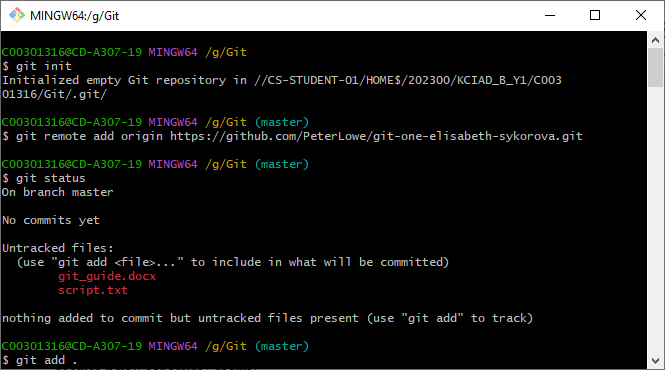
# Git Guide

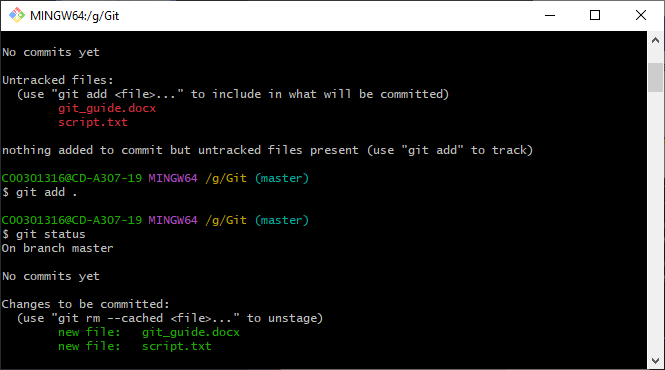
By Elisabeth Sykorova

## Init

* Creates a new empty repository locally (.git). An initial branch without any commits will be created.
* Format: git init

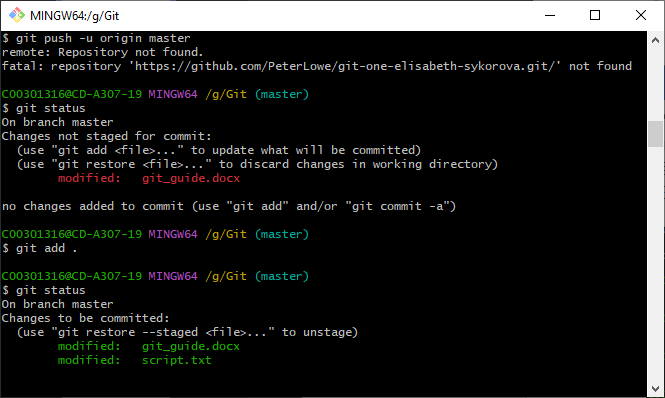
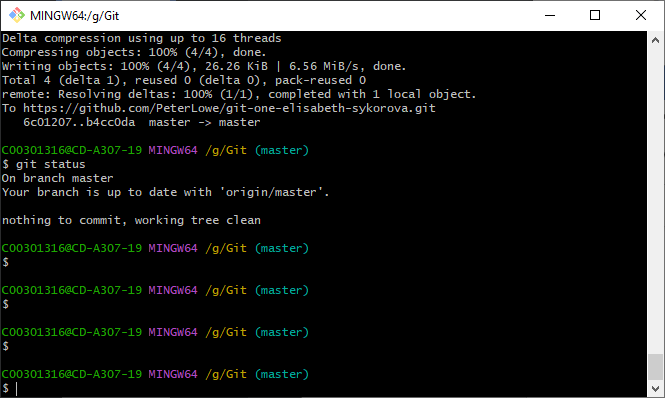
## Add

* Used to update the index using the current content found in the working tree. It prepares the content staged for the next commit. It can either add all files in the path or specifically chosen files. Can be performed multiple times before commit.

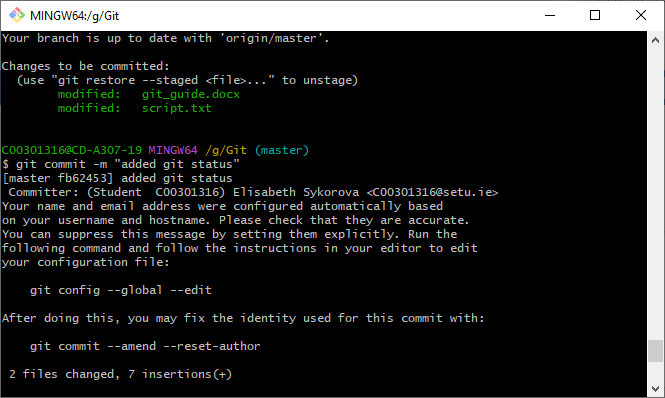


* Format: git add .
* To add specific files -> git add filename/pattern

## Status

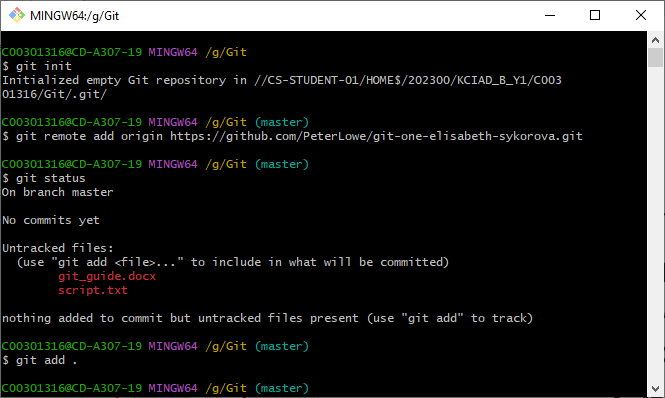
* Lists files modified in the working area, added files in staging area and current branch
* Format: git status

## Commit

* Records changes to the repository (=snapshot/backup). Creates a new commit containing the current contents of the index (created by add) and the given log message describing the changes (comments in “”).
* Format: git commit -m “comment”
* To enter editor mode for multiline comments -> git commit

## Remote

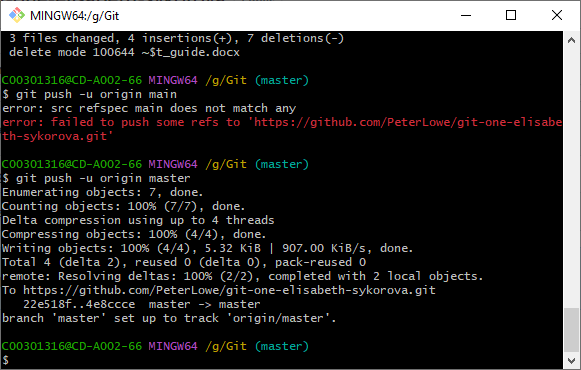
* Manages set of tracked repositories, used to clone repositories. Includes many different commands.



* Format: git remote …
* Different uses -> add, rename, remove, set-head, set-branches,..

## Push

* Used to upload local commits to a remote.



* Format: git push -u origin master (depending on what the branch name changes to)

## Branch

* Used to list, create, or delete branches. Creates a new branch in the local repository that can be worked on separately from the main branch and later merged.

A screenshot of a computer program

Description automatically generated

* Format: git branch new\_branch\_name
* To list all branches in repository: git branch -a/-l/-r

## Checkout

* Makes chosen node the current HEAD – switches branches or restores working tree files. Updates files in the working tree to match the version in the index or the specified tree.

A screenshot of a computer screen

Description automatically generated

A computer screen shot of a program

Description automatically generated

* Format: git checkout branch\_name/commit\_name

## Merge

* Used to merge target branch into current branch (allows to join two or more development branches together). To update main branch, you have to first switch into it.

A computer screen shot of a program

Description automatically generated

* Format: git merge branch\_name (of a branch that is the further one)
* To merge head with master -> git merge master

## Log

* Shows the history of reachable commits in the terminal, can be altered using special arguments.

A screenshot of a computer program

Description automatically generated

A screenshot of a computer program

Description automatically generated

* Format: git log
* Controlled by <space> or arrows to scroll, <q> to quit
* Altered files and the number of changed lines -> git log --stat
* Drawn branch paths -> git log --graph