



Creating and publishing a new Git repository

The screenshots in this tutorial were taken while creating the repository “three_axis_transform_using_git”

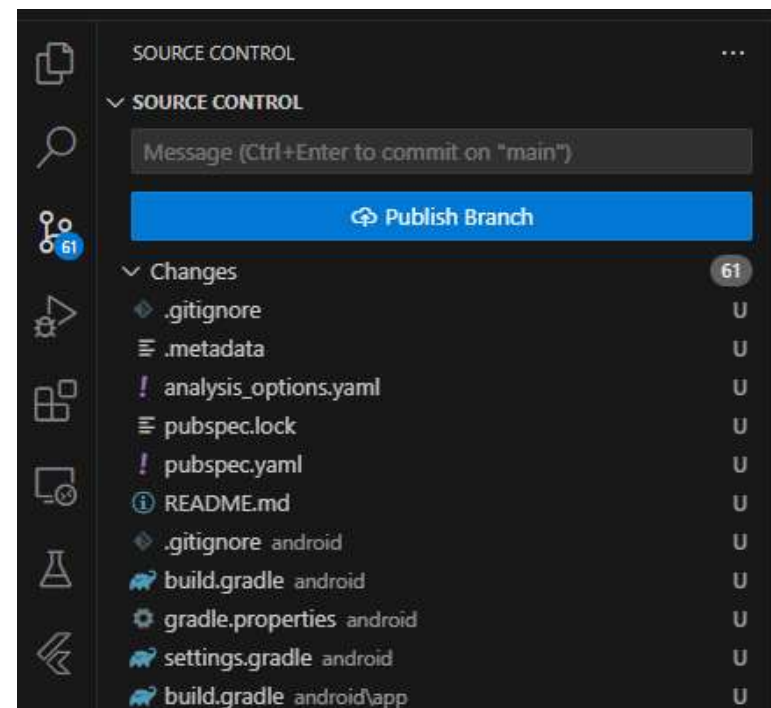
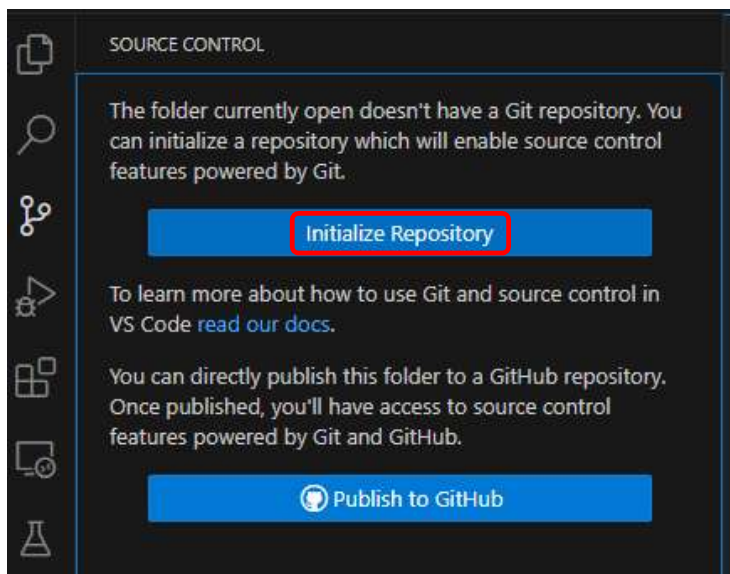
(GitHub link: https://github.com/GuentherSchmitt/three_axis_transform_using_git)



How to create a Git repository

Use case: You have created a new project e.g. using the “Application” template.

