Software Engineering: Tutorial 1

David Voigt

October 28th, 2022

Organisational matters

General information

- The tutorial starts at c.t., that is, at 12:15 o'clock
- Attendance is not mandatory
- Please bring your laptop if possible
- Relevant material presented during the tutorial will be uploaded to Github

Format of the tutorial

- Discuss common mistakes in your assignments
- Provide additional useful knowledge with respect to the lecture, e.g., basic terminal usage
- Prepare you for your assignments
- Answer your questions regarding the assignments
  - For general questions regarding the lecture, please ask directly in the forum

Basic terminal usage

1. Who of you has previous experience working with the command line?
2. Who is regularly using the command line during their normal workflow?

Basic terminal usage: useful commands

command	usage
`ls`	show files in current directory
`cd [DIR]`	changes the current working directory
`pwd`	prints the current working directory
`mv [FILE]* [FILE]`	moves one or more file(s) to another directory
`cp [FILE]* [File]`	copies one or more file(s) to another directory

Basic terminal usage: useful commands

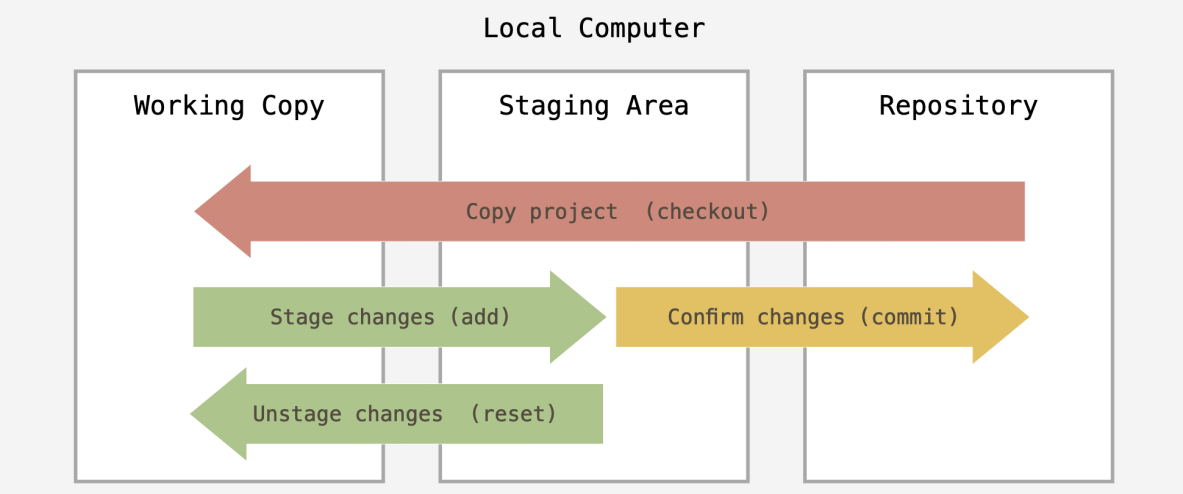
command	usage
`touch [FILE]`	creates a new file
`cat [FILE]`	outputs the content of a given file
`path/to/executable`	executes an executable
`[CMD1] | [CMD1]`	redirects the output of `CMD1` to `CMD2` as input
`[CMD] > out.txt`	writes the output of `CMD` to the file `out.txt`
`[CMD] >> out.txt`	appends the output of `CMD` to the file `out.txt`
`man CMD`	shows the manuel/documentation for a given command

Basic terminal usage

Are there any questions?

git recap

- `git` is the de-facto standard VCS
- snapshot based
- dezentral



git recap

working copy

The **working copy** the project folder that is currently under git version control. The working copy consists of "normal" files outside the `.git` that can be altered.

staging area

The **staging area** is like a drafting area. It is also called **index** and contains snapshots of files to be commited.

repository

The **repository** is represented by the `.git` folder. The repository **contains the whole history** of the project, e.g., commits and snapshots.

Basic git usage: common commands

Basic git usage: useful links

- git visualizer: https://git-school.github.io/visualizing-git/
- git branching tutorial: https://learngitbranching.js.org/
- git cheat sheet: https://training.github.com/downloads/github-git-cheat-sheet.pdf