Erasmus
School of
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GitHub

Introduction to GitHub
and GitHub Classroom

Erasmus University Rotterdam

Table of contents

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Part 1

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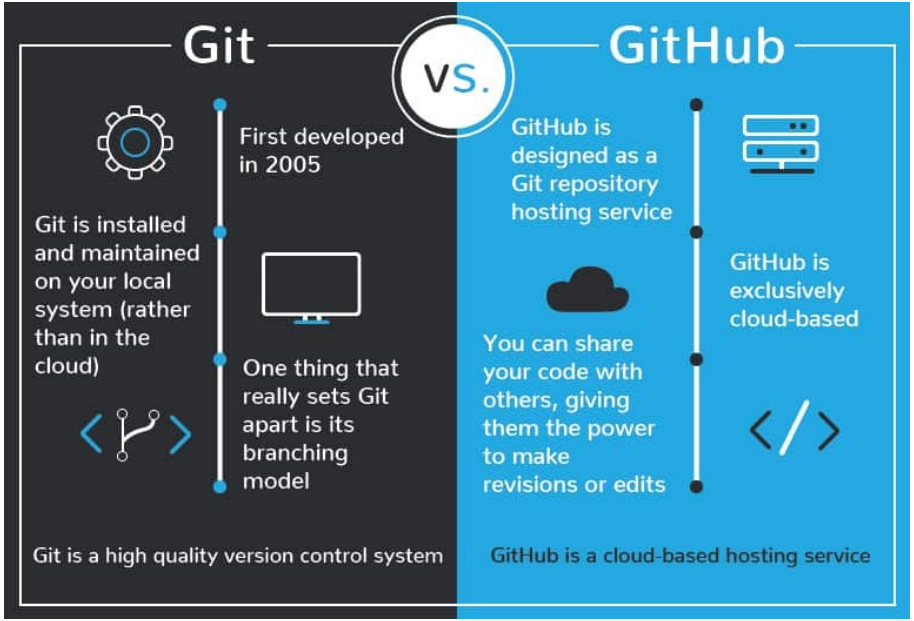
What is GitHub?

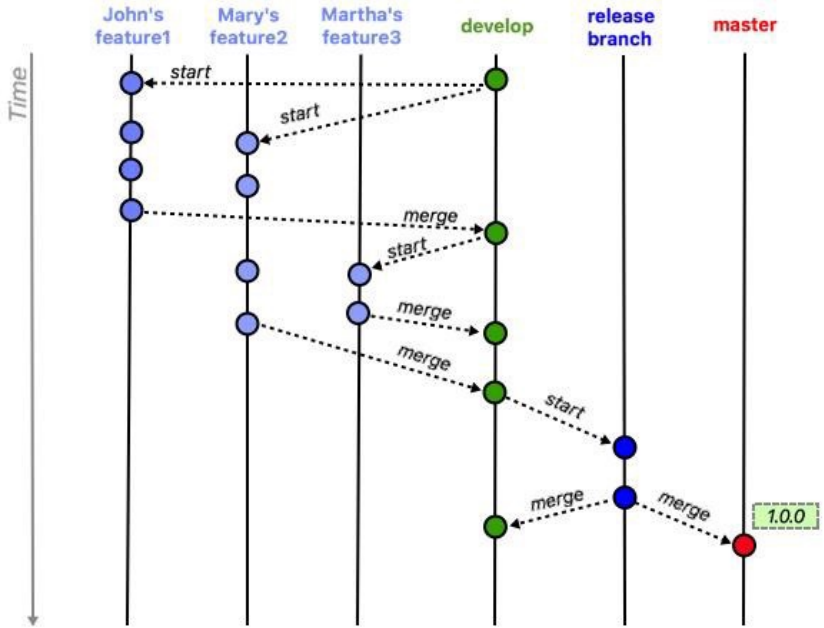
- GitHub is an online database that allows you to keep track of and share your Git projects outside of your local computer.
- Git (Global Information Tracker) is a version control tool for projects on your local computer.



What is GitHub?

How does Git work?

- Git uses a so-called branching model.
- Branching allows you to work on a project/file by working on a copy of it.
- Whereafter you can merge this updated copy to the main version.

