Git Installation and first usage

- Know what Git is used for and who created it

- Install Git on your Windows PC

- Use git to download flutter sources from GitHub

- Check if new versions of the sources are available on GitHub and pull them
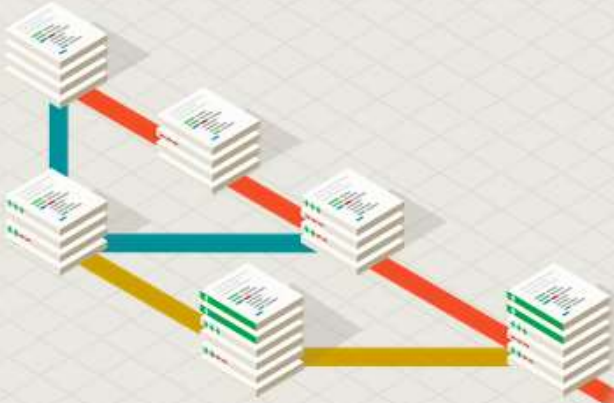
What is Git

Copied from

History of Git

10 Years of Git: An Interview with Git Creator Linus Torvalds

THE LINUX FOUNDATION | 06 APRIL 2015

Ten years ago this week, the Linux kernel community faced a daunting challenge: They could no longer use their revision control system BitKeeper and no other Source Control Management (SCMs) met their needs for a distributed system. Linus Torvalds, the creator of Linux, took the challenge into his own hands and disappeared over the weekend to emerge the following week with Git. Today Git is used for thousands of projects and has ushered in a new level of social coding among programmers.

Copied from https://www.linuxfoundation.org/blog/blog/10-years-of-git-an-interview-with-git-creator-linus-torvalds where you can find an interview with Linus Torvalds on Git.

BTW: "to usher in" means in German: "etwas einleiten"

3

Some questions on Git

What does Git do?

- Manage projects with **Repositories**
- **Clone** a project to work on a local copy
- Control and track changes with **Staging** and **Committing**
- **Branch** and **Merge** to allow for work on different parts and versions of a project
- **Pull** the latest version of the project to a local copy
- **Push** local updates to the main project

Why Git?

- Over 70% of developers use Git!
- Developers can work together from anywhere in the world.
- Developers can see the full history of the project.
- Developers can revert to earlier versions of a project.

What is GitHub?

- Git is not the same as GitHub.
- GitHub makes tools that use Git.
- GitHub is the largest host of source code in the world, and has been owned by Microsoft since 2018.

Copied from https://www.w3schools.com/git/git_intro.asp?remote=github

Install Git on your Windows PC

Open Visual Studio Code and select [icon] on the left:

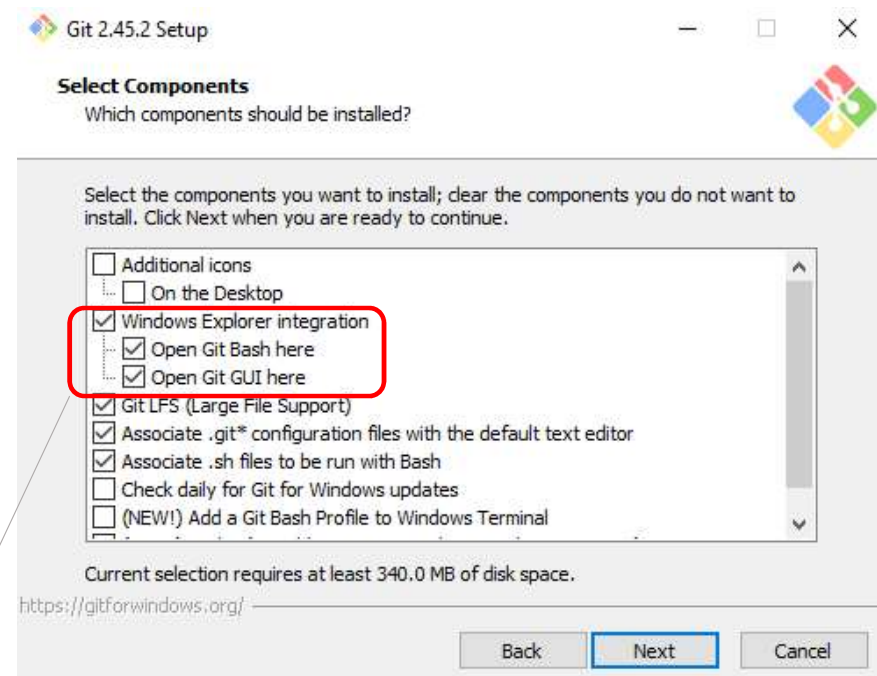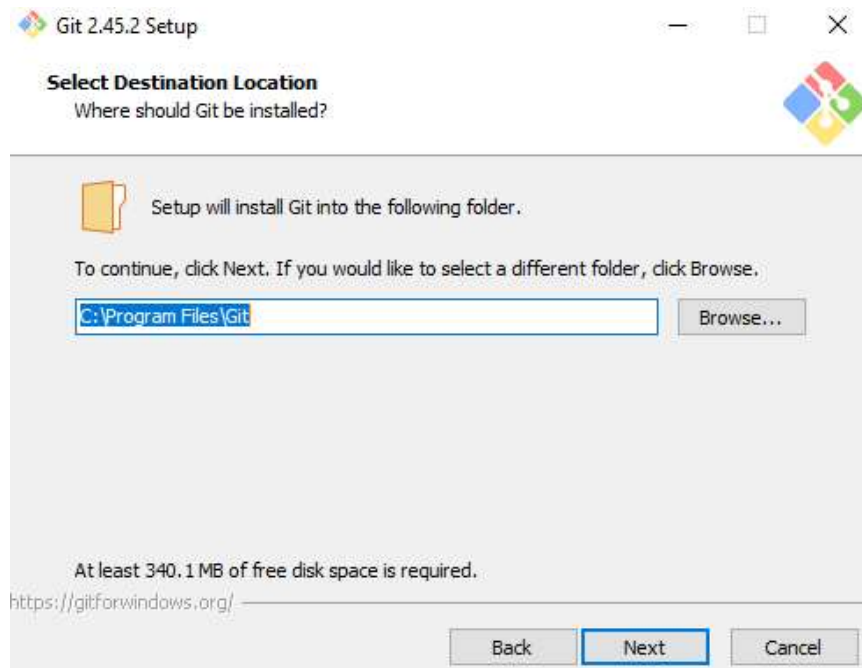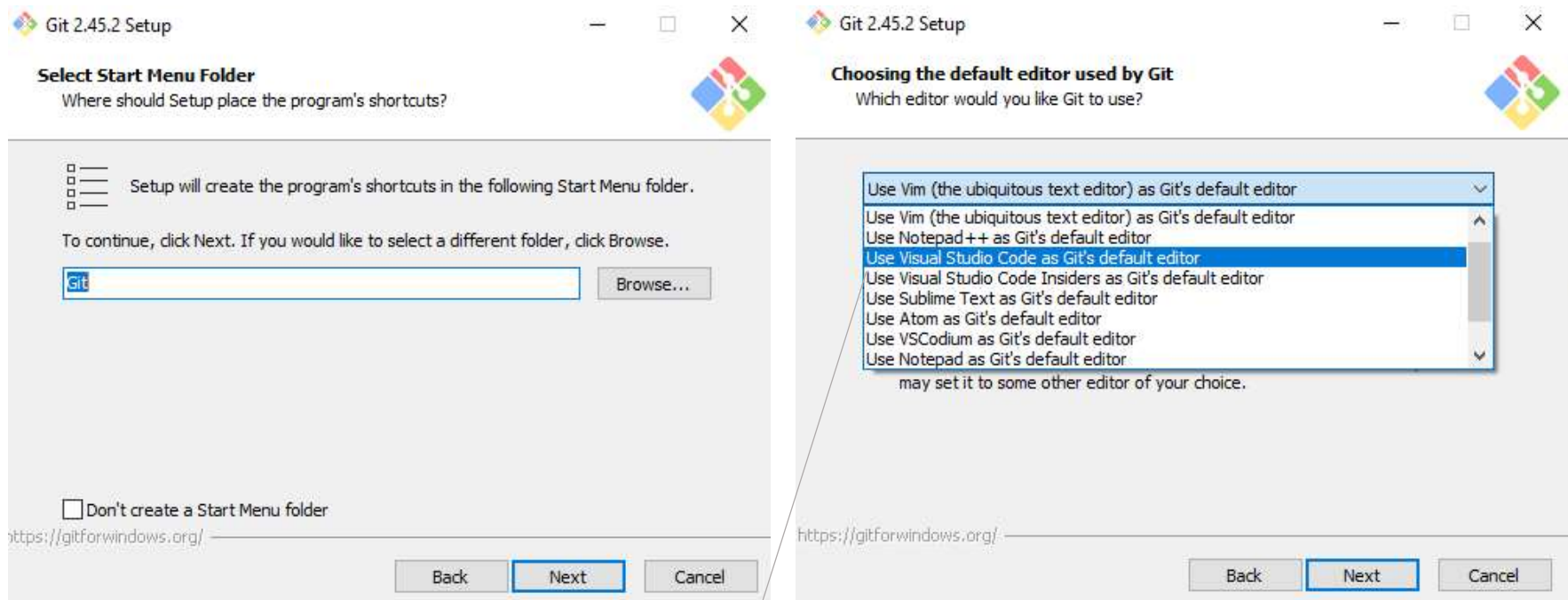# Install Git on your Windows PC

