

ASAM OpenX Project Workflows

1. Juli 2020



General Information



Communication & Information Channels

1. **Microsoft Teams** – Chat, conferencing, document folder for sharing documents (e.g. research papers, notes, videos, anything that does not need to be versioned)
2. **Gitlab (code.asam.net)** – All source code and standard relevant documentation. Issues relevant to deliverables should be created here.
3. **Mailing list (openodd@asam.net)** – project level communication will be duplicated here and in the teams channel for redundancy (e.g. project meetings, announcements)

Introduction to Git

*Note: These steps are intended for Windows users.
If you are a Linux user and need help, get in touch
with me.*



Some Terms...

- **Git** – a version control system
- **Gitlab** – popular open source interface we use that leverages Git
- **Remote** – the server, i.e. not on your pc, often used to refer to the master repository of a project on a server
- **Local** – A locally stored (on your pc) version of the remote repository
- **Working copy** – Files that are not yet handled by git or that contain changes git is not “aware” of
- **Staging Area** – Files or changes that git is aware of but that are not yet part of the history

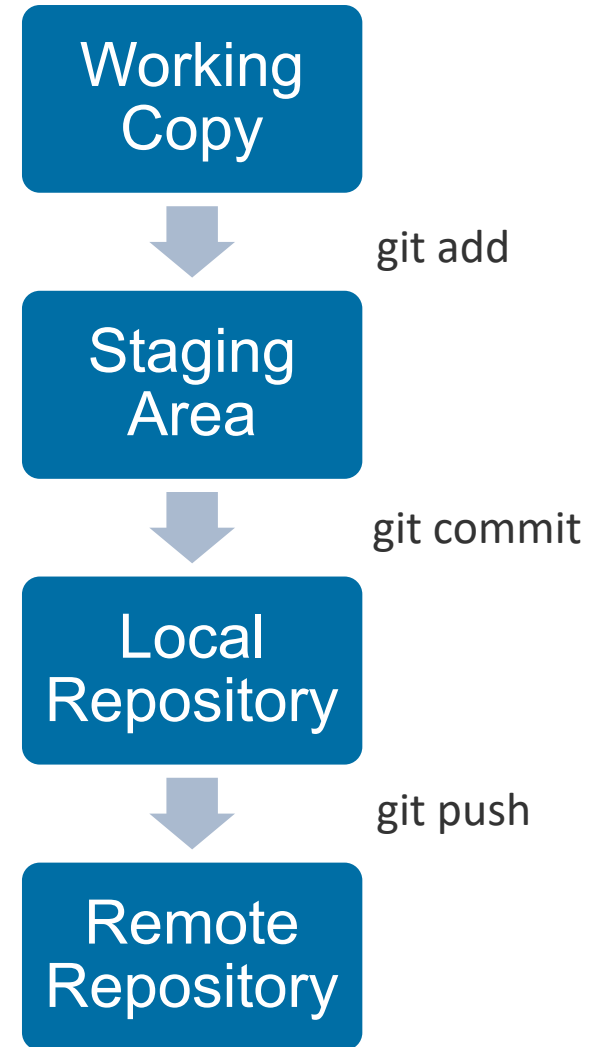
More Terms...

- Actions in Git:
 - **Clone** – done once to obtain a local copy of a remote repository
 - **Commit** – save the state of a repository (ideally with a “commit message” that gives some background). This “snapshot” only applies to the local repository.
 - **Push** – Copy the committed changes to the remote
 - **Pull** – Update your local copy with all changes that have been made to the remote
 - **Branch** – Diverge from the main line of development by creating a branch, this has a pointer to a specific commit in the parent to make it clear where it started
 - **Merge** – integrate the changes made in one **branch** into another

