First excercise with Git

Before proceeding, use the following instructions to set up your local assignment repository. This will be the place you work on your class assignments and it will be linked to two remote repositories on GitHub:

Refer to 1.15 The Course Workflow.pptx for a diagram of this process

1. **Assignment-upstream-SS** - You should be able to find this repository in our class organization on GitHub: **https://github.com/MIDS-INFO-W18/assignment-upstream-SS**. This is where we will post all class assignments. You have read access to this repository, and each week you will use a pull command to download the latest assignments to your own machine.
2. **Your student repository** - In this excercise you will make your own student remote repository. You should have write access to your student repisitory, but it will be only readable by you and your instructors. When you complete your homework each week, you will use a push command to upload your work to this repository.

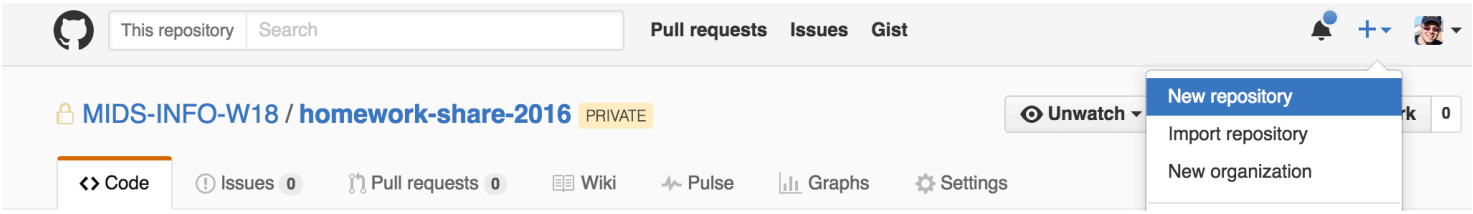
Initial Setup

There are several ways that you can set up your local repository. We recommend the following procedure.

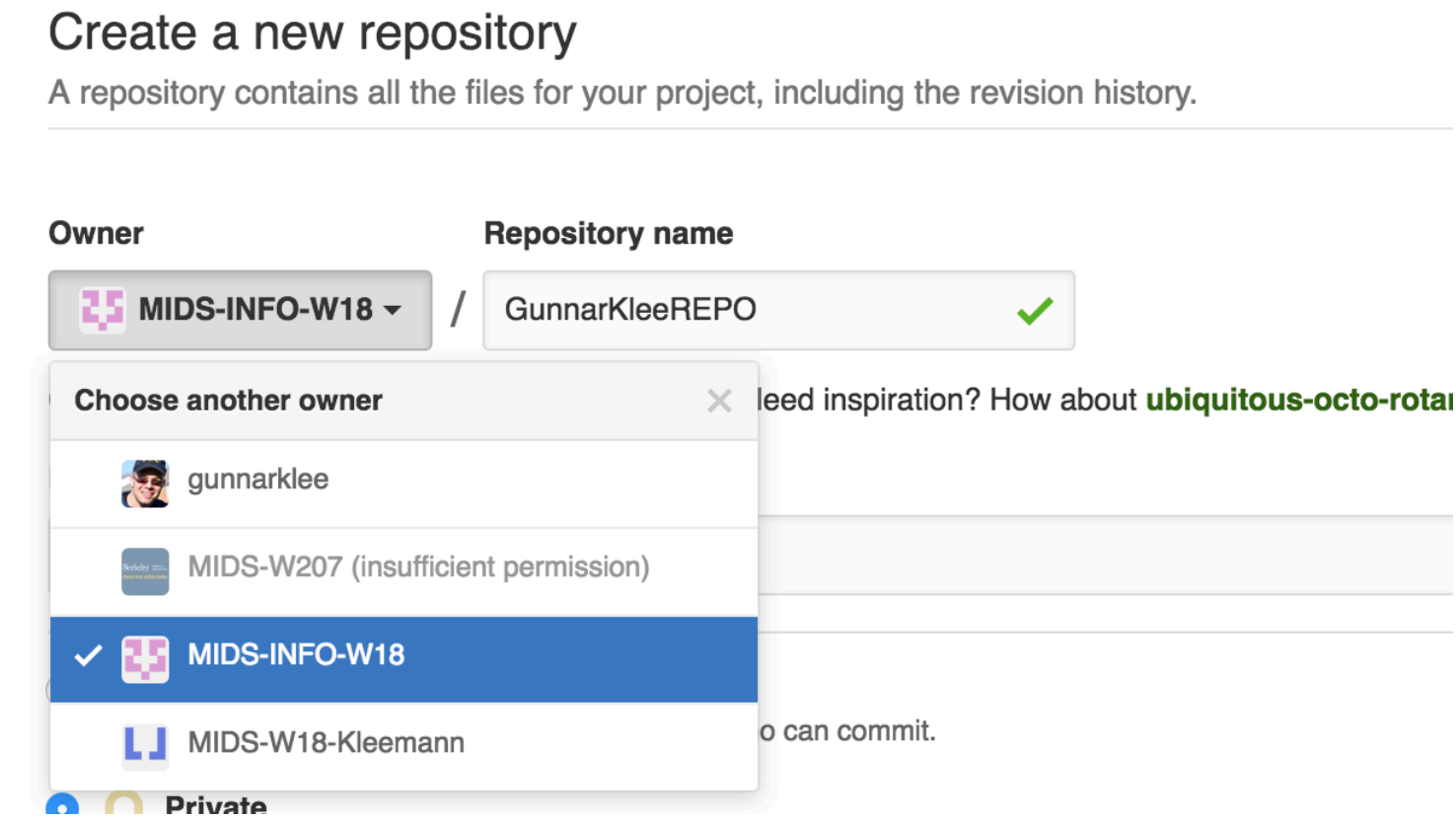
First create an empty repository in Github for your homework, you can do this through the github user interface.