Install Git on your Windows PC

Install Git on your Windows PC

Can be unselected (we will not use Git Bash and Git GUI).
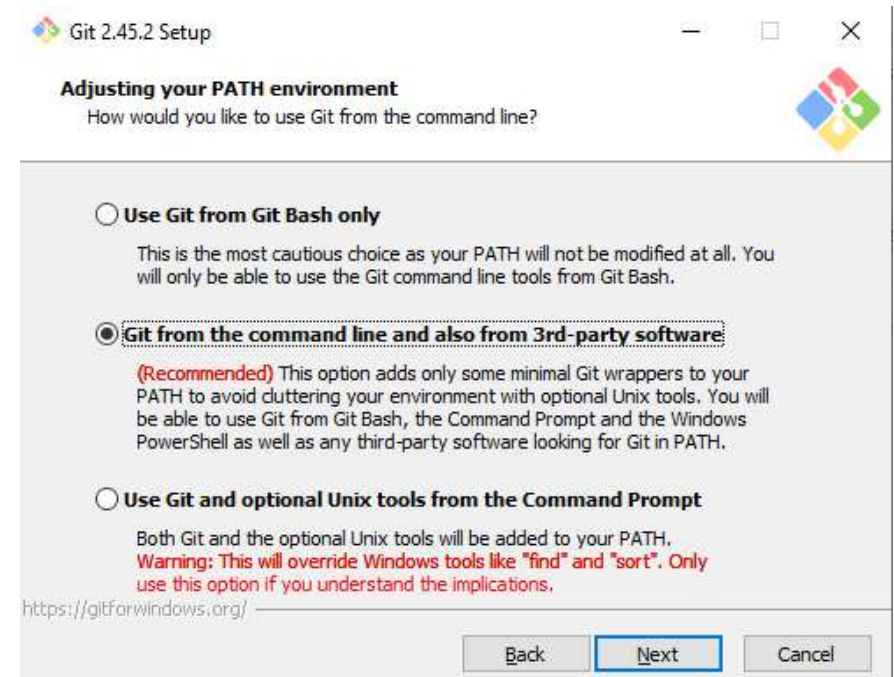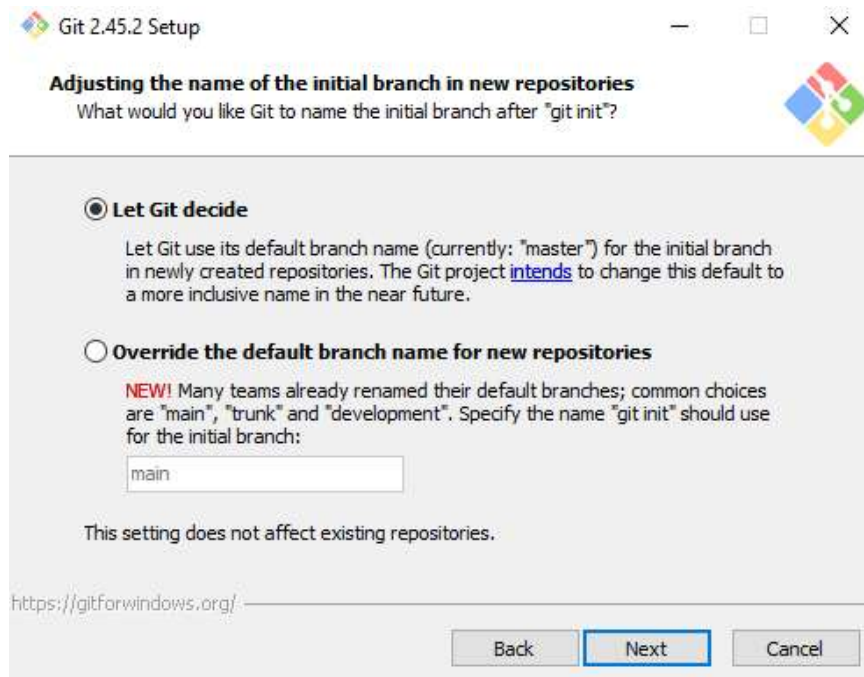