Working with Git

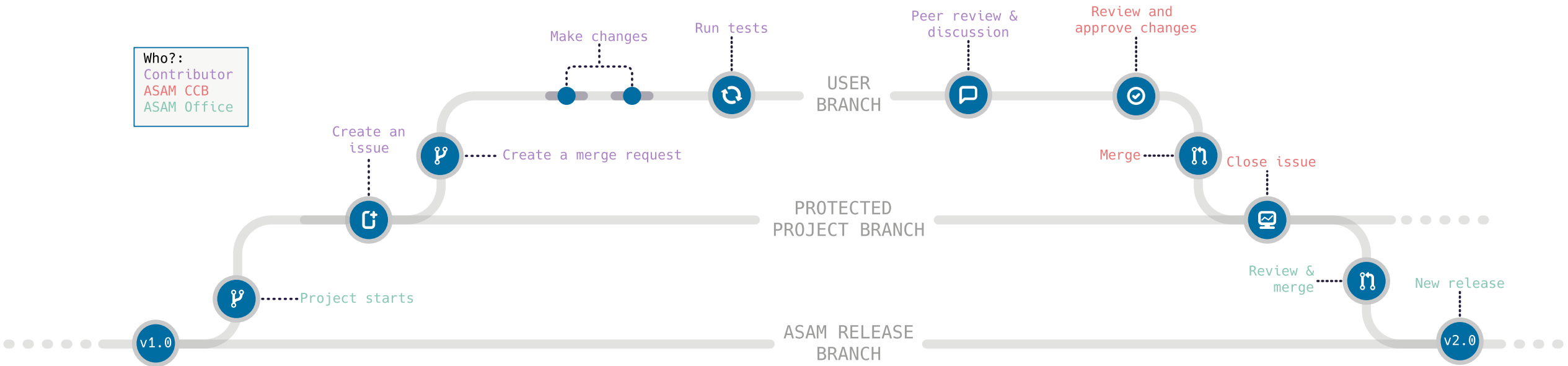
The Git workflow has a 3 Step process:

1. Add files from the working copy to the staging area.
2. Commit staged files to your local repo
3. Push to a remote repository.