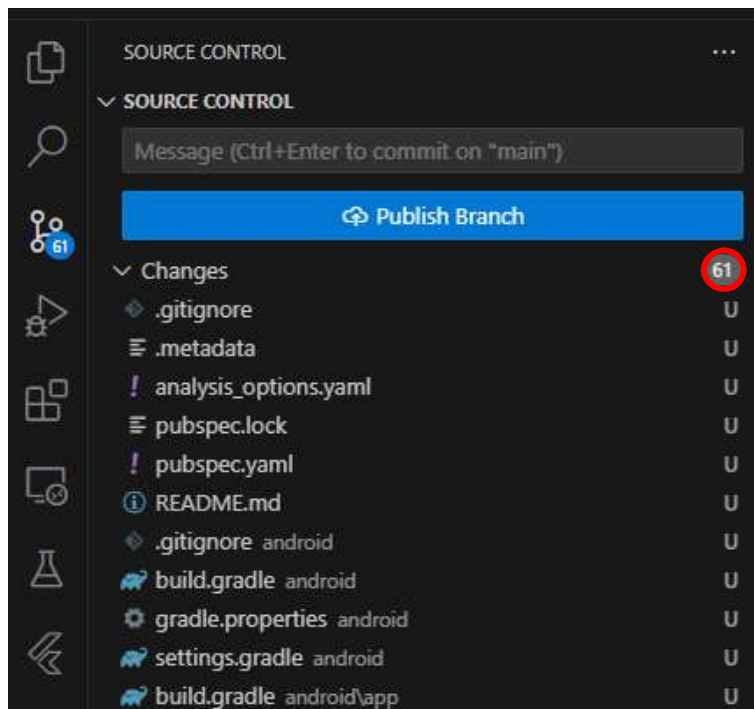
Now you want to put this project into a Git repository to keep track of all future changes.



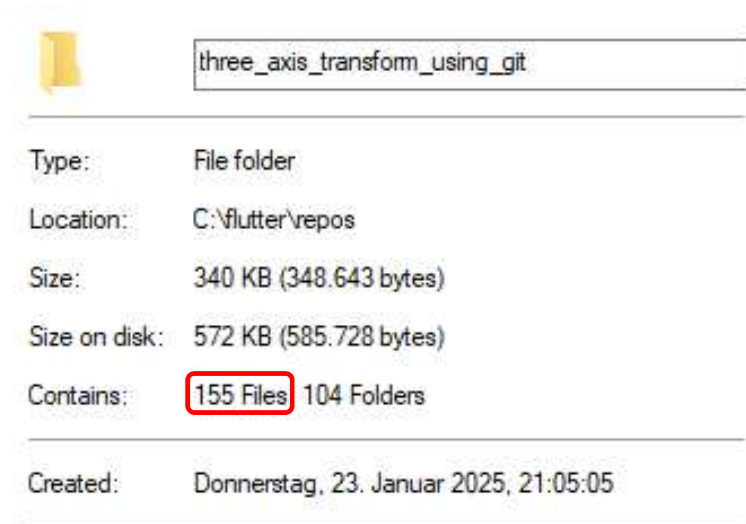


What is contained in the repository

VS Code reports 61 files as “changed”



but the directory contains 155 files



Why is that different ?



The .gitignore file

```
.gitignore - Notepad
File Edit Format View Help

# Flutter/Dart/Pub related
**/doc/api/
**/ios/Flutter/.last_build_id
.dart_tool/
.flutter-plugins
.flutter-plugins-dependencies
.pub-cache/
.pub/
/build/

# Symbolication related
app.*.symbols

# Obfuscation related
app.*.map.json
```

The .gitignore file is created together with your application.

It controls which files and folders should **not** be taken into the repository, because they contain temporary data which can automatically be recreated.

E.g. the folders “.dart_tool” and “build”, which are also deleted by “flutter clean”.

Remark: there are several .gitignore files created in the project, e.g. another one in folder “android”. Each .gitignore file controls the behavior in his directory and all subfolders.