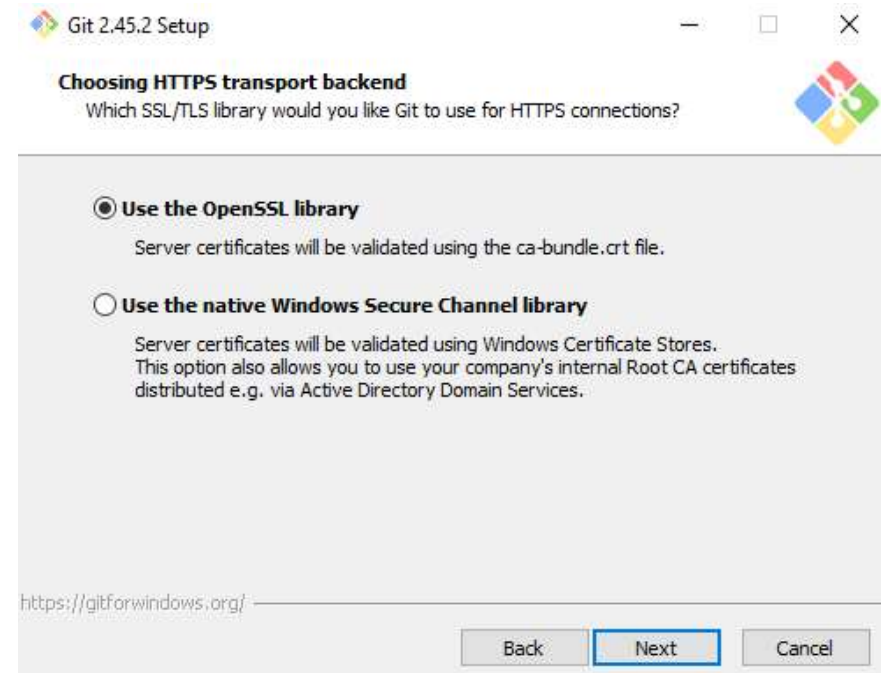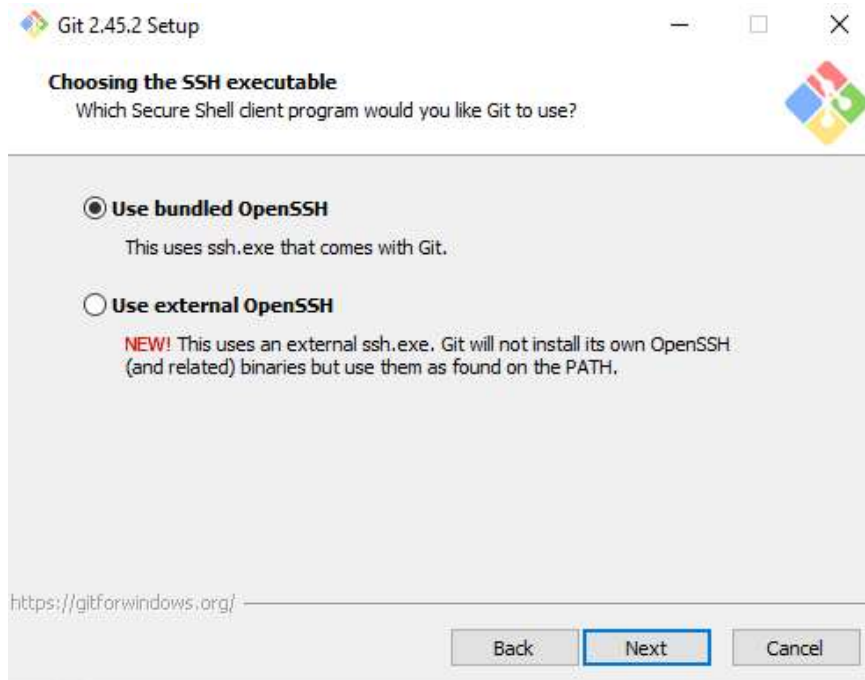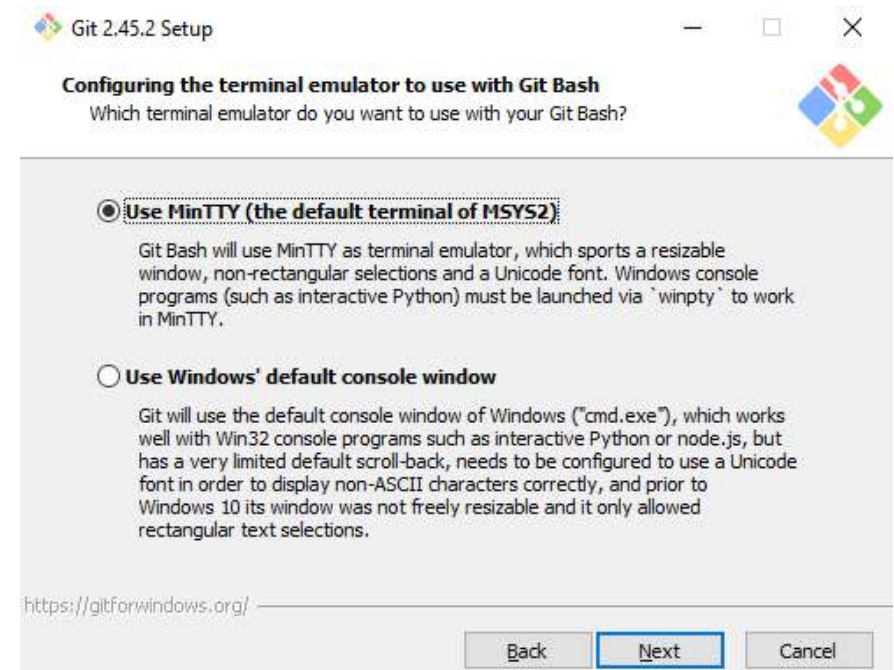# Install Git on your Windows PC