Branching with Git @ ASAM

Who?:
Contributor
ASAM CCB
ASAM Office



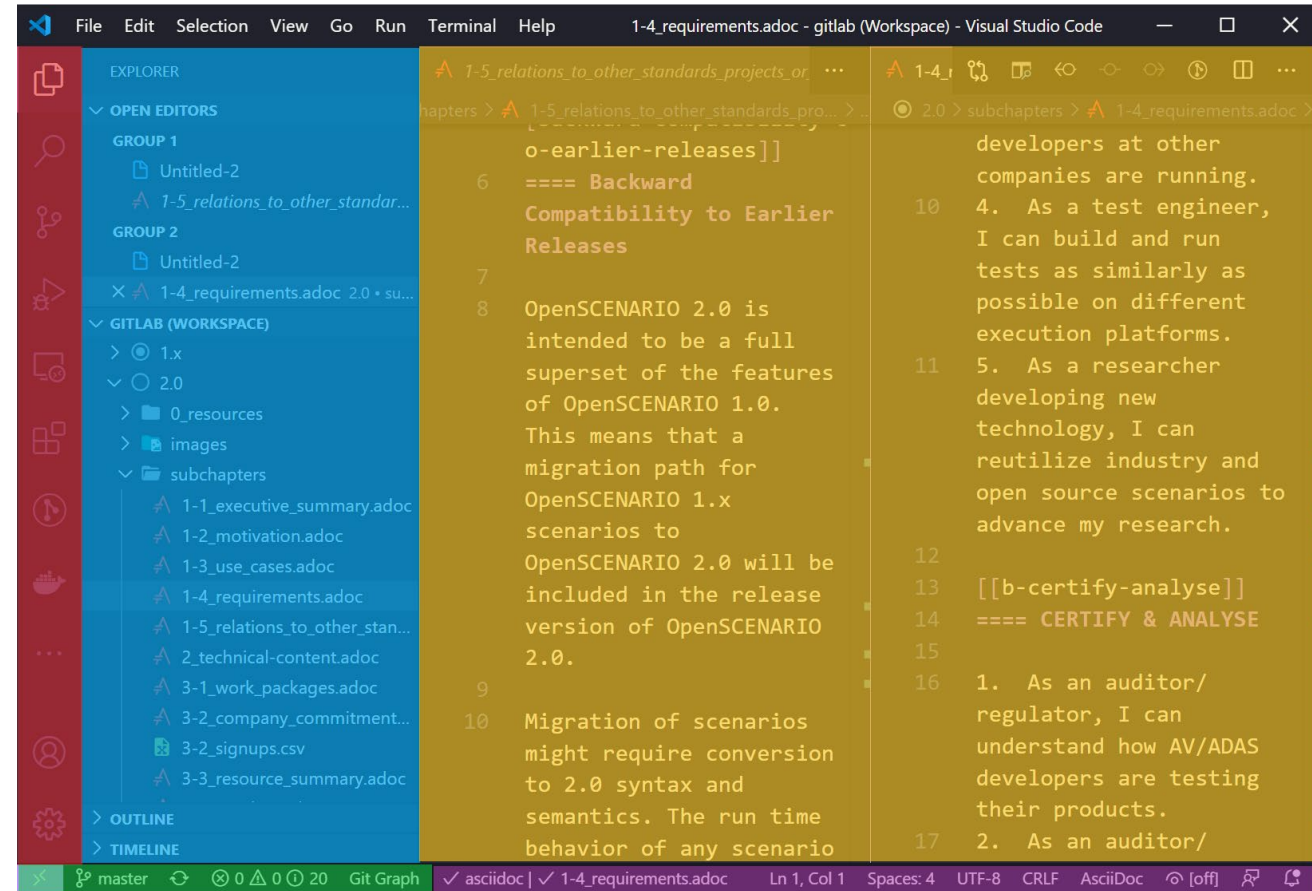
Quick Introduction to VSCode

*Note: These steps are intended for Windows users.
If you are a Linux user and need help, get in touch
with me.*



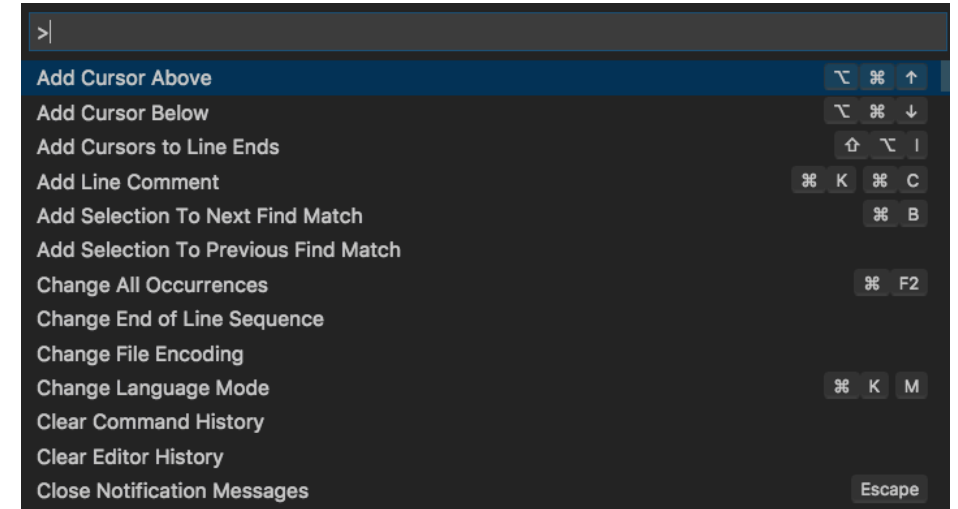
The Interface

- **Editor** - The main area to edit your files. You can open as many editors as you like side by side vertically and horizontally.
- **Side Bar** - Contains different views like the Explorer to assist you while working on your project.
- **Status Bar** - Information about the opened project and the files you edit.
- **Activity Bar** - Change the view in the side bar

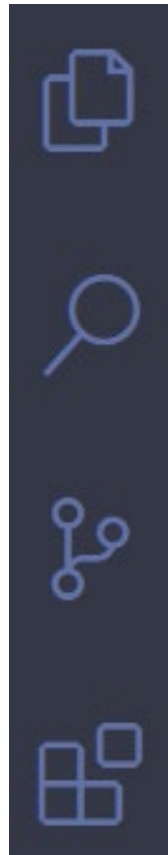


Command Palette

- Ctrl+Shift+P brings up the **Command Palette**.
- From here, you have access to all of the functionality of VS Code, including keyboard shortcuts for the most common operations.



