

Git demo from lecture

Create and clone repository

Go to github.uio.no and create a new repository. Get link from Download/clone button, and then on your computer clone the repository:

```
git clone https://github.uio.no/olavpo/INF5750-lecture-demo.git
```

cd into the repository, and list hidden files to see the hidden .git folder

```
cd INF5750-lecture-demo
ls -la
```

Add and commit

Create an index.html file and add some content (in the lecture we did this):

```
vim index.html

#added to the file:
<html>
  <h1>Hello world</h1>
</html>
```

`git status` shows we have one untracked file, but nothing to commit.

We add the file to the staging area/index, and then commit the file:

```
git add index.html
git status

git commit -m "Added index.html file"
git status

git log
```

We then pushed to the remote repository on github.uio.no:

```
git push
```

Branching

We added a branch called *superfeature*, and use `git branch` to list branches:

```
git branch superfeature
git branch
```

`git checkout` to check out the superfeature branch.

We then modified our `index.html` file in the superfeature branch by adding some more content, and committed the change:

```
vim index.html
git add index.html
git commit -m "Added paragraph to index.html"
git status
```

We checked out the master branch again, and verified that the changes to `index.html` was not visible in the master branch:

```
git checkout master
cat index.html
```

We merged the changes in the superfeature branch into master, and pushed the changes:

```
git branch
git merge -m "Merging the added paragraph" superfeature
cat index.html
git log
git push
```

We checkout out the superfeature branch again and pushed it to `github.uio.no`. We need to add the `-u` option to `git push` in order to create the branch in the remote repository.

```
git checkout superfeature
git push #this fails
git push -u origin superfeature
```

Conflicts

Finally, we made a change to the same line of `index.html` in both master and superfeature, and tried to merge the files in order to trigger a conflict.

```
vim index.html
git add index.html
```

```
git commit -m "Change punctuation (superfeature)"

git checkout master
vim index.html
git commit -a -m "Change punctuation (master)"

git merge superfeature #creates conflict
```

In order to resolve the conflict, we had to modify the index.html and the commit the modified version:

```
vim index.html
git add index.html
git commit -m "Merged punctuation changes"
```