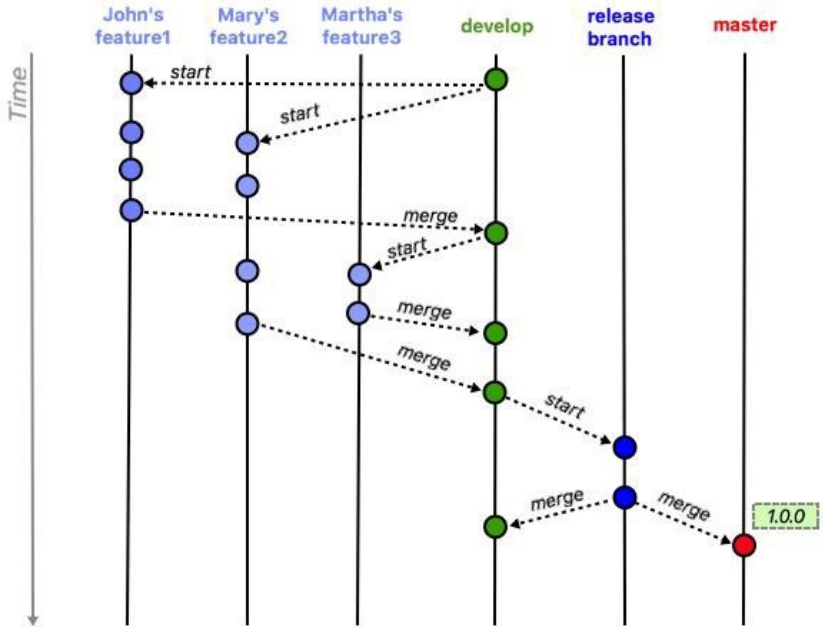


What is GitHub?

How does Git work?

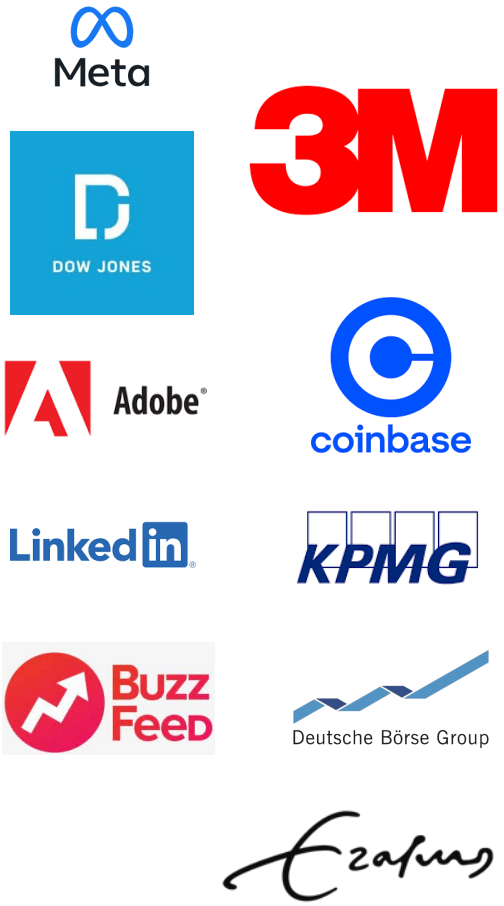
- Working on a copy instead of the main file, keeps the main file free of bugs and unfinished code.

- Furthermore, Git allows for version control, which lets you check older versions of a file.



Why should we use GitHub?

- GitHub makes Git available in the cloud where it allows you to work on projects in teams.
- Here you can place comments on versions, discuss versions, update files, try out new ideas, and keep track of earlier work.
- GitHub is widely used by businesses, therefore, understanding how GitHub works can be valuable for your future career.



GitHub Classroom

- GitHub Classroom allows educational institutes to introduce GitHub to students.
- The Classroom will be used for the assignment.
- Here GitHub allows you to collaborate with teammates and work on the assignment in an online repository.

Working on the assignment on GitHub

- The assignment for this course will be a group assignment (four members).
- Here you will work on code on your local computer and share updates to the GitHub repository of your group.
- In the repository you can discuss and keep track of the work done by your team.
- We provide a GitHub practice so that you can familiarize yourself with the GitHub workflow.