Select "Visual Studio Code" here instead of "Vim"
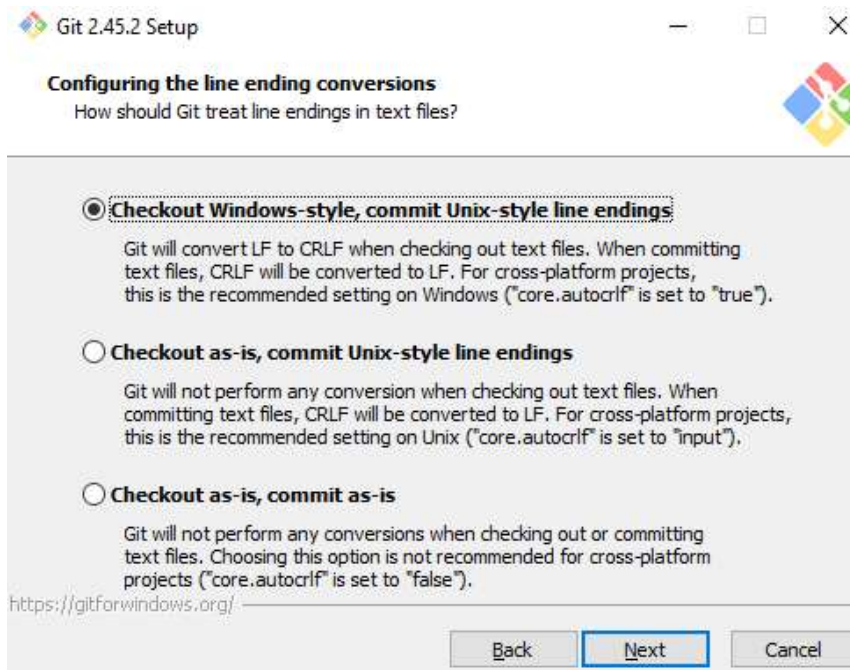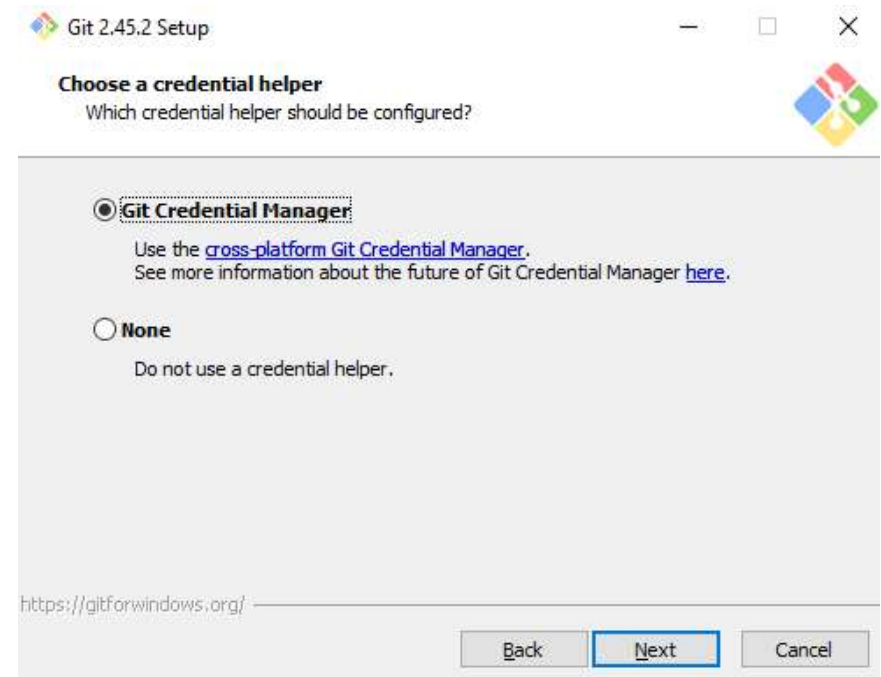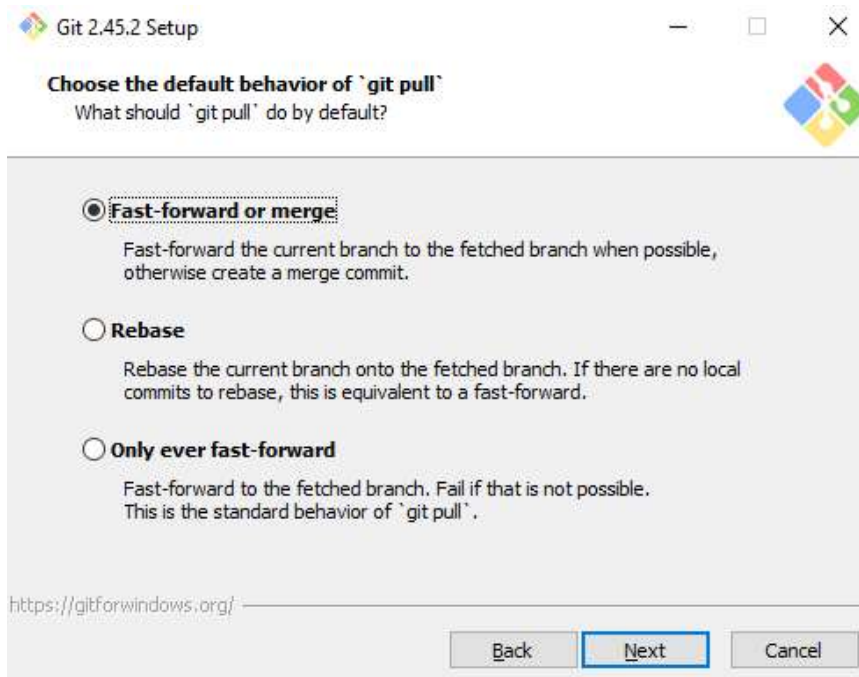
Install Git on your Windows PC

