

Data Driven Supply Chain Management

Git Workflow Tutorial

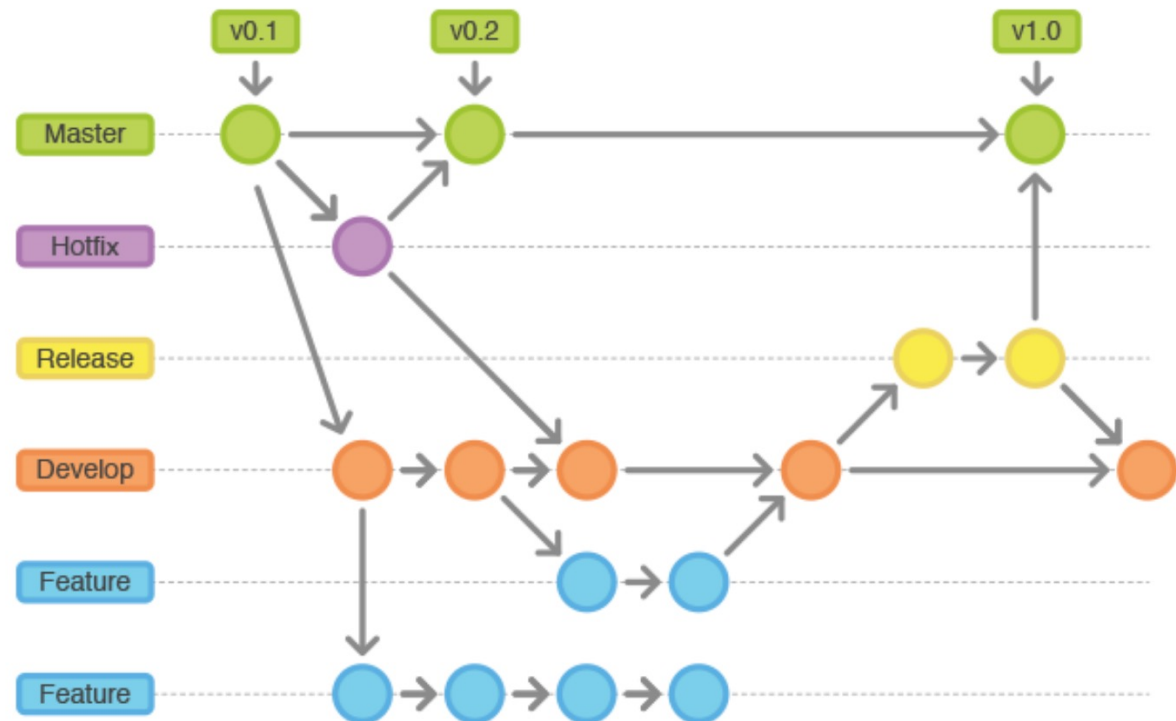


Agenda

- ▶ **Git: What & How**
- ▶ Git Codespaces: What & How
- ▶ Submission Workflow

Git: What & How

- Git is a distributed **version control system** that tracks changes in any set of computer files, usually used for coordinating work among programmers who are **collaboratively developing source code** during software development.
- A **repo** is a directory that has git implemented
- Each track is called a **branch**
- Each dot is called a **commit**
- We called a **merge** when we combine code from one *branch* to another
- A **pull-request (PR)** is a “request to *merge*” that needs to be reviewed by someone else



Agenda



Git: What & How



Git Codespaces: What & How



Submission Workflow

Git Codespaces: What & How

- A codespace is a computing environment that's hosted in the cloud (If you're familiar with Google Colab, is very similar but the difference is that is linked with a specific *repo*)

- We'll provide all the dependencies that you need for developing the assignments:
 - You only need to focus on coding, not in setting the environment or installing packages ;-)