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Part 2

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GitHub jargon

- **Repository (repo):** (noun) folder containing all tracked files as well as the version control history
- **Remote**: (noun) the version of your repository that is stored on a remote server; for instance, on GitHub
- **Clone**: (verb) to create a local copy of a remote repository on your personal computer
- **Local**: (noun) the version of your repository that is stored on your personal computer

GitHub jargon

- **fork**: (noun) a copy of another user's repository on GitHub; (verb) to copy a repository; for instance, from one user's GitHub account to your own
- **track**: (noun) a tracked file is one that is recognized by the Git repository
- **branch**: (noun) a parallel version of the files in a repository

GitHub jargon

- **stage**: (noun) the staging area holds the files to be included in the next commit; (verb) to mark a file to be included in the next commit

- **commit**: (noun) a snapshot of changes made to the staged file(s); (verb) to save a snapshot of changes made to the staged file(s)

- **push**: (verb) to send commits from a local repository to a remote repository

GitHub jargon

- **merge**: (verb) to update files by incorporating the changes introduced in new commits
- **pull**: (verb) to retrieve commits from a remote repository and merge them into a local repository
- **pull request**: (noun) pull requests let you tell others about changes you've pushed to a branch

GitHub workflow

To learn more about the GitHub workflow, have a look at the GitHub documentation:

- Overall documentation:
  - https://docs.github.com/en
- Quick start for your first repository:
  - https://docs.github.com/en/get-started/quickstart/hello-world
- Git for your local system:
  - https://docs.github.com/en/get-started/using-git
- Cloning a repository:
  - https://docs.github.com/en/repositories/creating-and-managing-repositories/cloning-a-repository
- Pull requests:
  - https://docs.github.com/en/pull-requests

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Part 3

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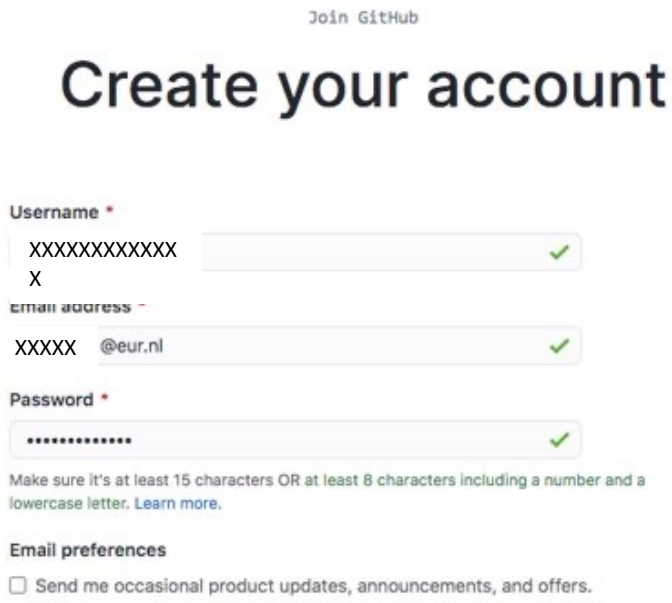
Setting up a GitHub account as a student

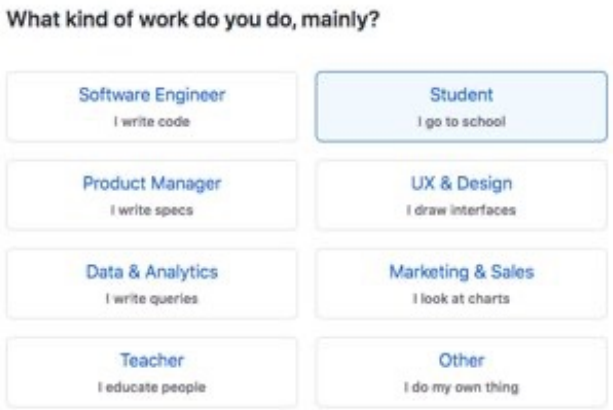
- Go to: https://github.com/
- Click “Sign up”

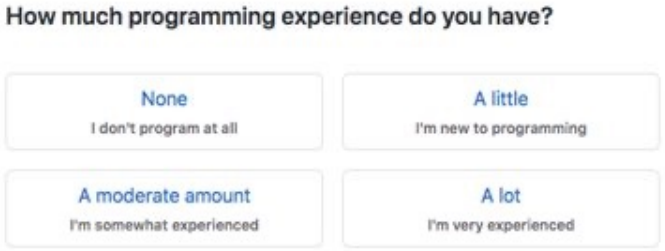
- IMPORTANT!! Use your EUR email address to sign up to GitHub (also if you already have a GitHub account with your private email address).



