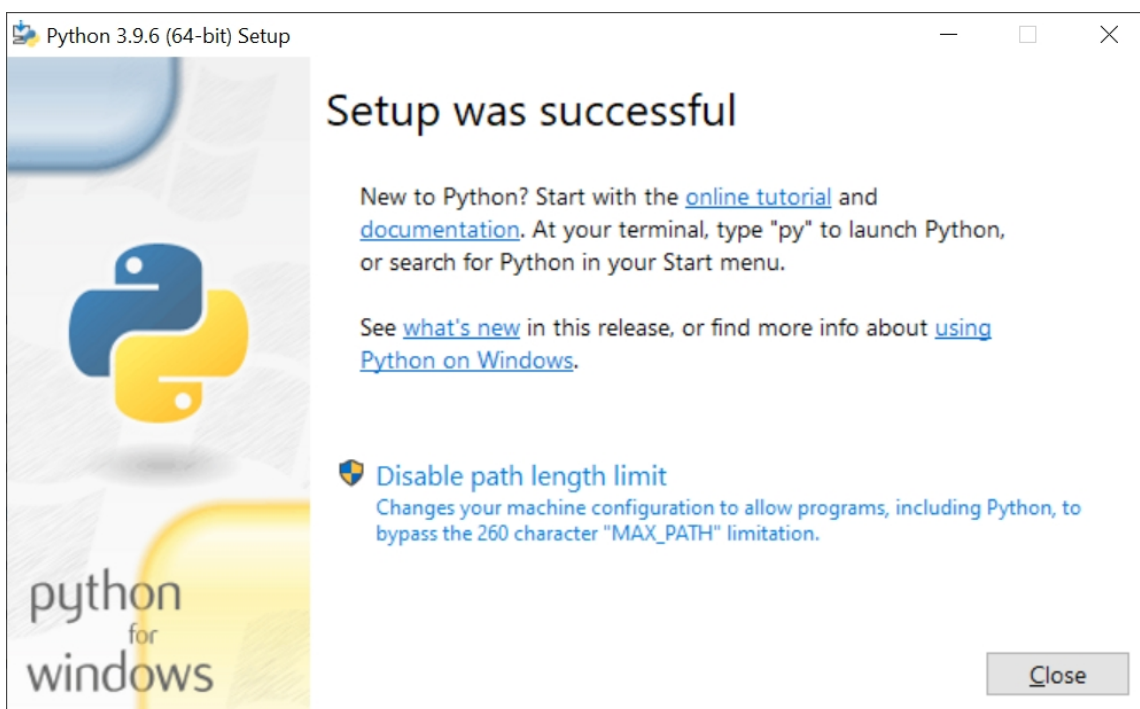
If you already have Python 3 installed on your PC (for example if you have already installed the ESP toolchain) skip this section and do not re-install Python.

Download Windows Installer from: <https://www.python.org/downloads/windows/>

Ensure that it's installed 'for all users' and add Python 3.9 to the system PATH:



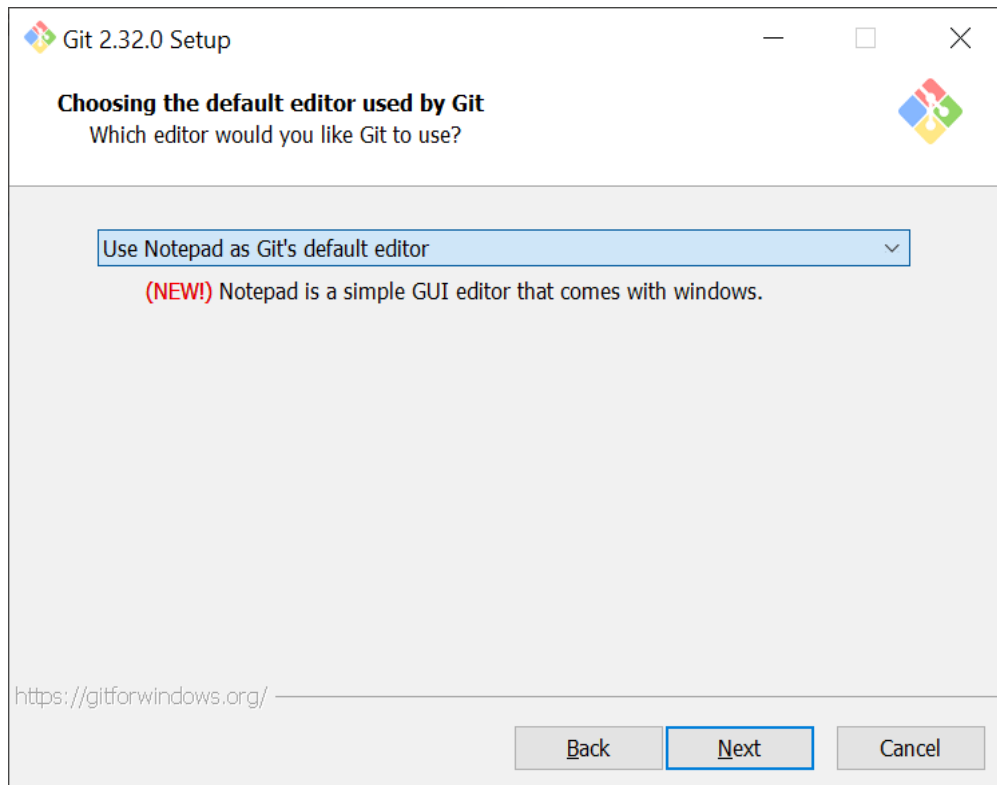
Disable the MAX_PATH length limit when prompted at the end of the Python installation.