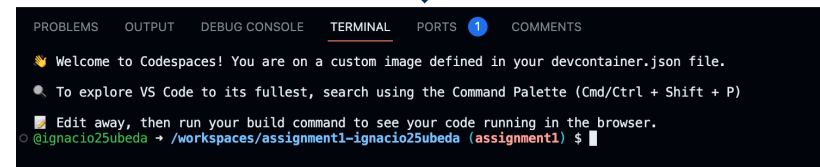
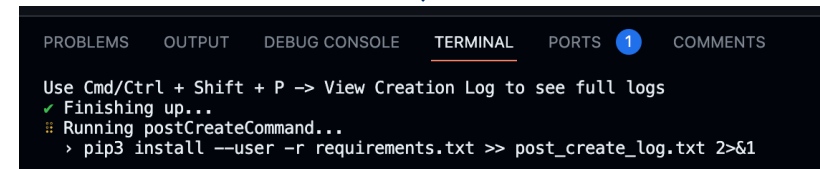
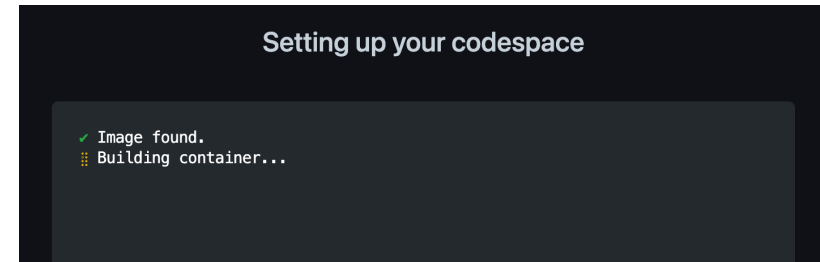
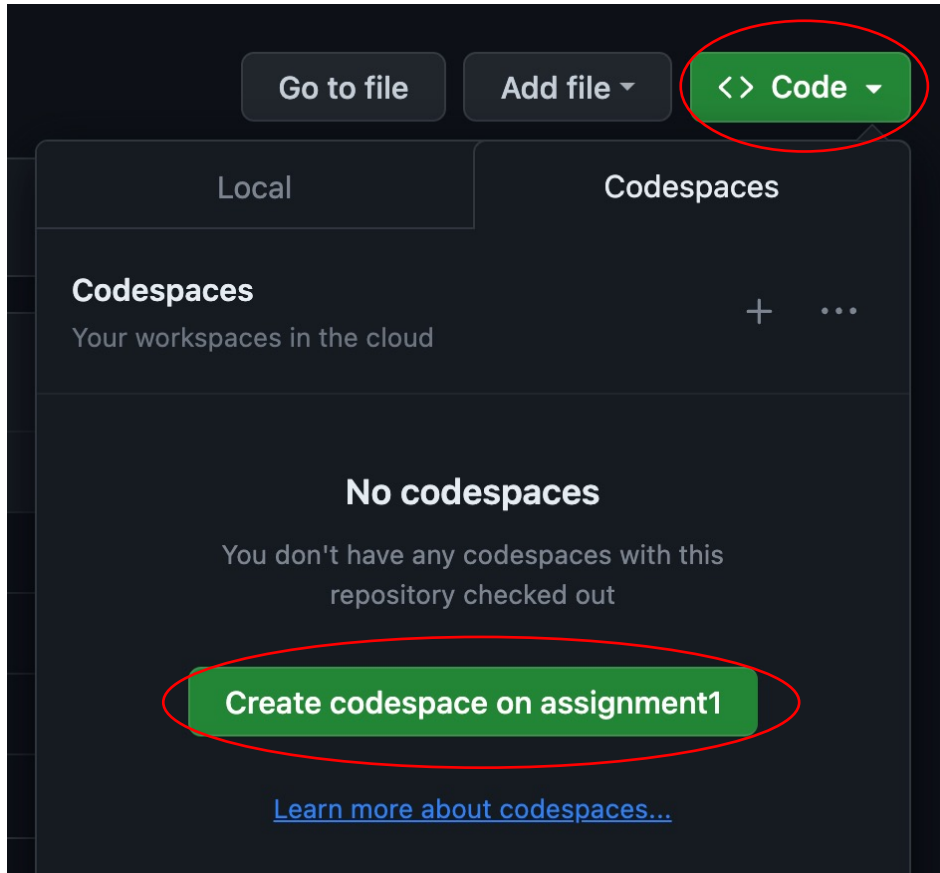
- To work on your assignment, you have to:
 1. Click on the assignment *url* in WueCampus classroom
 2. Login using GitHub Account
 3. Join the GitHub classroom by clicking on “Skip to the next step”
 4. Accept the assignment
 5. Wait for GitHub classroom to configure your repository and click on the link
 6. Press Code >> Codespaces and create the codespace in your own branch
 7. Wait until the environment is created, once is done you're ready to go!