Setting up a GitHub account as a student

Select ‘Student’ and the programming experience that is applicable to you

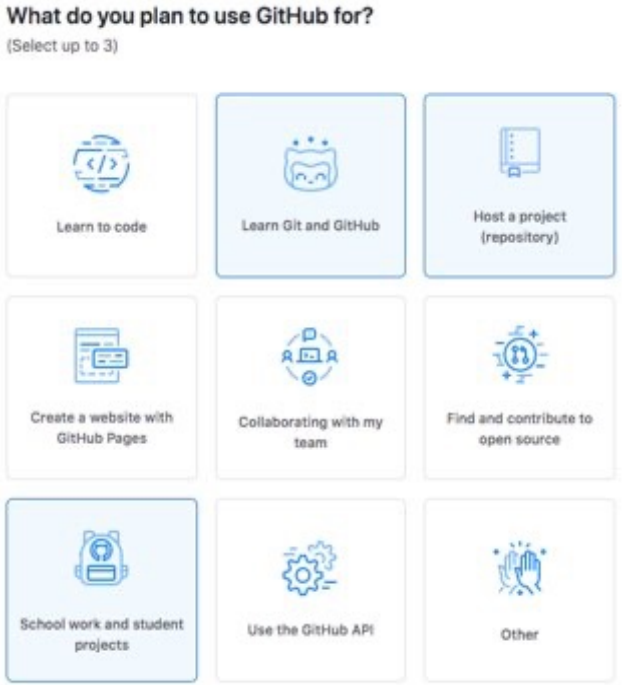




Setting up a GitHub account as a student

Select the following:

- Learn Git and GitHub
- Host a project (repository)
- School work and student projects



Setting up a GitHub account as a student

Finalize the sign-up process

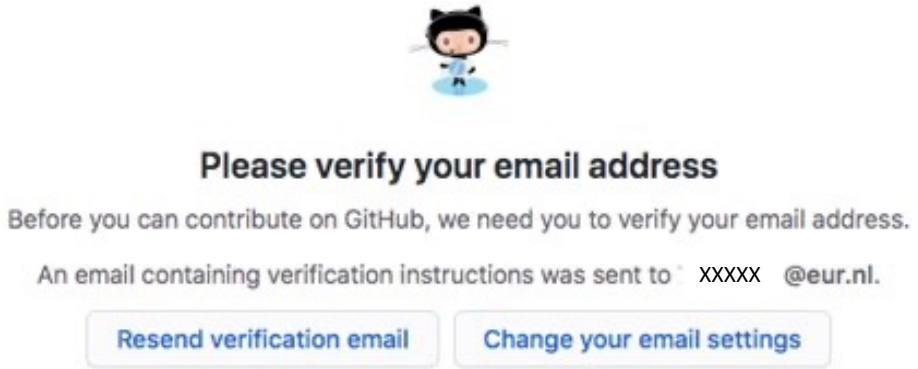
- GitHub will ask you to fill in your interests,
  __but this is not mandatory and can be skipped__

- To finalize setting up your account, click 'Complete setup'

Setting up a GitHub account as a student

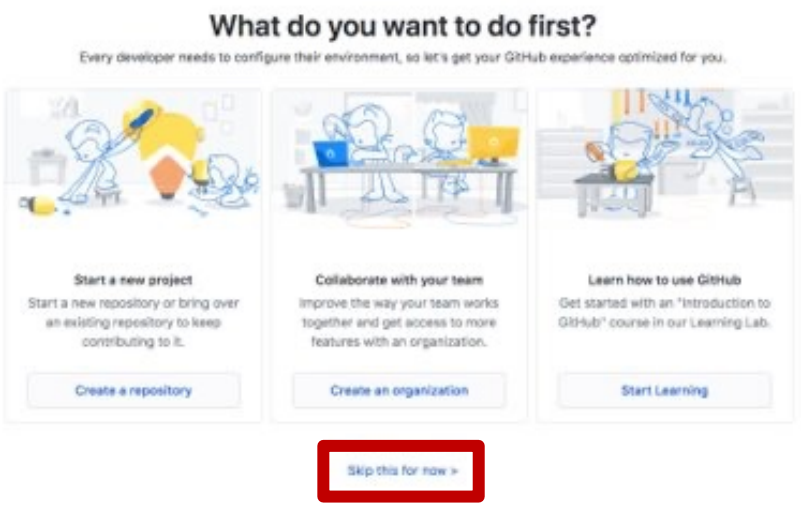
- GitHub will verify your email address
- Open the email they send and click

  ‘Verify email address’