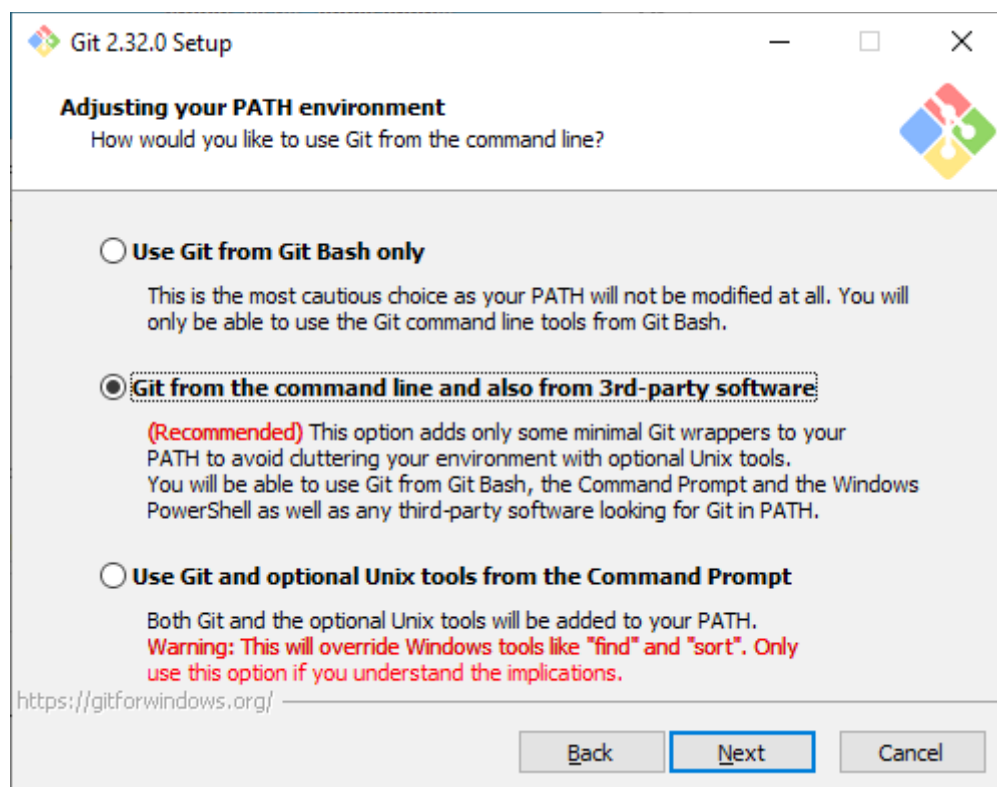
Installing Git

Download the Windows Installer from: <https://git-scm.com/download/win>

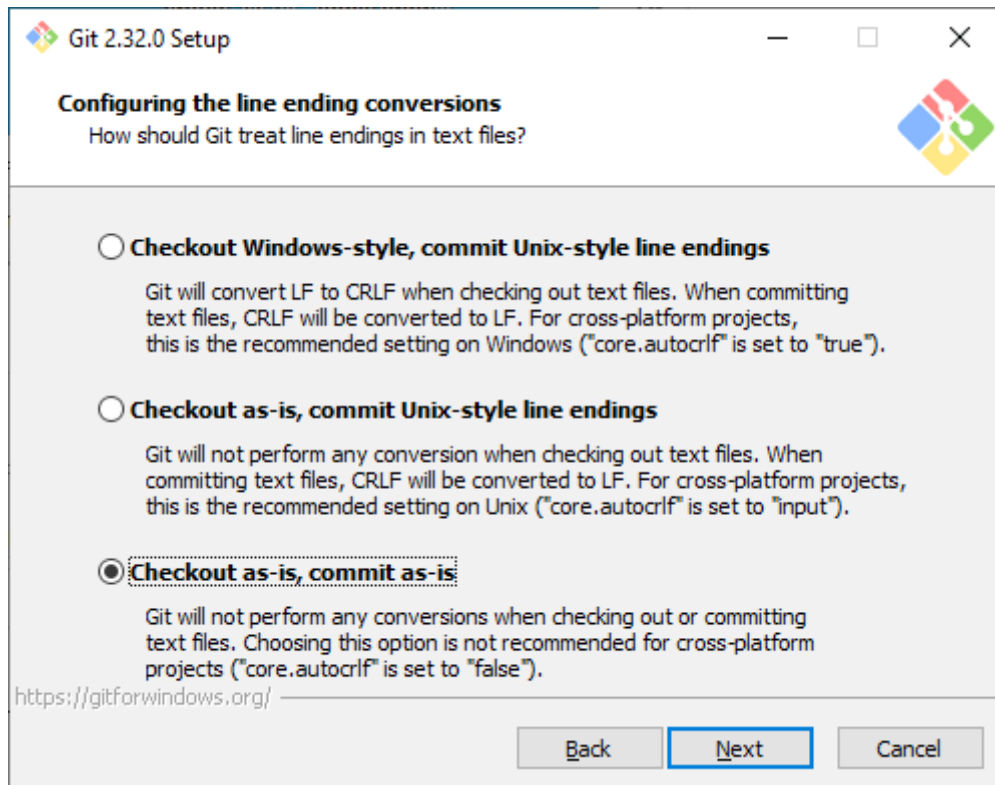