- Steps 1 to 6:

The screenshot shows a Moodle course page for 'wuecampus2.uni-wuerzburg.de/moodle/course/view.php?id=42108'. The page lists several learning activities, each with a 'Für Teilnehmer/innen verborgen' (Hidden from participants) label. Below these is a section titled 'Programming Assignments'. The first assignment is 'Initial Assignment (not graded)', which includes a link 'Link zum Repo - Pull Request (Abgabe bis zum 12.11.2019, 10 Uhr)'. This link is circled in red. Subsequent assignments are 'Assignment 1' through 'Assignment 5', each with a similar 'Link zum Repo - Pull Request' and a deadline.

Git Codespaces: What & How

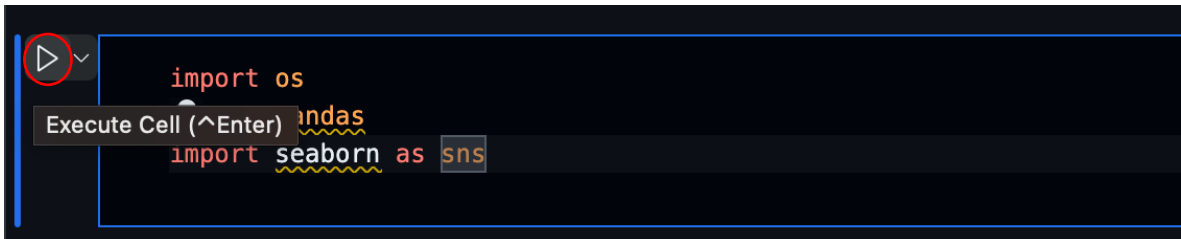
- Steps 7 to 8:



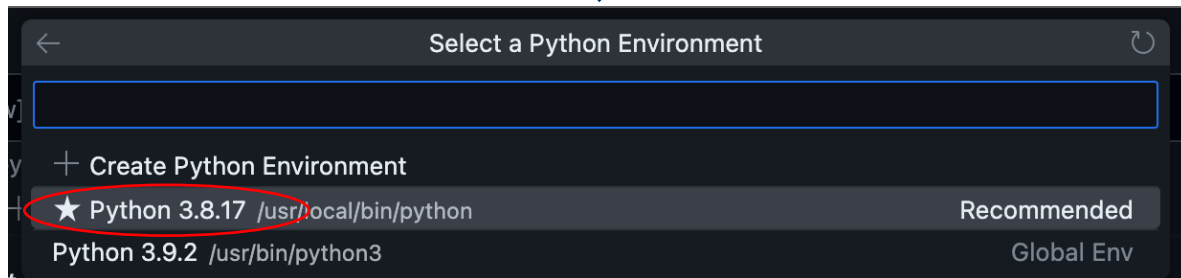
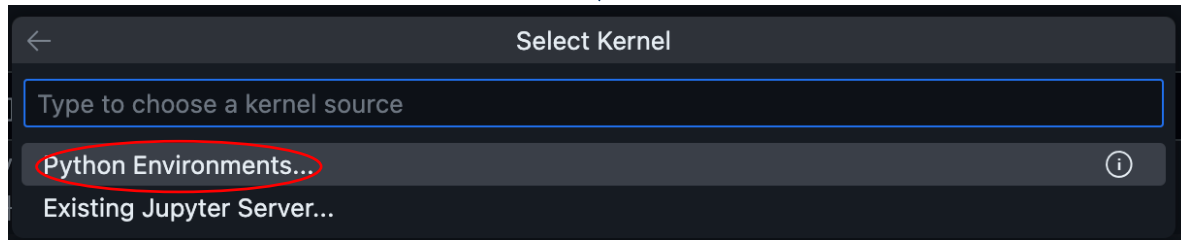
- Tip:** once you're done with your workspace, don't forget to shut it down (but commit all your progress first!)