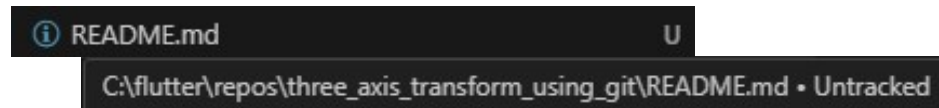


Staging files

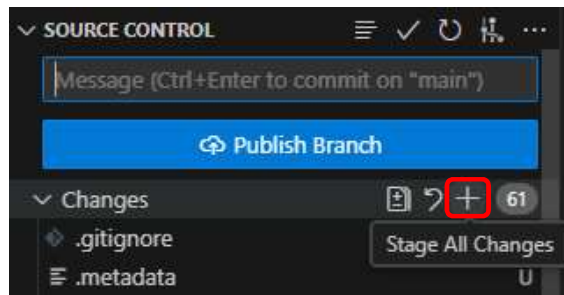
Git makes a difference between “**changed**” and “**staged**” files.

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

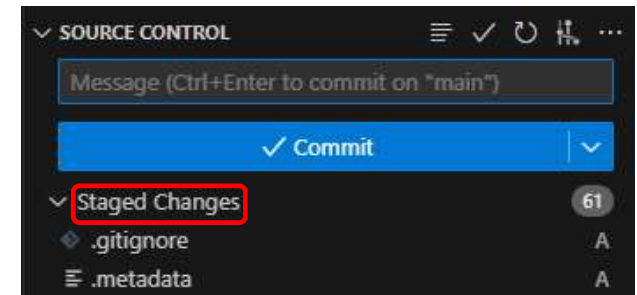
At the moment all 61 files are “changed”, because they are not yet contained in the repository. This is marked by an “U” behind the files (“U” for untracked”)