Activity Bar



Explorer - shows all of the files and folders you have access to



Search – Find and replace in files



Git – all git related commands, only active if in a git repository



Extensions let you add languages, debuggers, and tools to your installation to support your development workflow.

Tool Setup

*Note: These steps are intended for Windows users.
If you are a Linux user and need help, get in touch
with me.*



Installing the tools

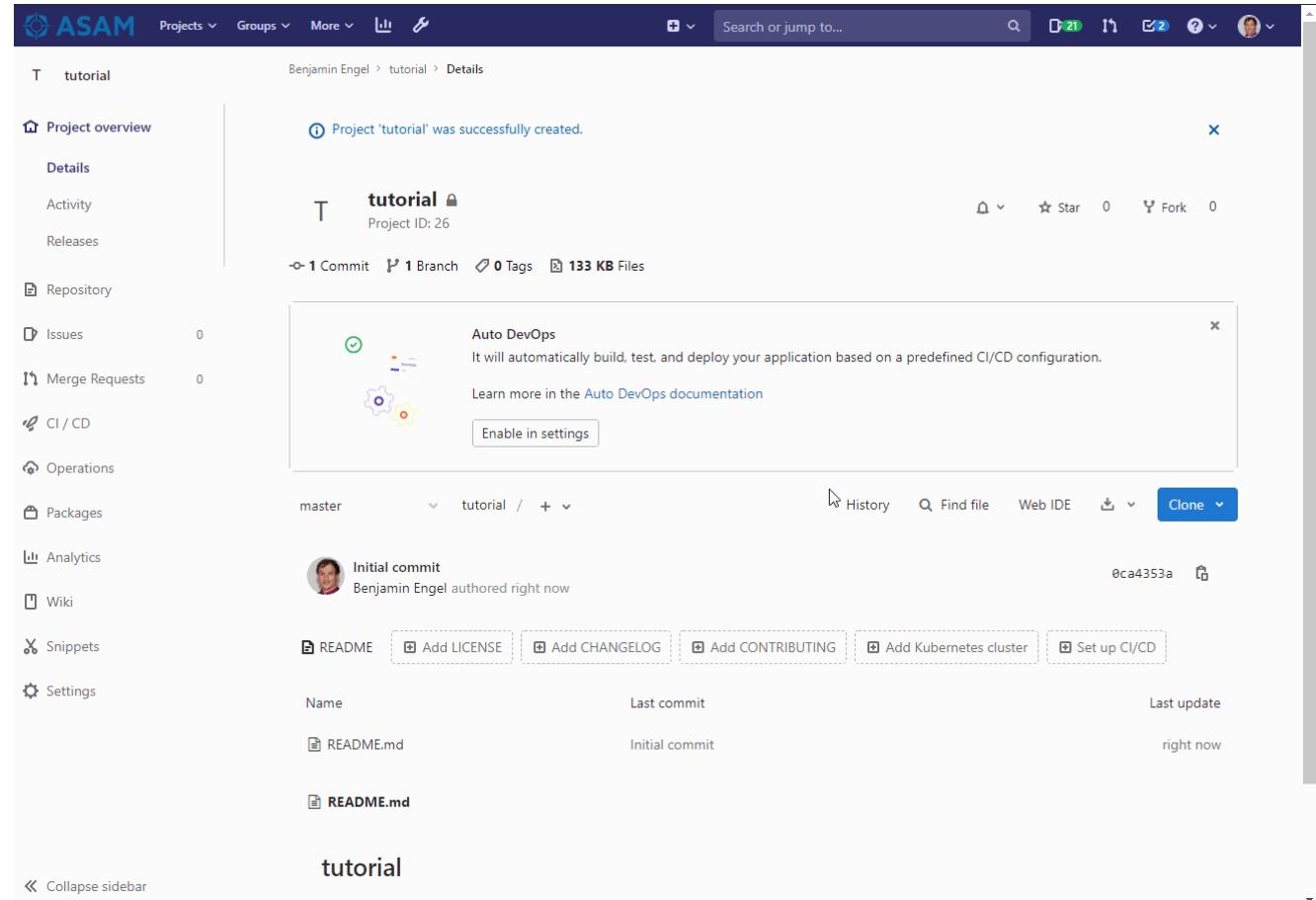
- Install Git (the versioning control system we use)
<https://git-scm.com/download/win>
- Install VSCode, an all-in-one open-source text editor that makes life a lot easier
<https://code.visualstudio.com/download>