Install Git on your Windows PC

Install Git on your Windows PC

Install Git on your Windows PC

Install Git on your Windows PC

Install Git on your Windows PC

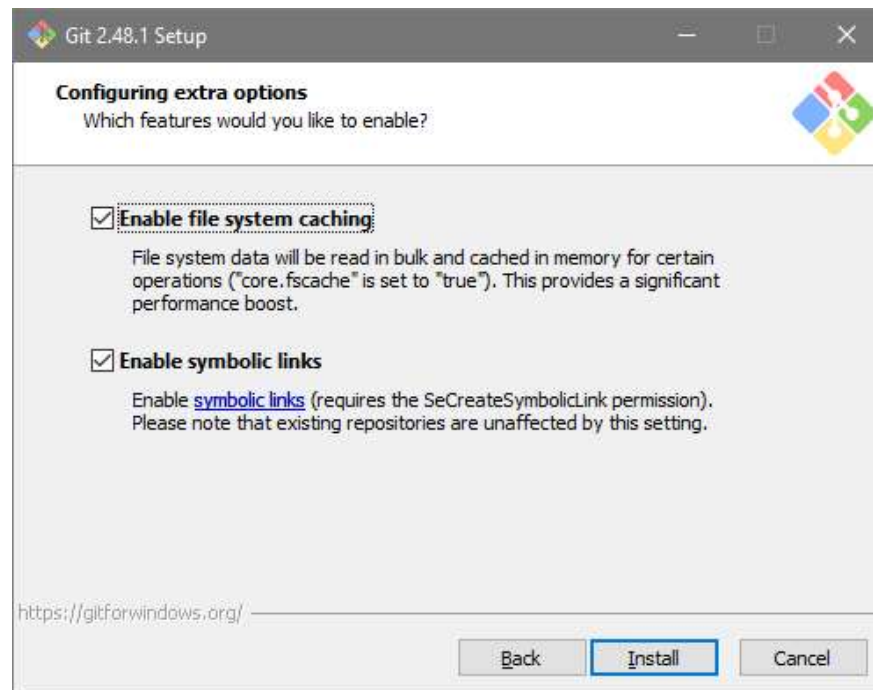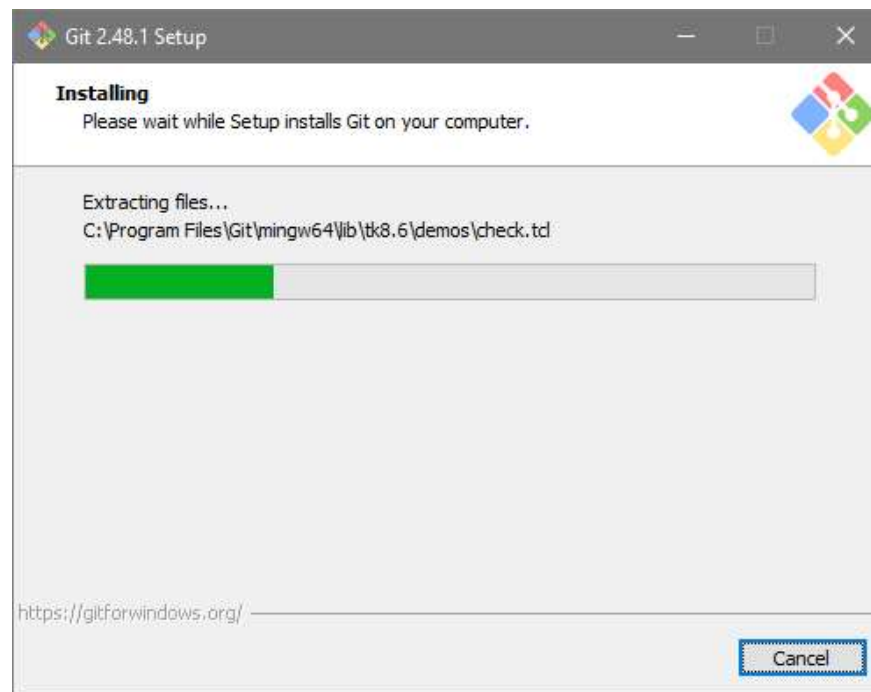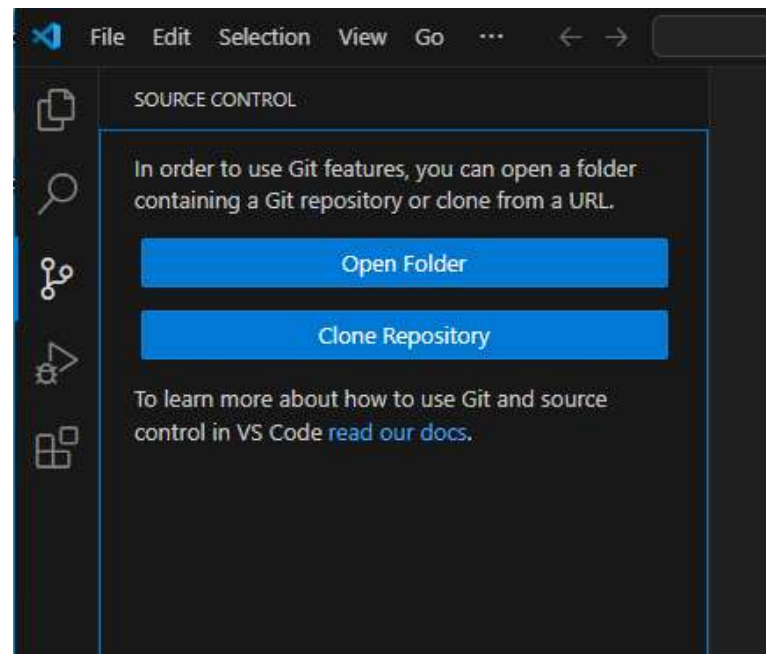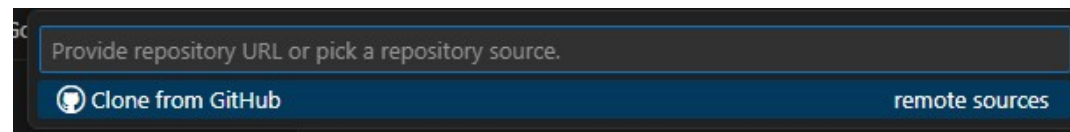# Install Git on your Windows PC
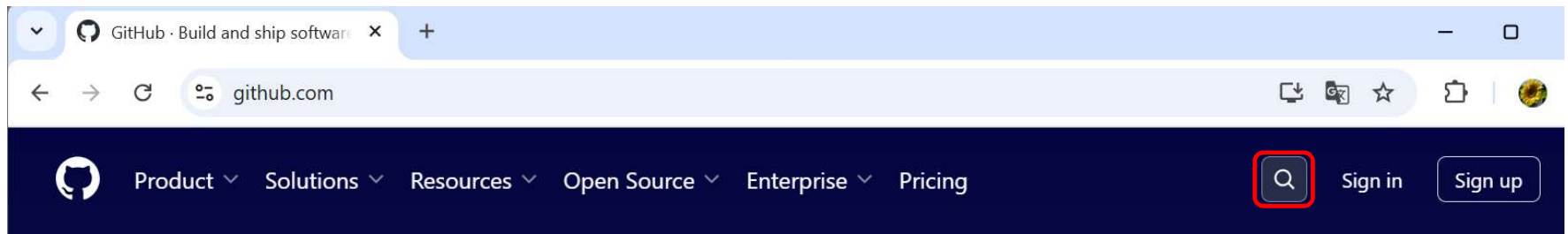
After restarting VS Code:

After "Clone Repository":
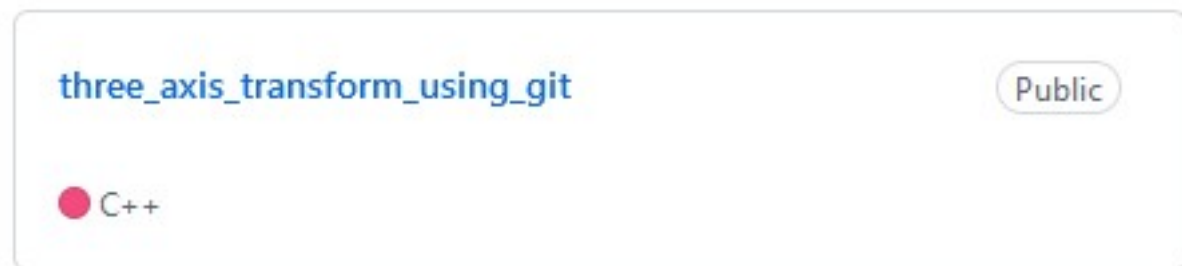
Search for repo on GitHub

Open GitHub in Browser and press the search icon:

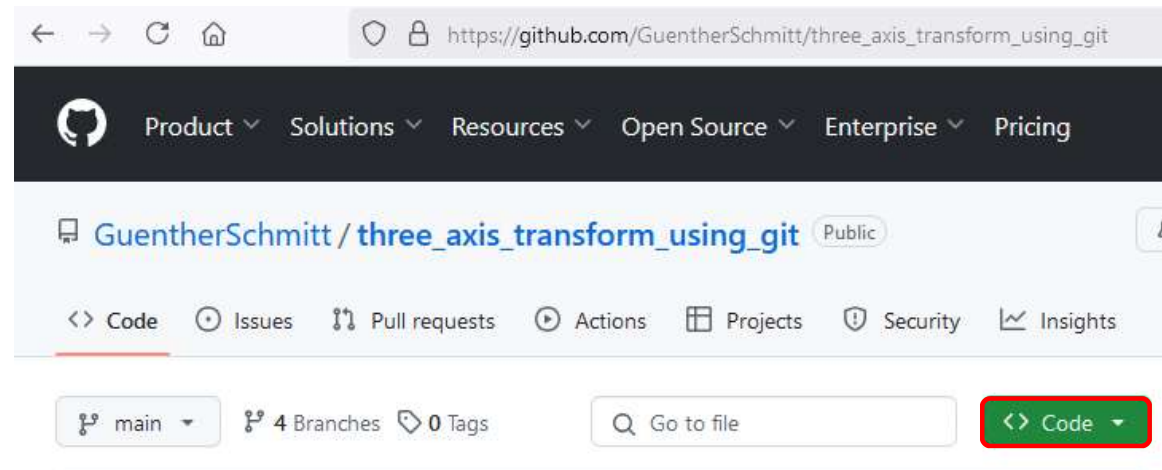In the search field enter "user:GuentherSchmitt":
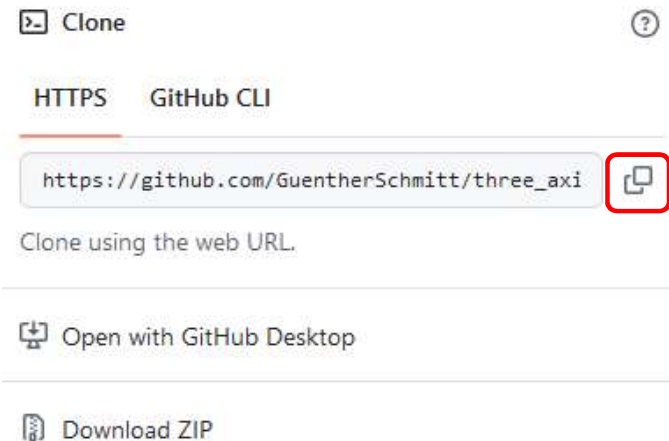

Open the repository

Get the URL of a repository

Press on the green "Code" button:
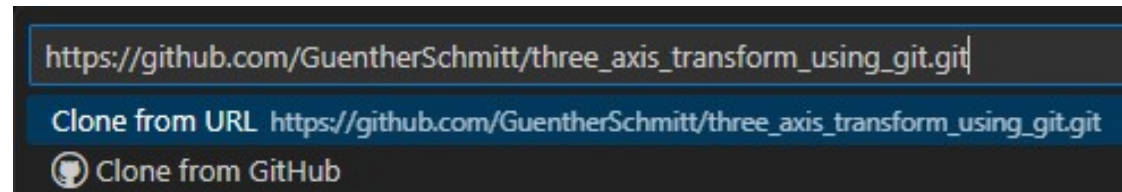

Then it appears

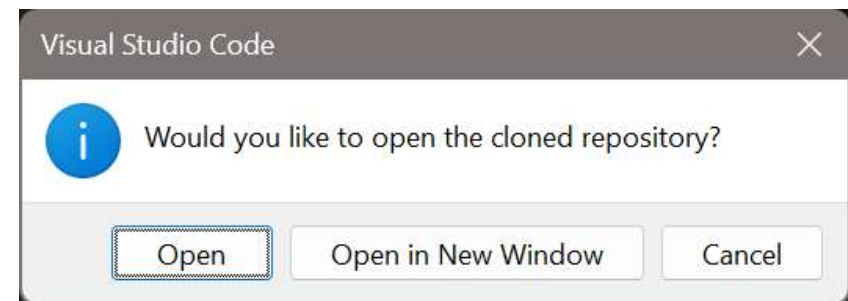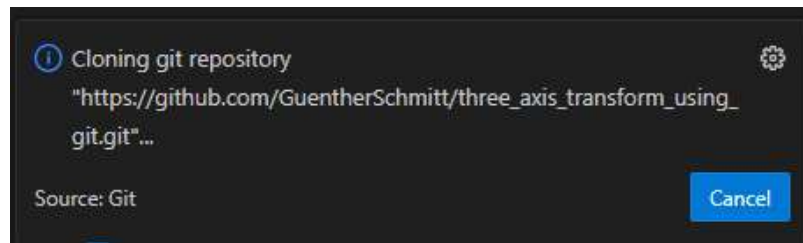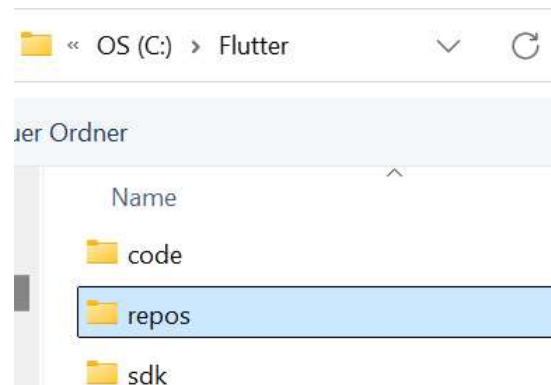Press here to copy the URL to clipboard

