git slides

Jonas Kusch and Martina Prugger

University of Innsbruck
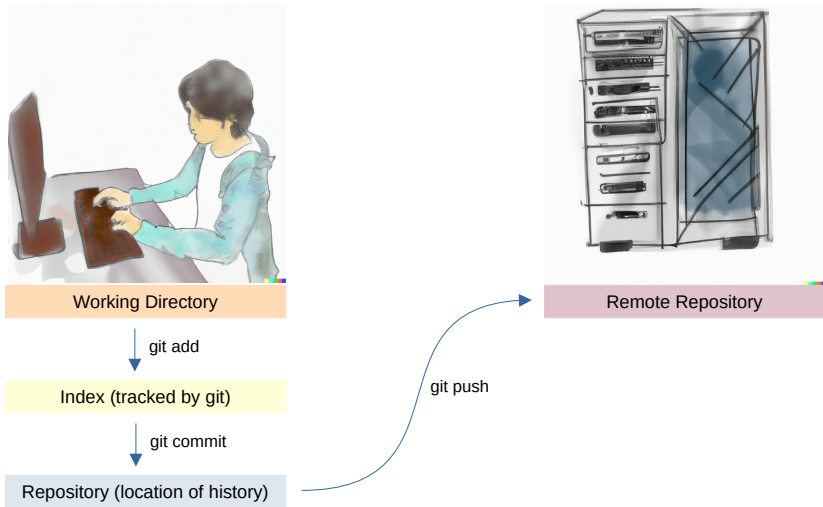
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git

- Version Control System (VCS) which uses a distributed graph tree model
- Track and manage changes made to files over time
- Keep track of different versions of the code, collaborate, and roll back changes if necessary
- Based on so-called commits (a snapshot of the project at a particular point in time, including all the changes that have been made up until that point)
  - unique name (revision hash)
  - time stamp
  - the author who created the commit
  - commit message that should explain what changes were made

Note

It is generally not a good idea to add and commit large changes or large files. Doing so can make it difficult to track changes and can lead to performance and storage issues down the road. Instead, it is generally better to break up large changes into smaller, more manageable commits that can be easily tracked and understood.

git model

Working Directory

↓ git add

Index (tracked by git)

↓ git commit

Repository (location of history)

git push →

Remote Repository

images created with DALL-E

git repository

Create the git repository

```
mkdir new-repo
cd new-repo
git init #initialize a new git repository
git clone username@remote-host:/path/to/repository #use a remote repository
```

Note

init is only used if you are the one generating the new project - if you want to work on an existing project, need to clone it!

Add files to the index and commiting to (local) repository

```
git add FILE
git commit -a #an editor opens up to create a commit message
```

Update the remote repository to the current state of the local repository

```
git push
```

GITLAB @ UIBK

Sign in with your University of Innsbruck account.

New to Gitlab at UIBK ? *Neu bei Gitlab bei UIBK ?*

If you are a member of the University and already have an account but are new to Gitlab, you must first **opt in.** Click on that link to enable your account for this service.

▶ (Klicken Sie hier, die deutsche Version zu sehen)

No UIBK account ? *Kein UIBK-Konto ?*

If you do not have an account, ask a faculty member or project coordinator to request one for you.

▶ (Klicken Sie hier, die deutsche Version zu sehen)

LDAP Server der Universität Innsbruck

LDAP Server der Universität Innsbruck Username

Password

☐ Remember me

Sign in

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Project instructions

- use the university gitlab server as remote repository: https://git.uibk.ac.at/
- once set up, add Jonas Kusch (c7021148) and Martina Prugger (c7121039) to the project as well