Initial Setup

1. In a powershell window, enter the following command
`ssh-keygen -t ed25519 -C "YourEmail@address.com"`
 - a) Use the suggested path
 - b) Entering a password is optional and leads to additional steps every time you connect to the remote so I recommend against it
2. In a Powershell window enter
`~/.ssh/id_ed25519.pub | clip`
 - a) If this doesn't work, open the file you created in a text editor and copy the whole text
3. Add the generated key to Gitlab
 - a) <https://code.asam.net/profile/keys>
 - b) Paste the key copied in step 2, give it a title and then click „Add Key“

Cloning a Repository the First Time

- This only needs to be done once to obtain a local copy.
 1. Find the repository url on the website and copy the git url
 2. Open Command Palette (Ctrl+Shift+p) → Type “Git: Clone” → Press Enter
 3. Enter the git url you copied earlier → Press enter
 4. Select the folder on your pc where you want to save the repository



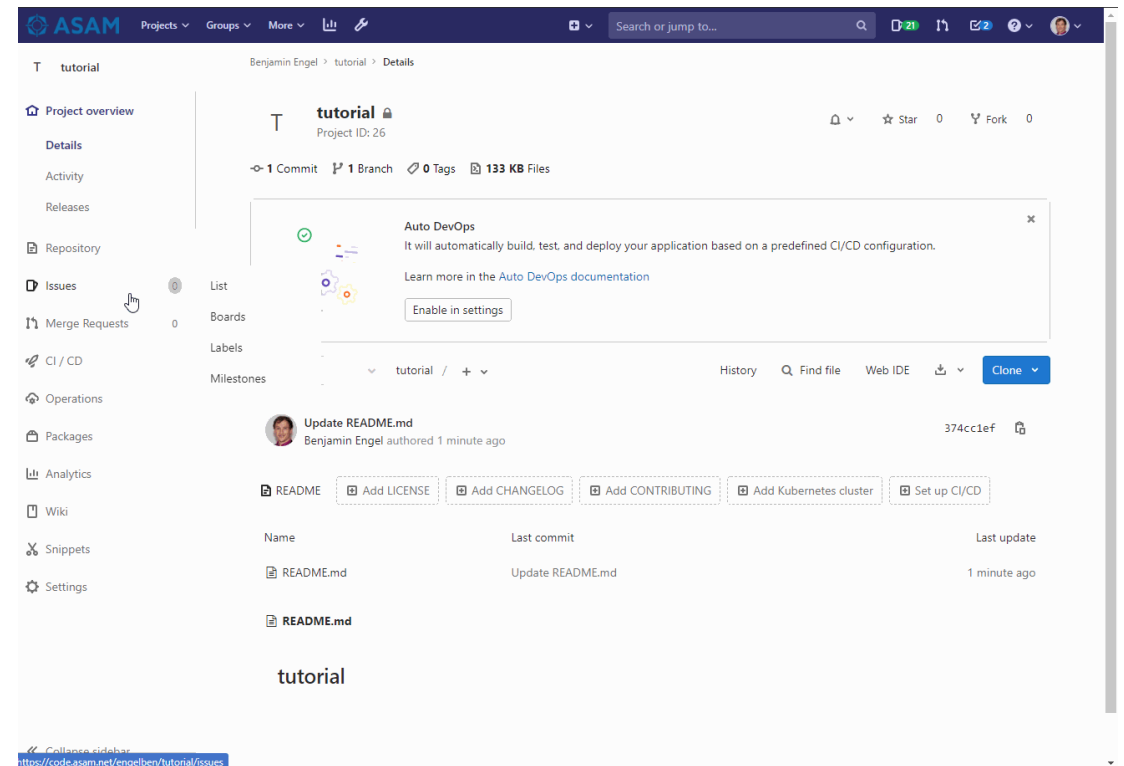
Contributing

The next steps assume you have added an SSH key to your account



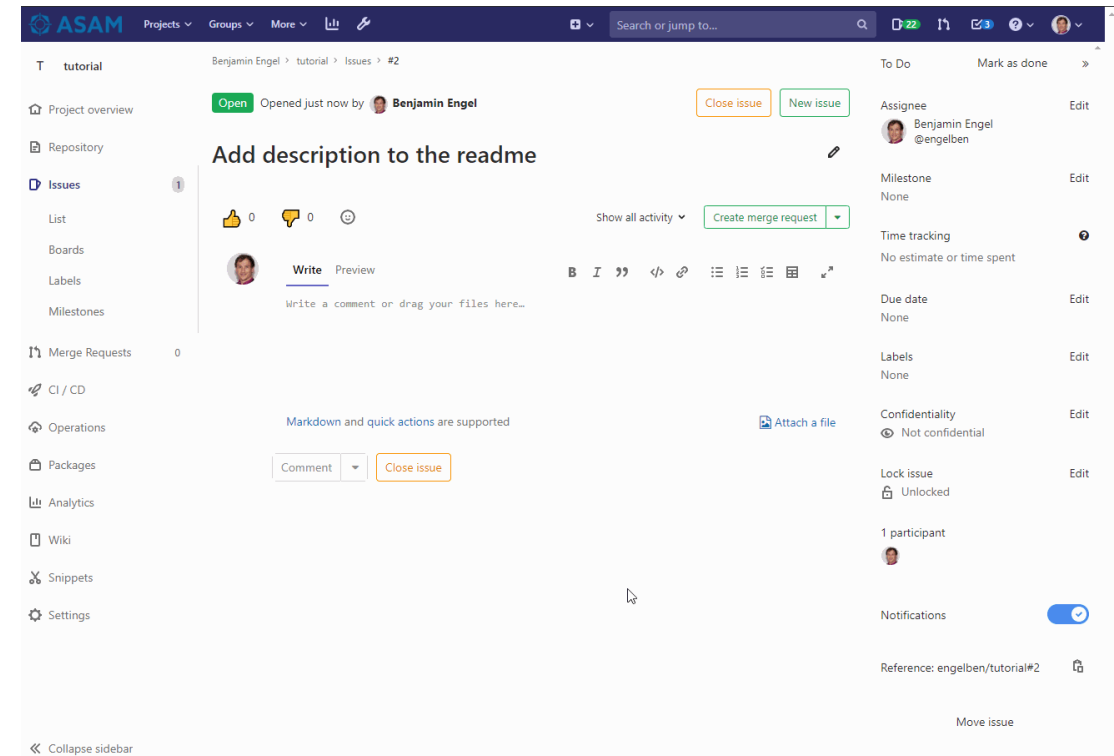
Creating an Issue

- It all starts with an issue. You or someone will report something that needs to be done. Maybe the WP leader will assign it to you or you create it to start a discussion.
- Make sure to:
 - Give it a descriptive title/description
 - Assign it to someone
 - Assign labels to find it easily



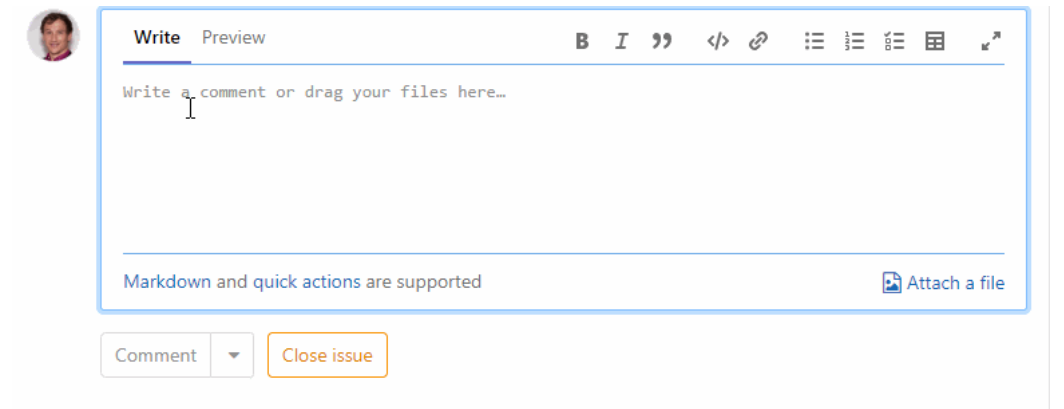
Open a Merge Request and Push!