Create a new repository

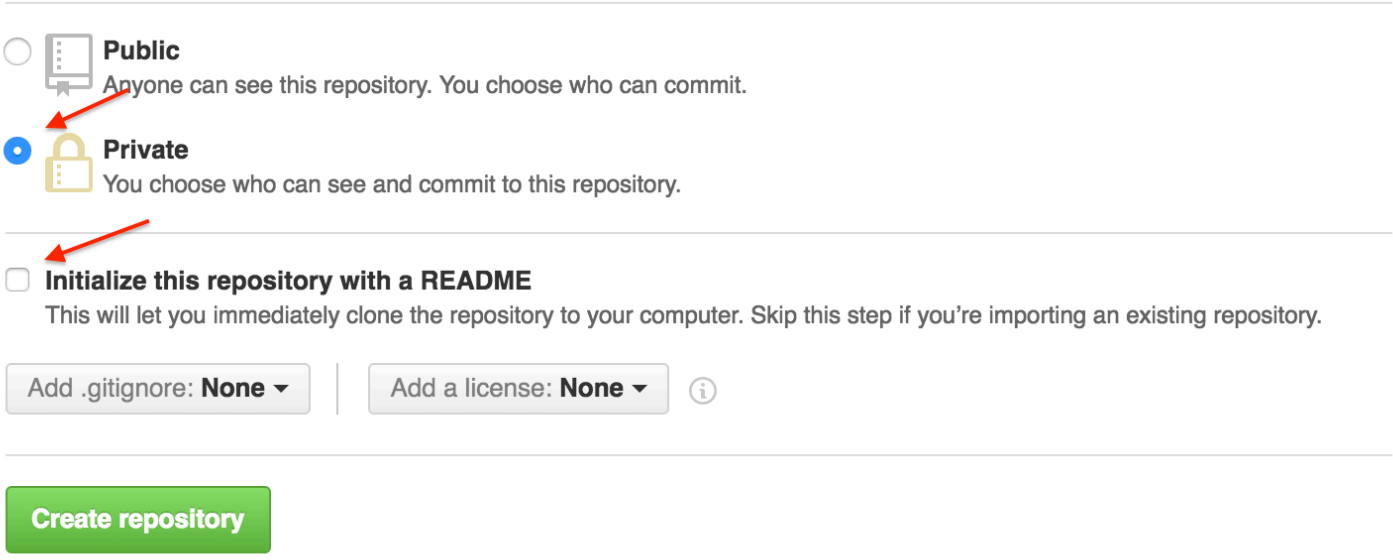
- this is done through the add menu on the upper right