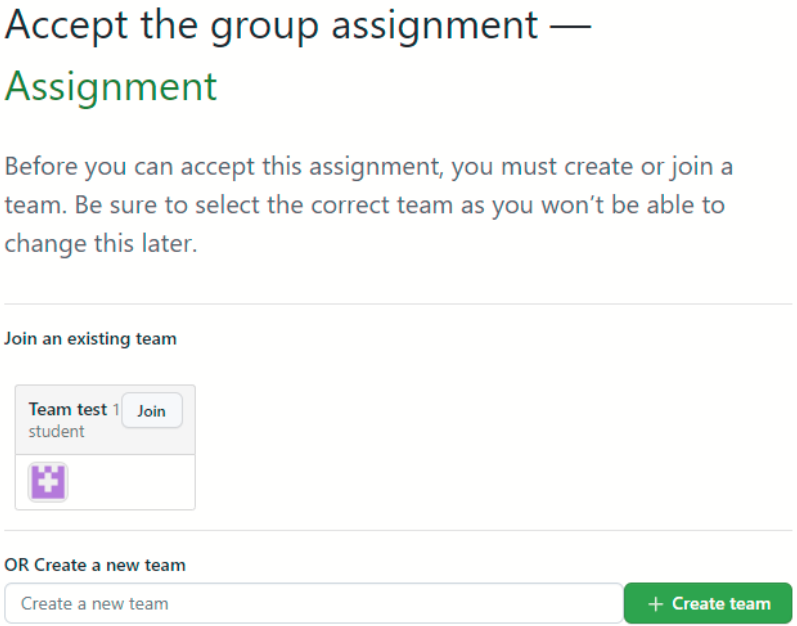
Setting up a GitHub account as a student

- After you clicked ‘Verify email address’, you will see the following screen.
- You can click ‘Skip this for now’
- Now you are signed up and ready to work with GitHub!



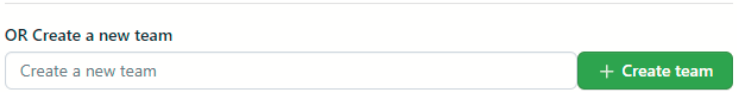
Getting in GitHub Classroom

- You will be able to find a link to GitHub Classroom in the assignment on Canvas.
- When you are signed into GitHub, you will see the following:

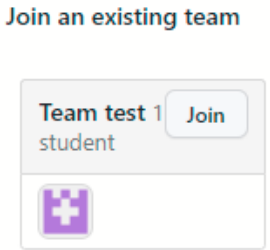


Getting in GitHub Classroom

- Your team should assign one team member to set up the team on GitHub Classroom.
- This team member can create a team by filling in a team name and clicking the button.
- You can come up with your own team name!

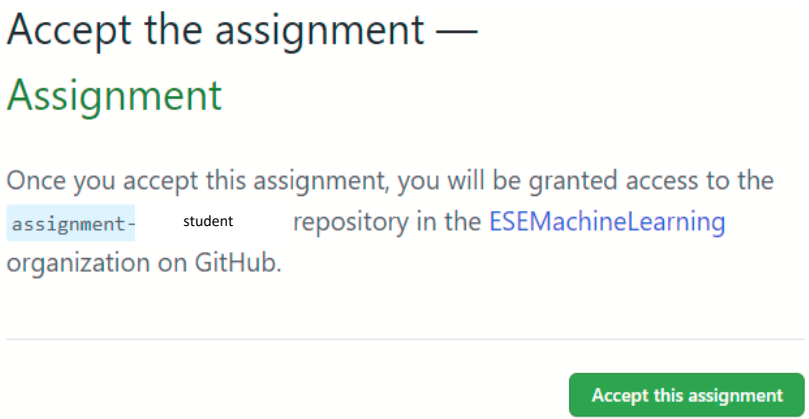


- The other team members can join the team on GitHub Classroom when it is created.
- This is done by clicking on the Join button of an existing group.



Getting in GitHub Classroom

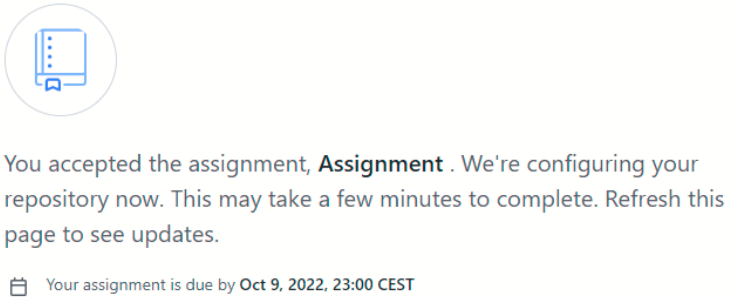
- After you joined or created a team you will be directed to:



- Here you should accept the assignment, by clicking the button.