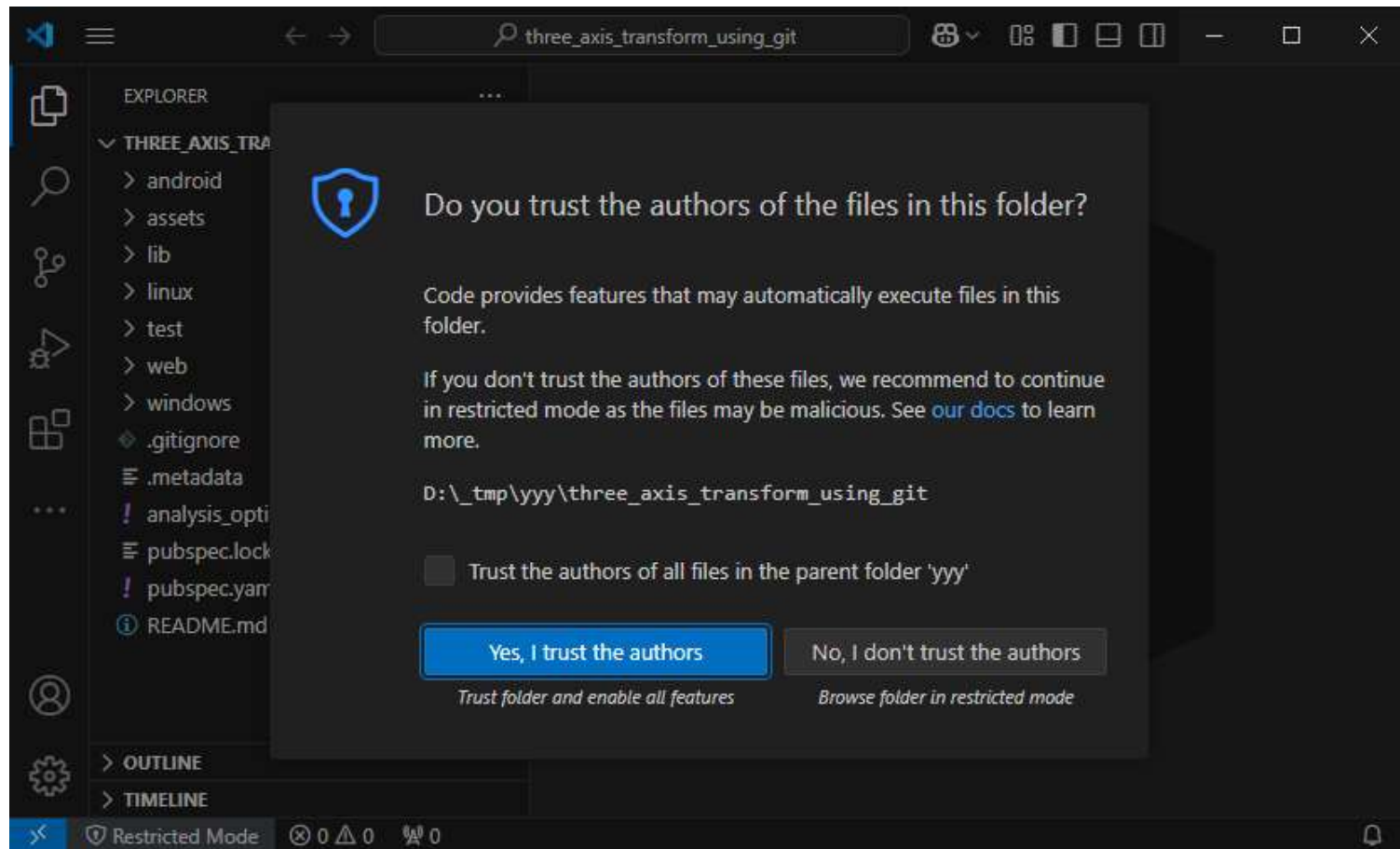# Clone Repo to your PC

Paste copied URL to VS Code:
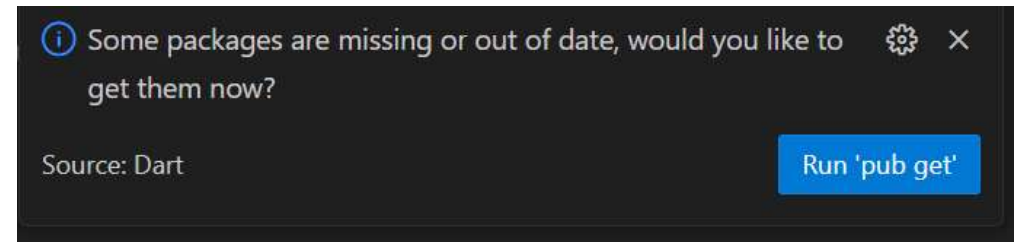
Select directory where to store the clone:

Finally the cloned repo is opened in VS Code

"pub get"

You are asked to update packages:

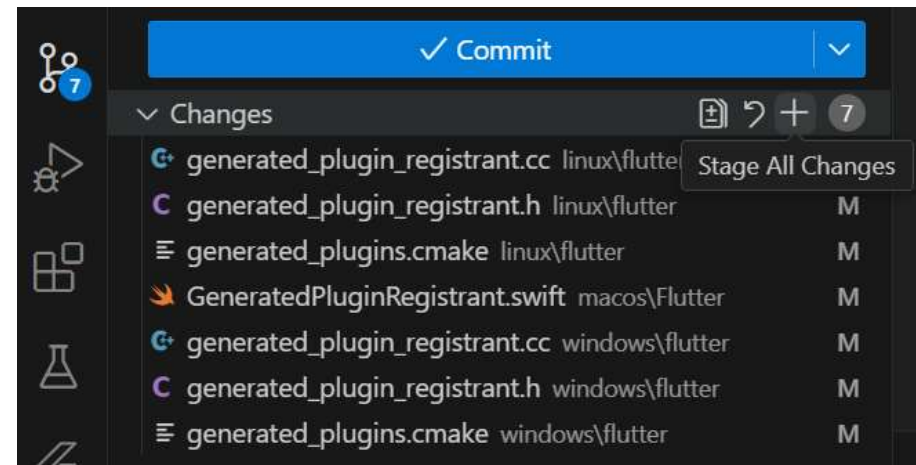This can be repeated at any time by entering "**flutter pub get**" in Terminal:

We already mentioned "**flutter pub get**" when we discussed "flutter clean" in "11 three_axis_transform and DRY principle.pptx" and will learn more about it later when we speak about flutter packages.
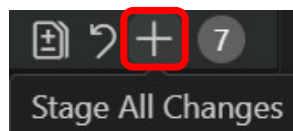
Strange effect after "pub get" in cloned repo

7 files are marked as "changed":

This is discussed in https://stackoverflow.com/questions/74858985/flutter-generated-plugins-showed-with-git-changes-when-there-are-no-changes .

The reason is that during "flutter pub get" these 7 files were written with unix line ending (LF) and not with Windows line ending (CR LF).
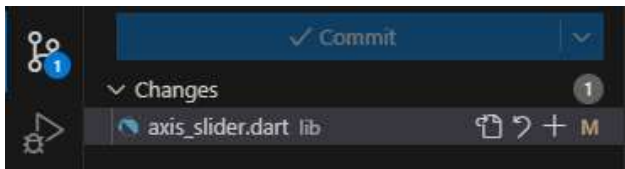
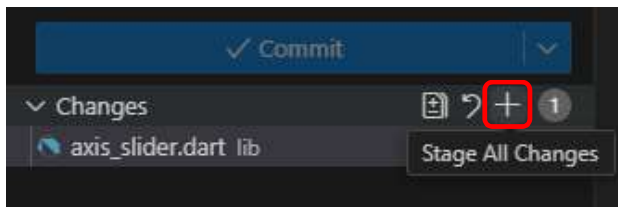Just press on then these files will no longer be reported as changed.
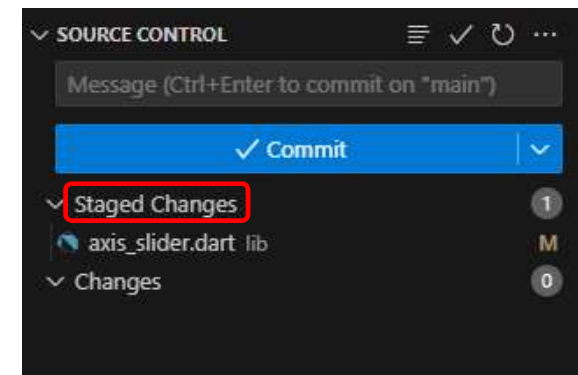
Staging changed files

Git makes a difference between "**changed**" and "**staged**" files.

"**Changed**" are those files in the project folder, that are different to the repository.