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

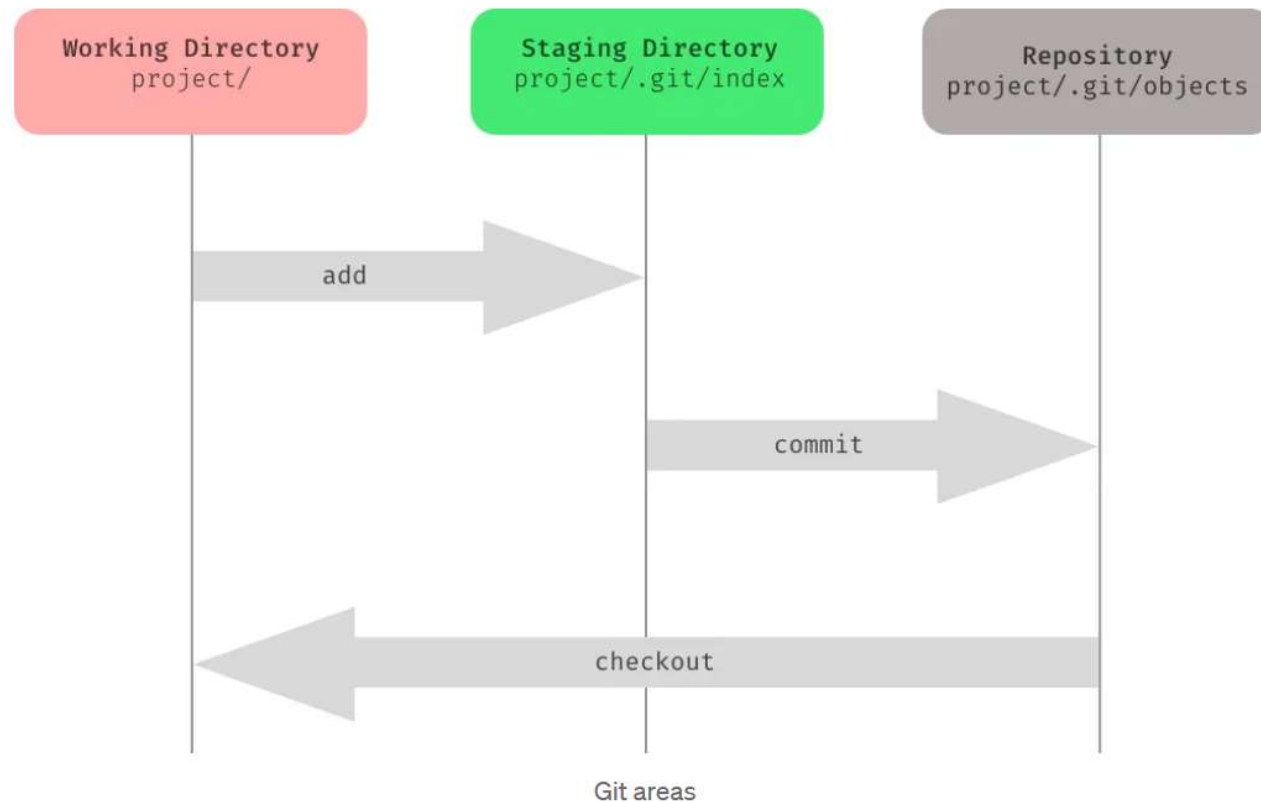


You will see:





3 areas in Git



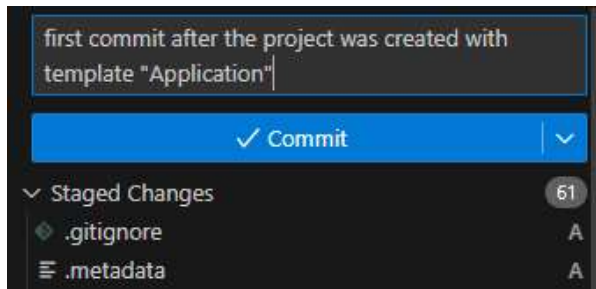
Copied from <https://konrad126.medium.com/understanding-git-index-4821a0765cf>



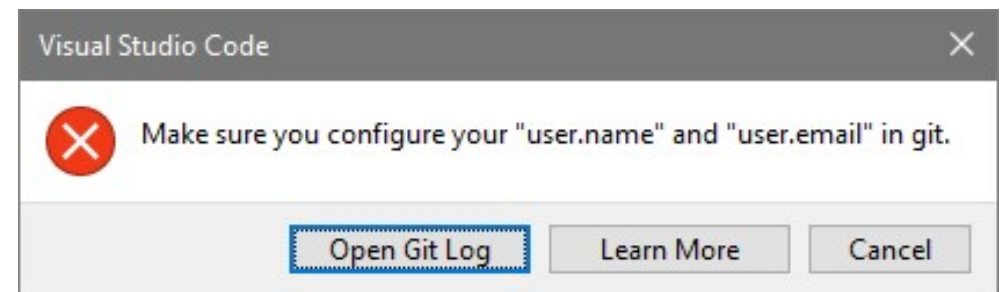
Committing files

When you commit your staged files, they are taken into the repository.
In our case the repository is created during this step.

For every commit you must provide a descriptive message:



In case this is your first commit after you have installed git on your PC, you will see:





Setting User Name and Email for git

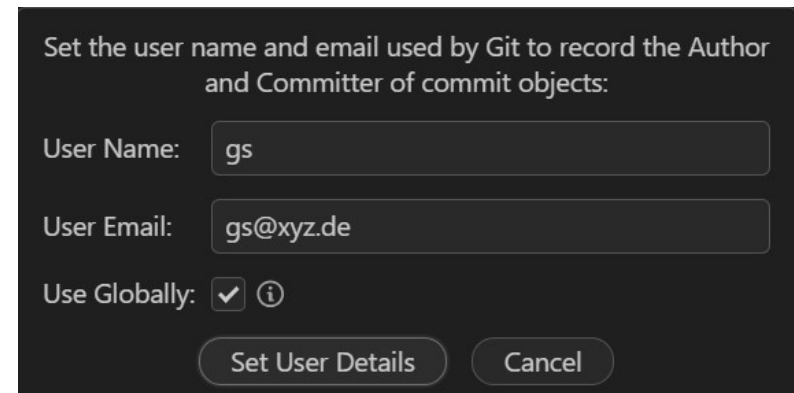
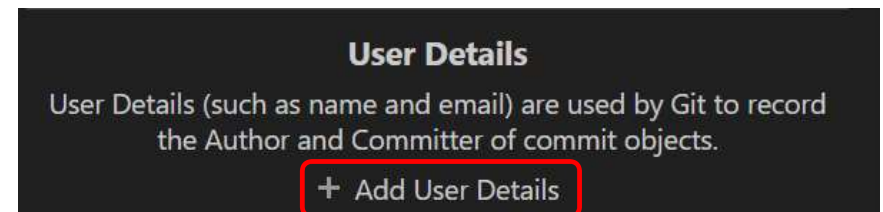
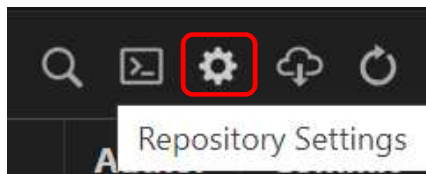
Git wants to know your name because it is stored with other information in every commit.