When installing Git you should ensure that you change the default editor away from vim:



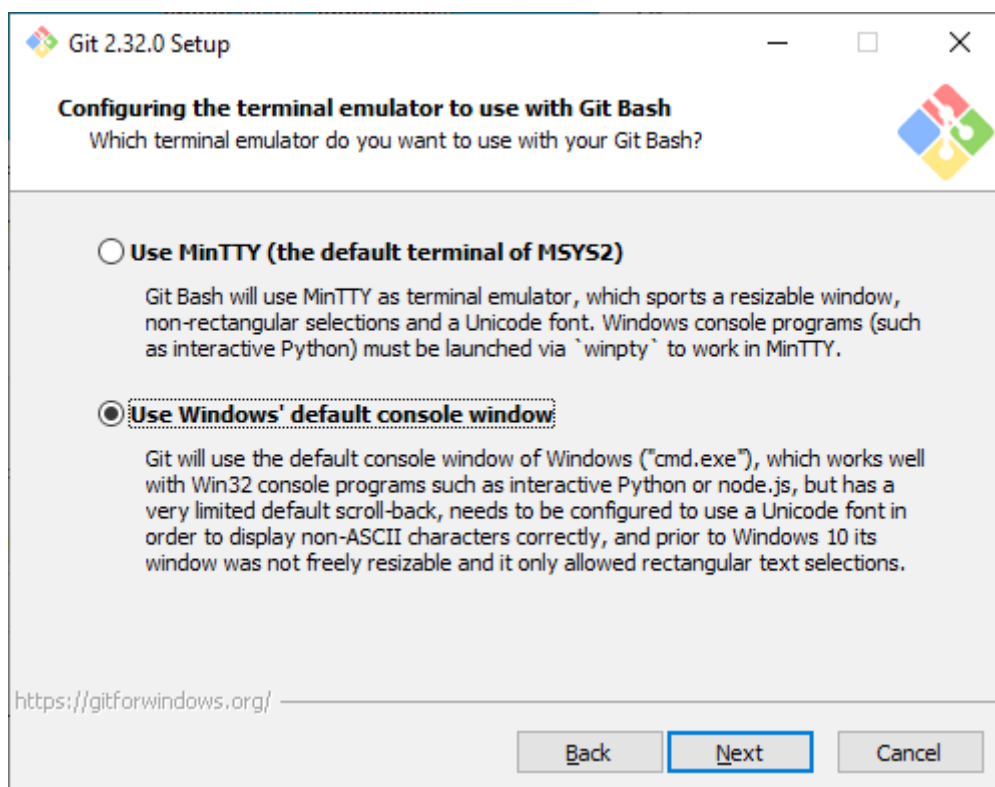
Ensure you tick the checkbox to allow Git to be used from third-party tools:



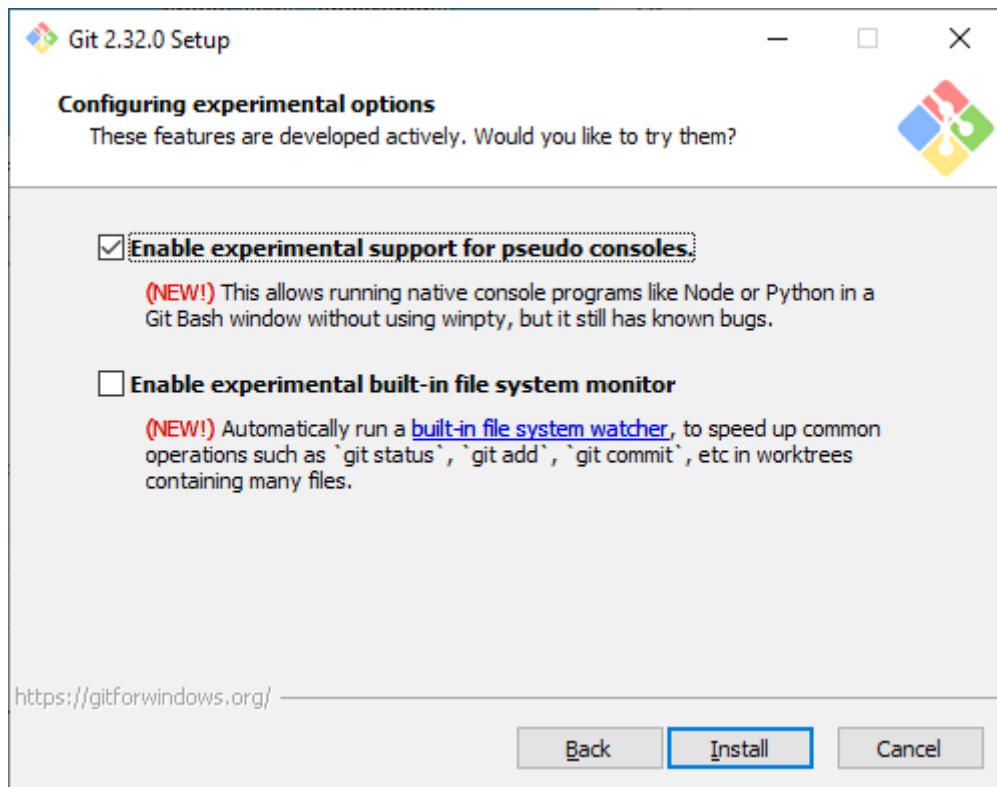
Select "Checkout as is, commit as-is":



Select "Use Windows' default console window":



Check "Enable experimental support for pseudo consoles" during the installation process:



Installing the Pico SDK

Use Git to download the Pico SDK to a location on your PC.

For example, install to your user Downloads directory:

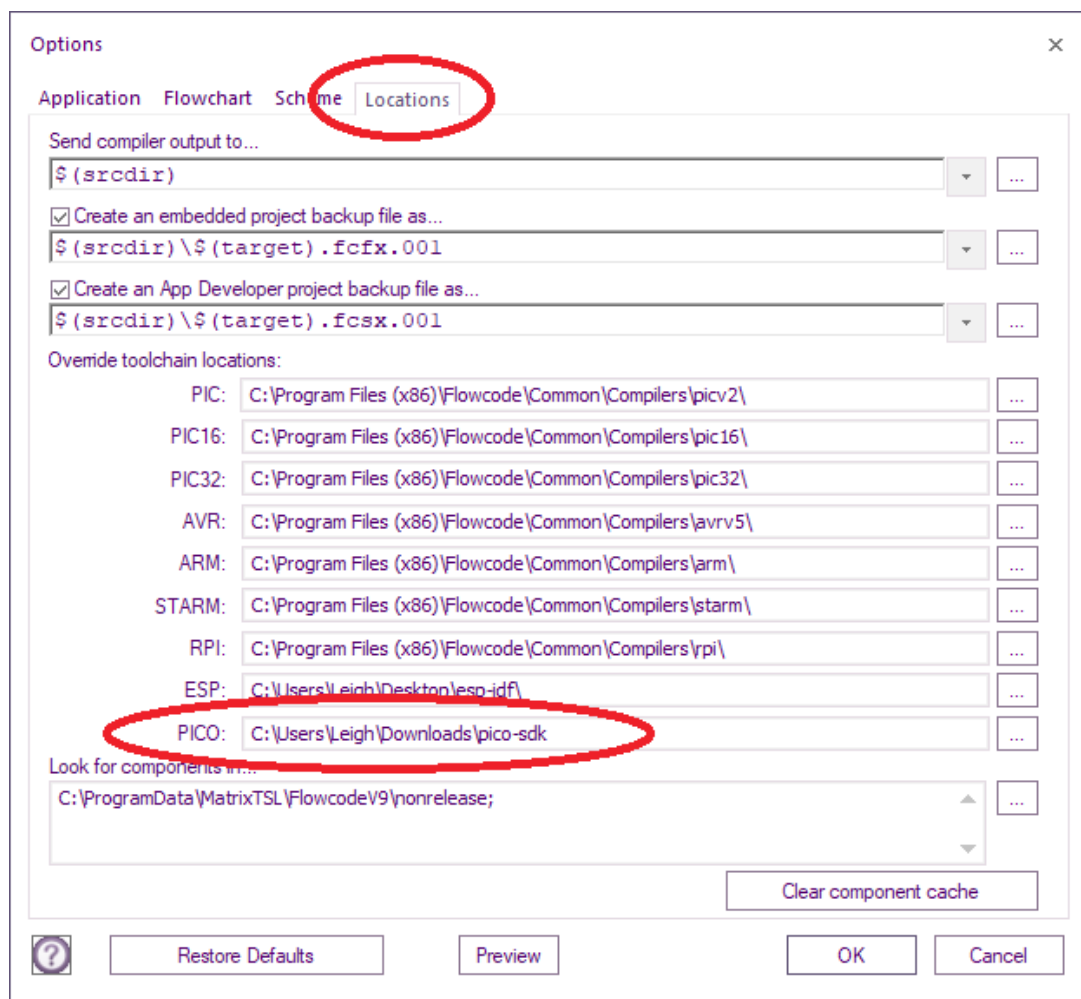
C:\Users\YourName\Downloads\pico-sdk

Run a command prompt (type "cmd" at the start search box)
and run the following commands:

```
cd Downloads
git clone -b master https://github.com/raspberrypi/pico-sdk.git
cd pico-sdk
git submodule update --init
```

Setting up Flowcode for use with the Pico toolchain

Copy the location of the Pico sdk (e.g. C:\Users\YourName\Downloads\pico-sdk) into the
Global Settings, Locations tab:



Programming The Pico

Make sure you have the RPI pack installed and you have got the RPI included in your licence & you are running Flowcode v9.2 or later

First, make sure you can see the Pico chip pack is enabled:



PICO

To do that, select **Help, Licensing, View**

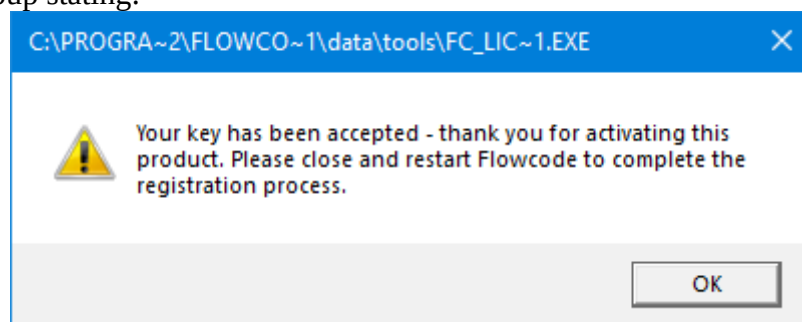
If not, you may just need to refresh your license.