Git Codespaces: What & How

- Finally, for running notebooks within your codespace you need to select a kernel, this is how you do it:



```
import os
import pandas
import seaborn as sns
```



- (1) Execute the first cell with the  button (or keyboard shortcut)
 - You can also select the “Run all” on the top of the notebook if you want to run all code chunks at once

- (2) Select “Python Environments...”

- (3) Choose the environment with the ★ and *voilà*.

Note: This is done **only the first time** you execute a notebook within an active codespace.

Agenda



Git: What & How



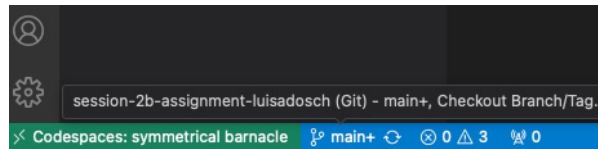
Git Codespaces: What & How



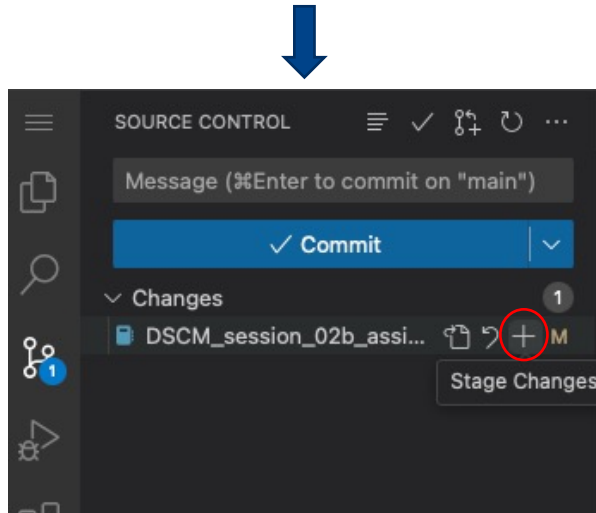
Submission Workflow

Submission Workflow

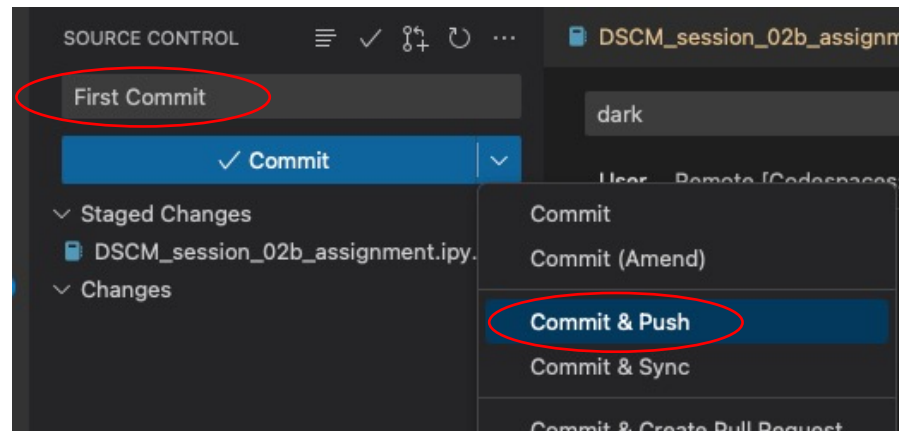
- Assignments are submitted via a commit on the **main branch**
- You can push as many commits as you want
- The last commit on the **main branch** before the deadline counts as your submission



(1) Make sure that you are on the main branch



(2) Stage your changes (+)



(3) Add a message, commit and push