Open GitGraph



and finally define a name and email address under “User Details”:

select “Repository Settings” on the right:

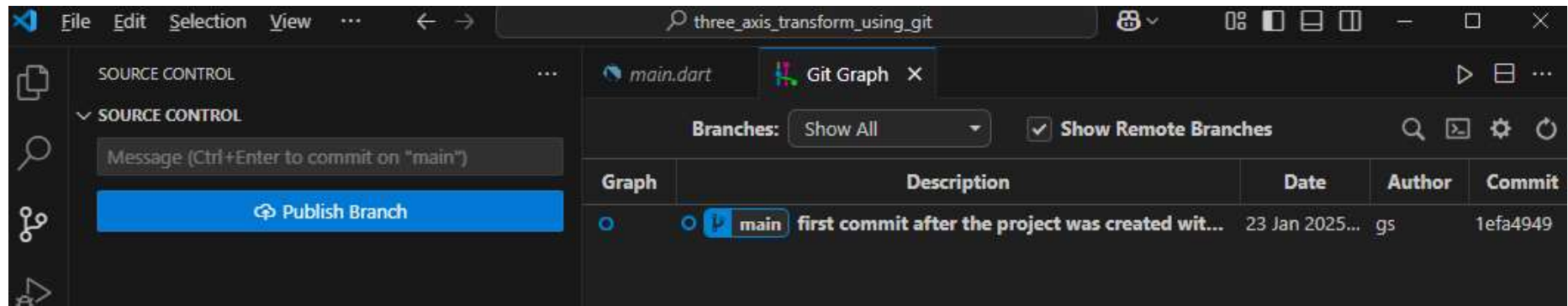


You can enter a pseudo mail address, it is not verified.

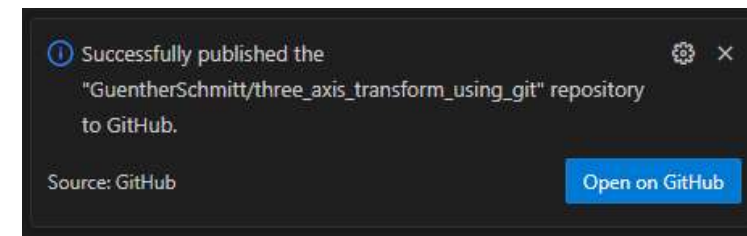
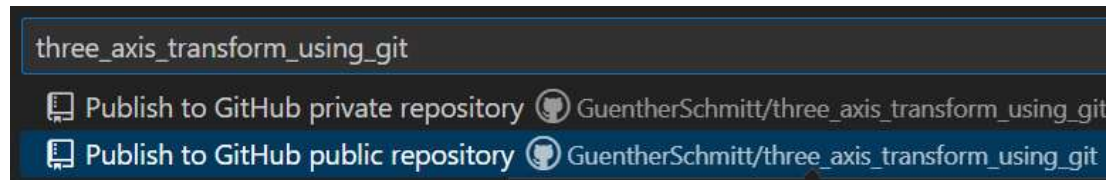