- Put your repository in the MIDS-INFO-W18 organization

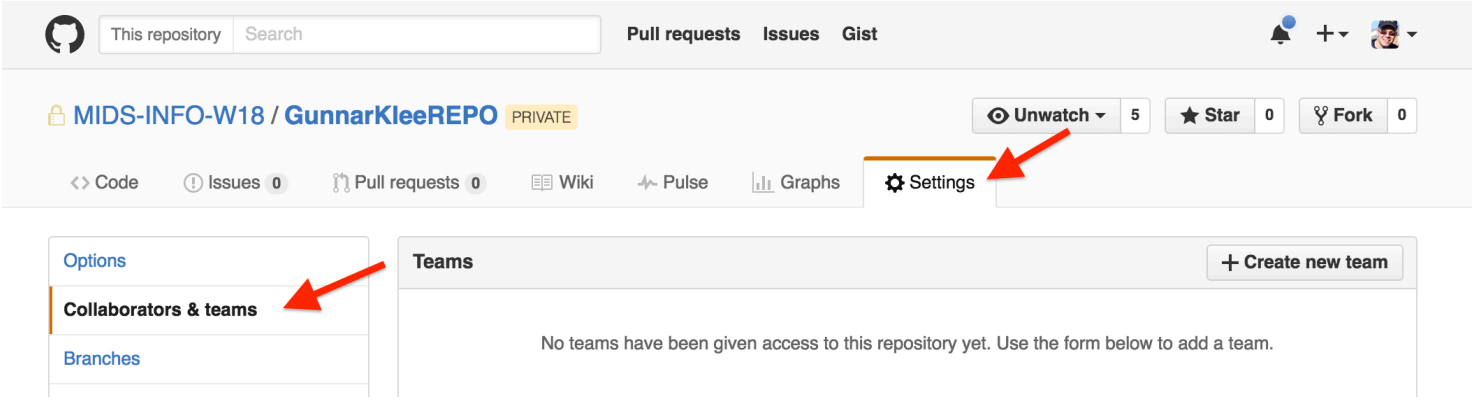


- Make the repository **private** with the radio button
- **Important:** Do not add a readme file, you need an empty repository