"Staged" are those files that you have marked to be included in your next commit. After staging the files by pressing on
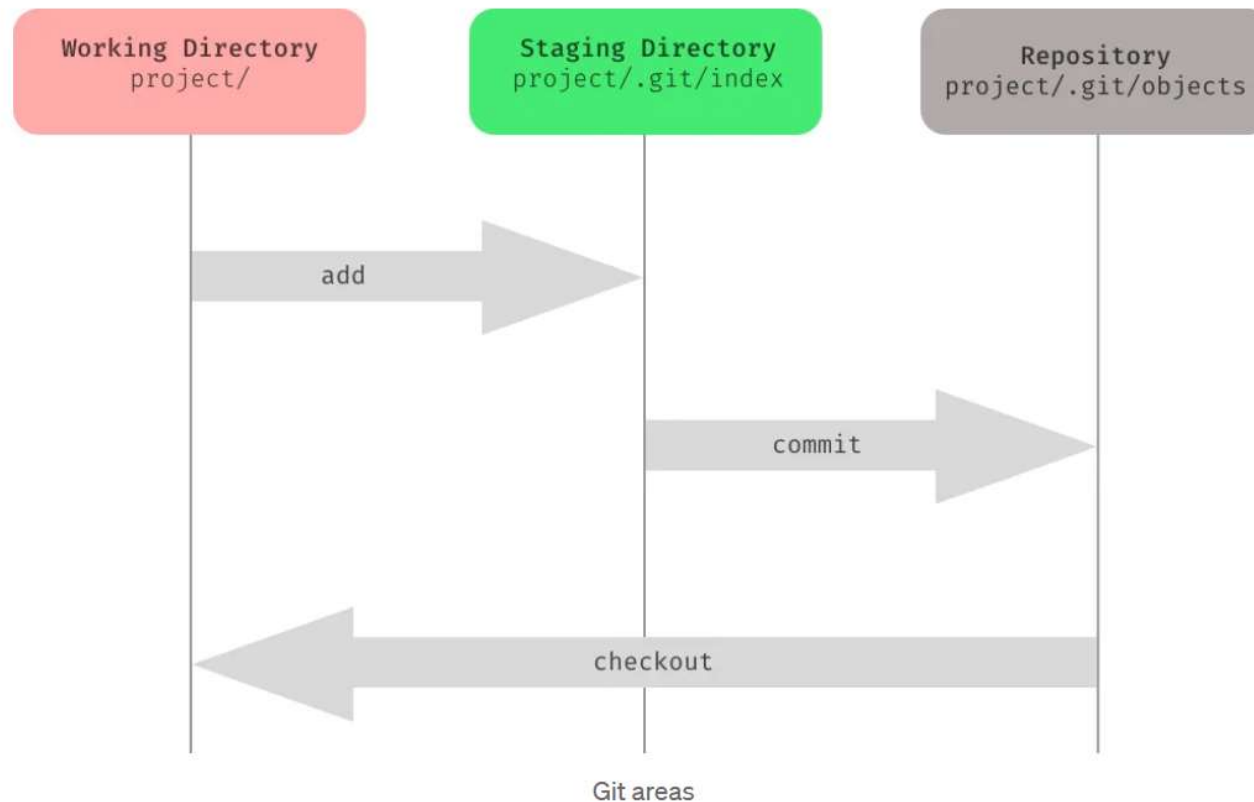

You will see:

3 areas in Git

Git areas

Committing files

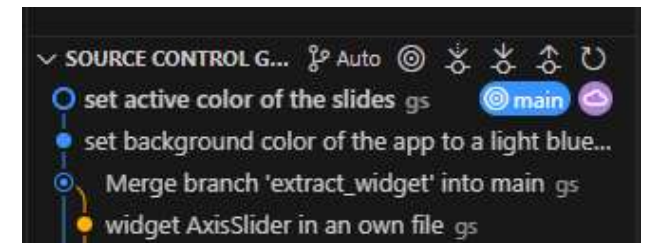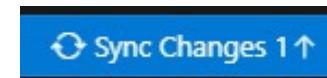When you commit your staged files, they are taken into the repository.

For every commit you must provide a descriptive message:
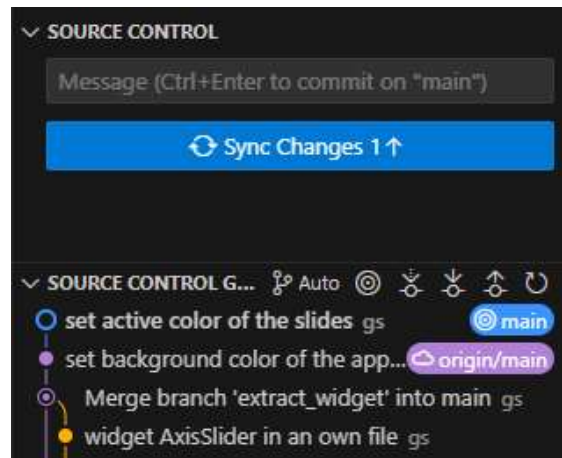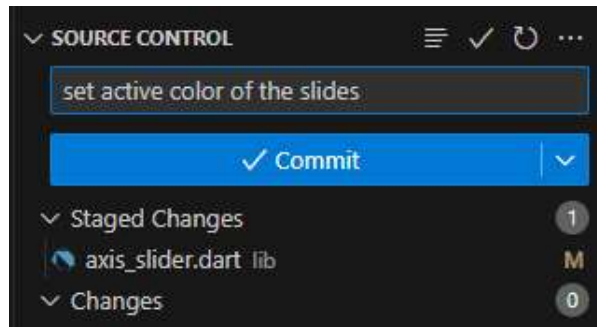
After pressing on

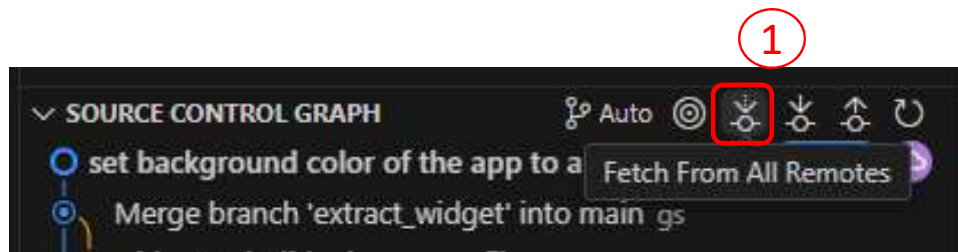

Local repository is ahead of GitHub repository

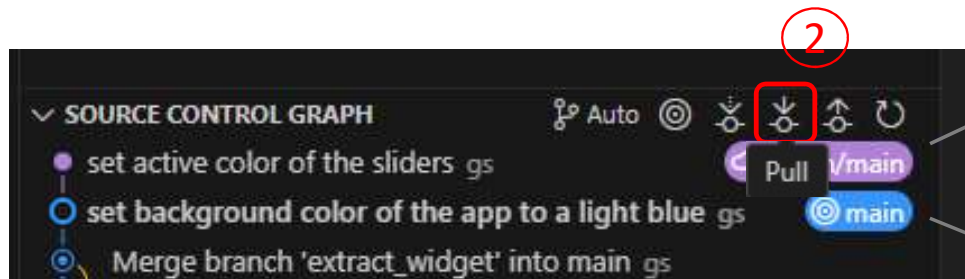Local and GitHub repository are in sync

Check for new commits on GitHub

Fetch

Pull

The repository on GitHub is one commit ahead

here we are in our local repository

In sync