Publishing the repository to GitHub

Now you can see your commit in GitGraph and are ready to publish your repository:



When pressing on the right on “Publish Branch”, you are asked if you want to create a public or private repository on GitHub:





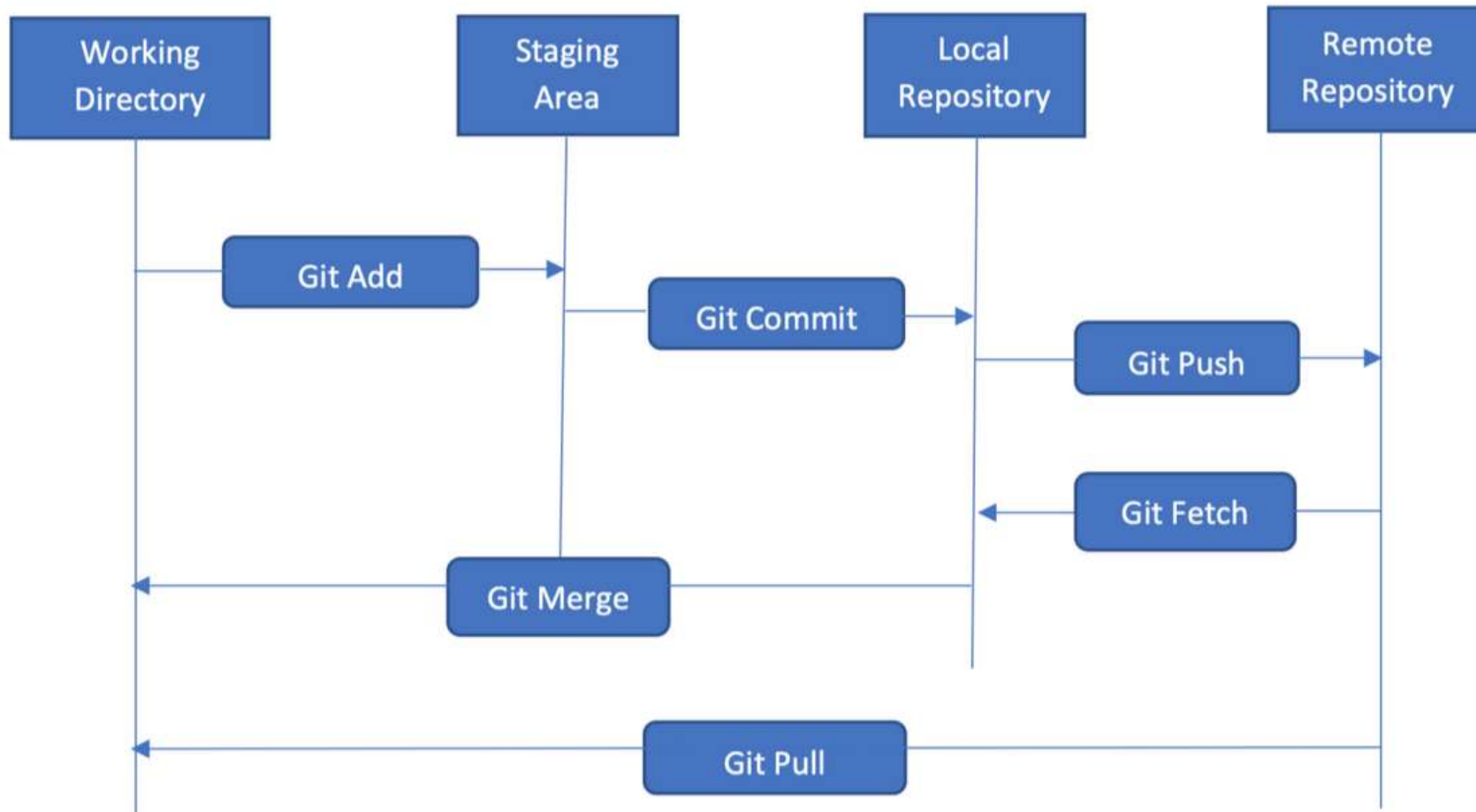
The repository on GitHub

The screenshot shows a web browser displaying a GitHub repository page. The URL in the address bar is `https://github.com/GuentherSchmitt/three_axis_transform_using_git`. The repository is owned by 'GuentherSchmitt' and is titled 'three_axis_transform_using_git'. It is a public repository with 0 stars and 0 forks. The repository is currently on the 'main' branch. The file list shows four files: 'android', 'lib', 'linux', and 'test', all with their first commit 6 minutes ago. The 'About' section on the right indicates that no description, website, or topics are provided.

File	Commit Message	Commit Time
android	first commit after the p...	6 minutes ago
lib	first commit after the p...	6 minutes ago
linux	first commit after the p...	6 minutes ago
test	first commit after the p...	6 minutes ago

Public repositories can be seen by everybody.

Private repositories can be seen only by the owner and invited collaborators.



GIT Workflow Diagram

Copied from <https://www.dezlearn.com/getting-started-with-git/>



Where is the local repository stored ?