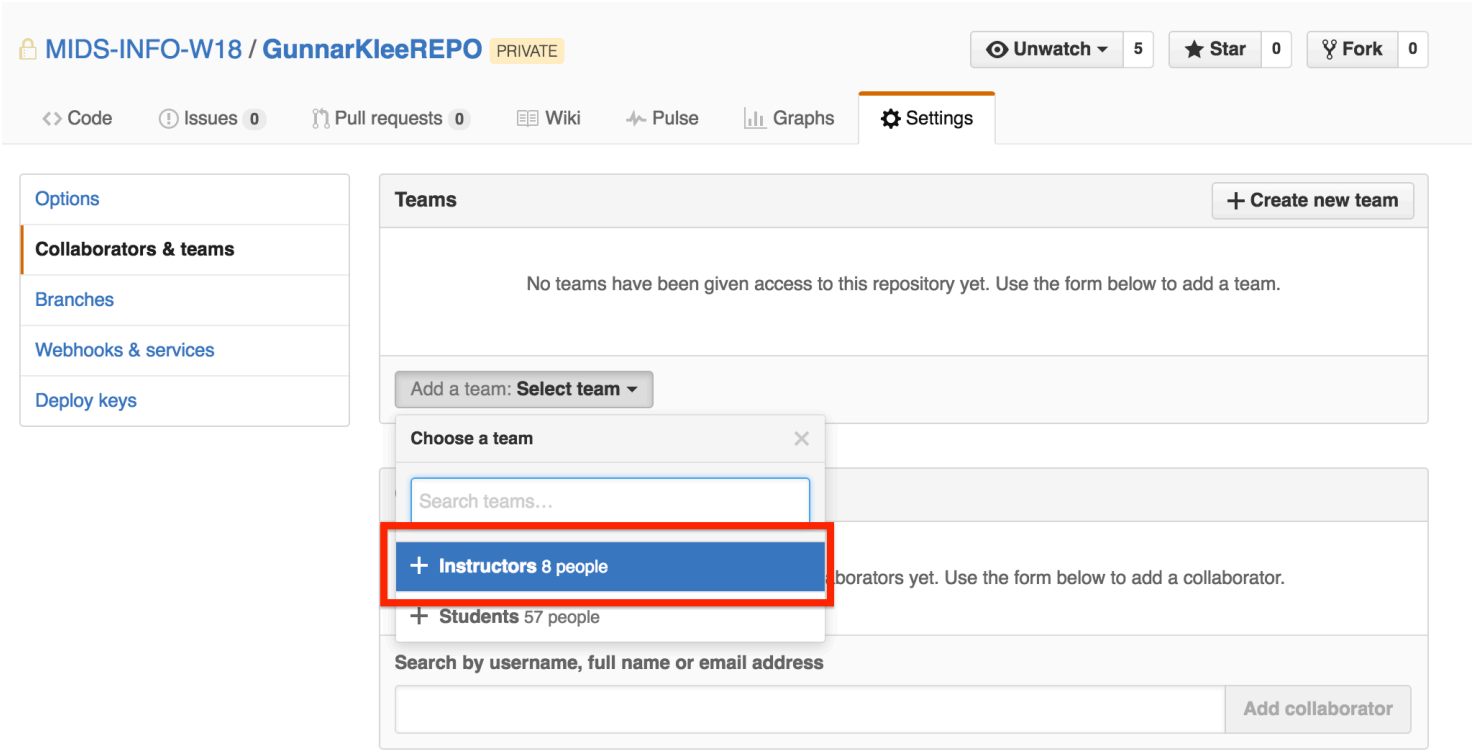


Give the instructors read access

- In your new **private** repository, go to the settings tab, on the right and then select collaborators and teams on the left



- Give (only) instructors read access:



- You should see this:

Clone the assignments directory on your system

Open a command prompt and use it to navigate to your desktop or course working directory. Then execute the following commands:

Note: lines preceeded by "#" are comments to explain each step and should not be executed.

```
# clone the assignment repository onto your computer
git clone https://github.com/MIDS-INFO-W18/assignment-upstream-SS.git

cd assignment-upstream-SS

git remote add upstream https://github.com/MIDS-INFO-W18/assignment-upstream-SS.git
```

You can find the URLs by navigating to the appropriate repository in your web browser, then clicking on the "Clone or download" button in the upper right corner.

```
# set the origin to your personal repository

git remote remove origin
git remote add origin <ENTER YOUR REPOSITORY HTTPS URL HERE>

# i.e. git remote add origin https://github.com/MIDS-INFO-W18/GunnarKleeRepo.git
```

To check if you did everything right, execute the following command:

```
git remote -v
```

- The output should show two remotes, one named origin and one named upstream.
- You should also use the **ls** command to confirm that the assignment files have been copied to your machine.

Workflow for Each Week

Each week, you will begin by downloading the latest changes to the assignment-upstream repository. You do this with a git pull:

```
git pull upstream master
```

Next, you complete all the exercises on your local machine and commit your changes to git. Finally, you'll push your changes up to your personal student repository. You can do this with the following command:

```
git push origin master
```

Completing the Exercise

The assignment-upstream-SS repository contains a simple exercise to give you practice with this procedure. The Github repository **installation** contains the exercise.

- Clone the installation directory to your local machine

```
git clone https://github.com/MIDS-INFO-W18/Installation.git
```

- Copy the file "First_GitHub_Exercise.txt"
    - From your local **Installation** directory. To your local **assignments-upstream-SS** folder
    - To copy the file you can practice using the command line **cp** command or just drag and drop the file.
- Open the file, answer the questions, and save.
- Commit the changes to your local repository. Go back to your command terminal and type the following.

```
git status
```

- This should confirm that you have a modified file in your repository. Go ahead and add the file.

```
git add First_GitHub_Exercise.txt

#Then commit your changes.

git commit -m "completed GitHub exercise".
```

Pushing Changes to GitHub

Now it is time to push your changes up to your GitHub repository. First, run `git status` to confirm that all your code is currently committed. Next, push your changes to the master branch of origin, representing your repository on GitHub.

```
git push origin master
```

Check the GitHub repository in your browser to confirm that your changes are there.