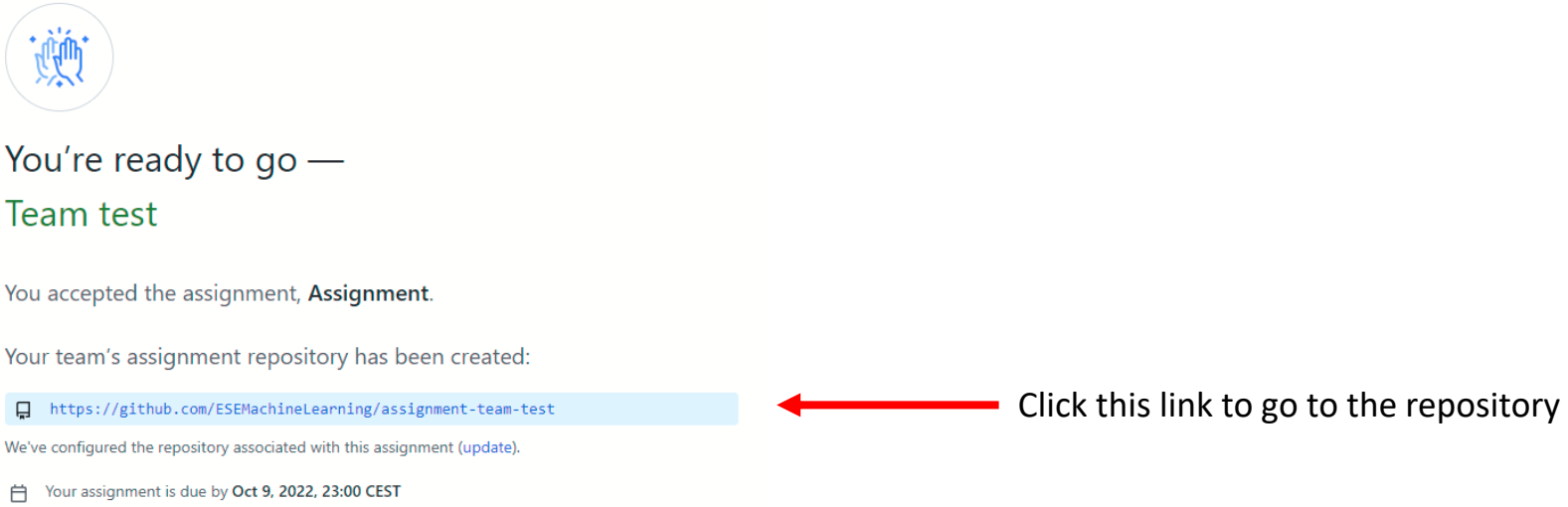
Signing up for GitHub Classroom

- After you accepted the assignment, you will be directed to a page where GitHub will configure your repository:



Signing up for GitHub Classroom

- After you refresh the page, you are ready to go!



GitHub Classroom for FEM31002 and FEM21045

On GitHub Classroom, we provide two assignments:

- GitHub practice
  - The GitHub practice will help you become familiar with Git and GitHub.
  - It is provided as an individual assignment in GitHub Classroom.
  - The practice is not mandatory!

- Assignment
  - The assignment will be done in groups of four.
  - The assignment will be graded through CodeGrade.
  - We can see the contribution of students through GitHub to prevent freeriding.
  - Deadline: October 9, at 11:59 PM

Starting the assignment

- We provide you with a template repository with all information you will need for the assignment. Please carefully read the README file!!

- Make use of the GitHub functionalities as a group:
  - Pull, Commit, Push, and Merge!
  - Use GitHub Issues for discussions and assign team members to tasks!

Handing in the assignment

- You will have to set up a link with CodeGrade inside the assignment page on Canvas. More information can be found in the documentation on Canvas.

- Your repository should be linked with CodeGrade before **Semptember 15, at 10:00AM**

Handing in the assignment

- Key points of handing in the assignment:
  - Please do not remove any files from the template repository!
  - You should include everything needed to reproduce the predictions file in the main branch.
  - You are allowed to add additional files to the main branch.
  - You can update the hand-in files, report.pdf, questions.pdf, and predictions.txt.

    However, they should keep their original names!

- If one of these requirements is not matched, we may not be able to grade your assignment and you may receive 0 points.

Questions regarding the assignment

- If you have any questions regarding the assignment, please post a message in the discussion forum on Canvas.

Bedankt
Thank you