In the folder “.git” in your project directory:

The image shows a file explorer window with a sidebar on the left and a main pane on the right. The sidebar shows a tree view of a project directory. The main pane shows the contents of the selected directory, which is the .git directory. An arrow points from the 'config' file in the main pane to a code editor window on the right.

File Explorer Sidebar:

- three_axis_transform_u
- > .dart_tool
- > **.git**
- > android
- lib
- > linux
- test
- > web
- > windows

File Explorer Main Pane (Name):

- hooks
- info
- logs
- objects
- refs
- COMMIT_EDITMSG
- config
- description
- FETCH_HEAD
- HEAD
- index

Code Editor Window:

```
[core]
  repositoryformatversion = 0
  filemode = false
  bare = false
  logallrefupdates = true
  ignorecase = true
[remote "origin"]
  url = https://github.com/GuentherSchmitt/three_axis_transform_using_git.git
  fetch = +refs/heads/*:refs/remotes/origin/*
[branch "main"]
  remote = origin
  merge = refs/heads/main
  vscode-merge-base = origin/main
```

It is **not a good idea** to manually modify files in the .git directory !

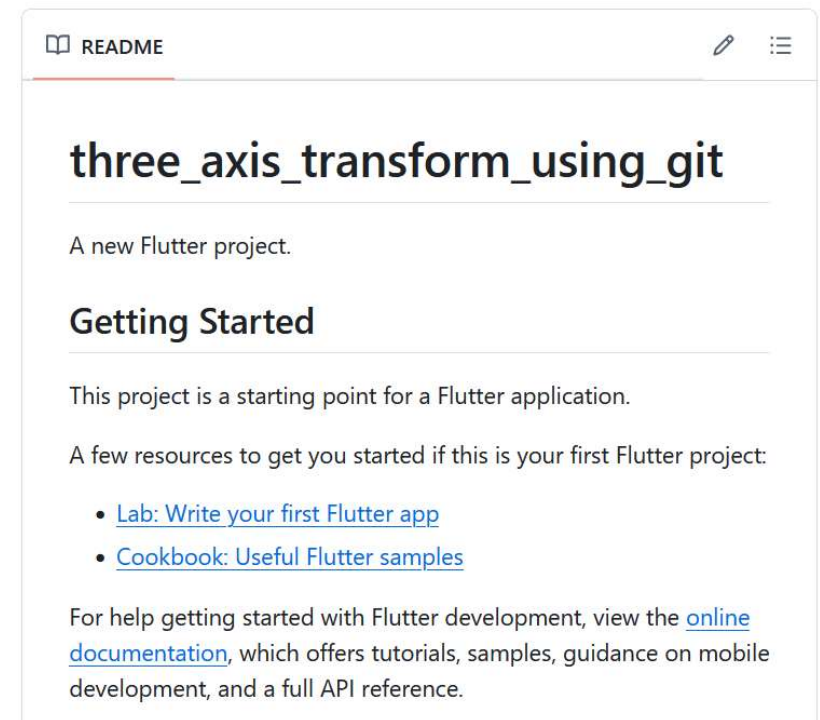


Optional step: adapt your readme.md file

Your project directory contains a file “readme.md”. The extension “.md” stands for “MarkDown”, which provides an easy way to create “nice looking” documents.