To do that Select **Help, Licensing, Manage.**

Select **My Flowcode Licence**

Enter your Account name and password, then select **Activate...**

You will see a popup stating:

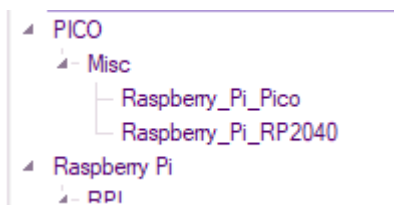


Flowcode will then Restart.

Select **New Project**

Check to see if you have the Pico targets.

There is a separate PICO chain under Choose a Target:



If you see the Pico targets then you can go straight to Sending Your First Program on the next page.

If you can't see the Pico targets, you will need to refresh your library.

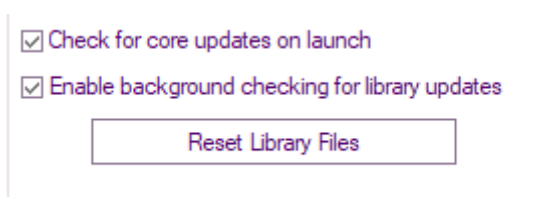
To do that, select **View, Global Settings...**

Make sure the following is selected:

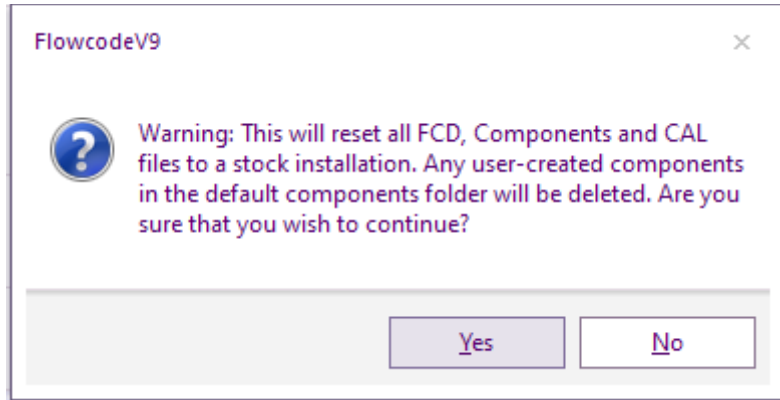
Check for core updates on launch.

& Enable background checking for library updates.

Select **Reset Library Files**



You will get a warning:



Select **Yes**.


A message will pop up stating to restart Flowcode, that can be ignored for now

Select **Help, Library Updates...**

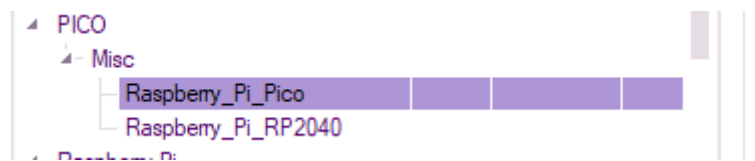
Change **Files in-use** to **Full database**.

The new library updates for the Pico should now be displayed within the Updates window.

Select **Download**.

select **File, Reload** Or the Reload Icon 

Now you should be fully up-to-date with all the required files:



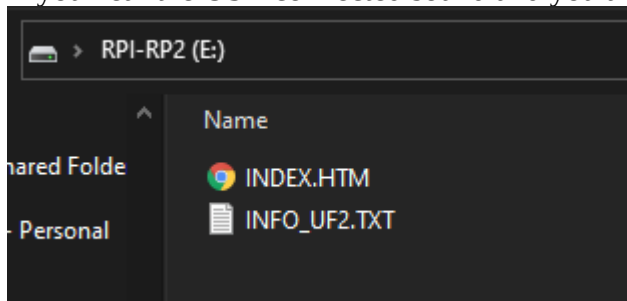
Sending Your First Program

Before sending your flowchart to the Pico, you must first enable **boot mode**.

To do that, make sure the pico is not connected to your PC.

Hold the **BOOTSEL** down and plug the Pico into your PC.

If you hear the USB connected sound and you also get a popup like this:



Then your Pico is ready to be programmed.