- You or whoever is working on the issue will open a merge request. This automatically creates a new branch on the remote
- In VSCode, pull this new information and switch to the newly created branch
- Make changes, then save the file. VSCode shows unstaged changes with an asterisk in the status bar.
- Stage the changes, add a commit message and commit
- Push the commit to the remote
- The merge request will automatically update
- When the work on the issue is done and ready to be merged into the parent branch, remove the WIP status of the merge request and an admin will merge it



Collaboration

- Use the comment functionality on issues and merge requests
- Flag people for discussion with @ (this will bring up a popup)
- Collaborate on the same branch, we don't need a new one everytime
- Commit and push/pull regularly to prevent headaches!



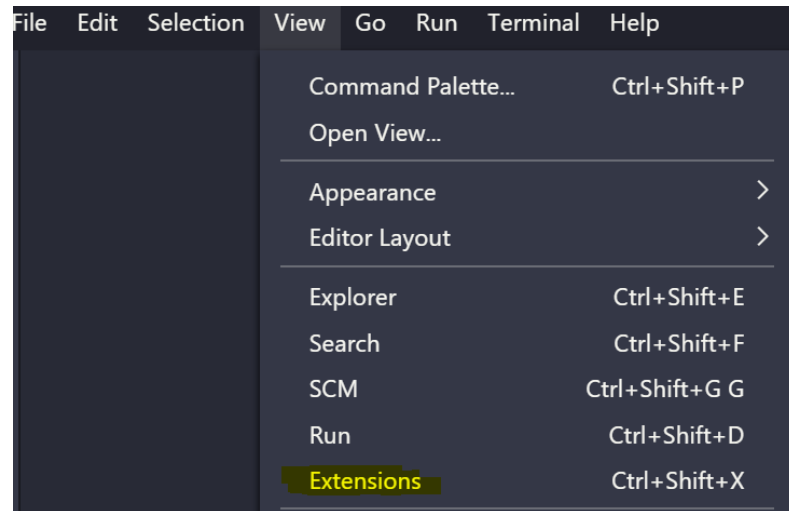
Working with AsciiDoc

*Note: These steps are intended for Windows users.
If you are a Linux user and need help, get in touch
with me.*

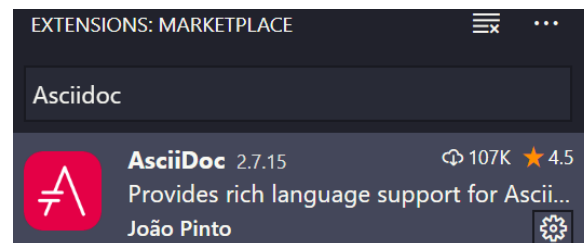


Set up for working with AsciiDoc

- In vscode menu bar -> View -> Extensions



- Search for AsciiDoc & install it. This gives us preview and syntax highlighting for asciidoc files



Writing AsciiDoc

- Openable in any text editor
- Allows focus on content not on formatting!
- Versionable and diffable – i.e. we can tell who did what, when and where!
- Quick reference - <https://asciidoctor.org/docs/asciidoc-syntax-quick-reference/>
- User manual - <https://asciidoctor.org/docs/user-manual/>

Headings

== Header 1
=== Header 2
==== Header 3

Lists

* Bullet point level 1
** Level 2
*** Level 3

Itemised lists

. Level 1
.. Level 2
... Level 3

Mixed lists

. Level 1
* Indented bullet
. Level 1

Tables

```
|===  
| row 1 cell 1 | row 1 cell 2  
| row 2 cell 1 | row 2 cell 2  
|===
```

Text formatting

```
*bold text*  
_italic text_
```

Dr. Klaus Estenfeld
Managing Director, ASAM e.V.

Phone: +49 151 64631204

Email: klaus.estenfeld@asam.net