This readme.md file is displayed in the “Code” tab of the repository on GitHub:

```
① README.md X
① README.md > # three_axis_transform_using_git > ## Getting Started
1  # three_axis_transform_using_git
2
3  A new Flutter project.
4
5  ## Getting Started
6
7  This project is a starting point for a Flutter application.
8
9  A few resources to get you started if this is your first Flutter project:
10
11 - [Lab: Write your first Flutter app](https://docs.flutter.dev/get-started/codelab)
12 - [Cookbook: Useful Flutter samples](https://docs.flutter.dev/cookbook)
13
14 For help getting started with Flutter development, view the
15 [online documentation](https://docs.flutter.dev/), which offers tutorials,
16 samples, guidance on mobile development, and a full API reference.
17
```



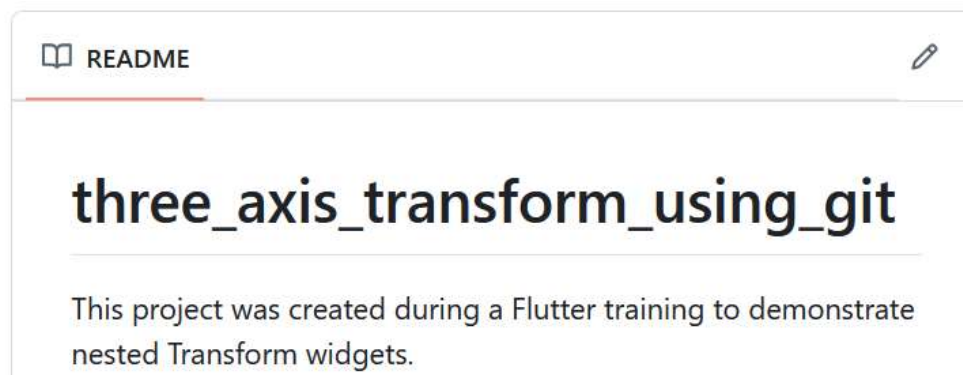
Optional: adapt your readme.md file (continued)



Change your readme.md file e.g. like

```
❯ README.md X
❯ README.md > # three_axis_transform_using_git
1 # three_axis_transform_using_git
2
3 This project was created during a Flutter training to demonstrate nested Transform widgets.
```

Save, stage, commit and push your changes, then you will see on GitHub:

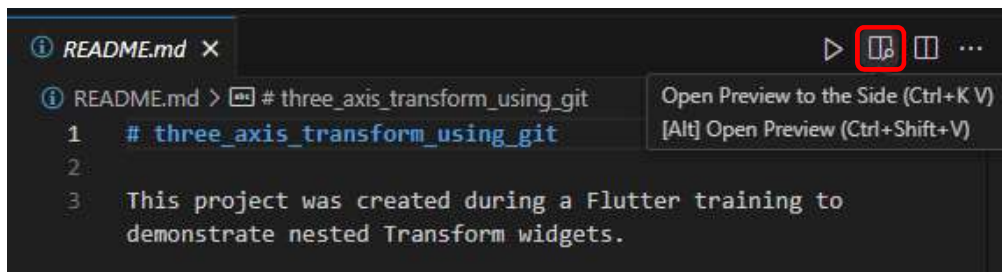


For details on the syntax of .md files see <https://www.markdownguide.org/basic-syntax/> or use <https://markdownlivepreview.com/> to test it online.



Optional: Preview Markdown files in VS Code

Press the following button in the VS Code editor of the Markdown file:



Then you will see:

