

Getting started with GitHub Classrooms: Make your Classroom, link student GitHub accounts, and make a first assignment from a template repo

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Why GitHub Classrooms?

GitHub Classrooms automates the creation & distribution of organized GitHub repositories for student assignments. It will be most useful for courses where the unit of student assignment work & submission is a repo. It is **not** a full course management system (i.e. it doesn't replace GauchoSpace, or a separate course website). Spare yourself some mental energy: think of GitHub Classrooms as GitHub Assignments. **Aside:** *Want to make a nice course website in R? See our [Make a MEDS Websites with distill](#) instructions to make a [MEDS-themed website](#) in just a few minutes!*

Get started with GitHub Classrooms

A. Set up your Classroom & link student GitHub accounts

1. Go to [GitHub Classrooms](#) and authorize it for your GitHub account (if you haven't used GitHub Classrooms before).
2. Through GitHub Classrooms, make a new Organization for your course for that quarter, e.g. **eds123-fall-2022-org**.
3. Create a new Classroom within that Organization, e.g. **eds123-fall-2022**. Skip the steps to add TAs and students (choose "Skip for now" on those two options) to create an empty Classroom.
4. In your Classroom dashboard, click on the Students tab. Upload a CSV with students' names (get enrolled student names from GauchoSpace, or by sending out a Google Form to have students enter preferred names, then upload).
5. Create & send out an empty assignment to prompt students to link their GitHub account to the Classroom roster. In the Assignments tab of your Classroom, click New Assignment, name it something like 'Link GitHub', keep all other defaults, and create the assignment. Copy the Assignment Invitation URL, and send the link out to all students.
6. When students click on the Assignment Invitation URL, they will self-select their name from the roster. Once they select their name from the roster list and accept the assignment, a repo is

created for each student for that toy assignment, but more importantly this links their GitHub account to their roster name for the course.

Now your GitHub Classroom is set up, with students' GitHub accounts linked to the roster.

B. Create an individual assignment from a template repo

1. Create a template repo containing assignment materials that you want students to start with (e.g. R Markdown templates, scripts or starter code, ReadMe containing links to assignment post/resources, etc.). Make sure this is a **template repo** (repo > Settings, then select 'Template repo'). **Note 1:** *A template repo must be "either in the same organization as this classroom or a public repository if elsewhere." In other words, a private repo template must be in the Classroom Organization to use it as a template repo for an assignment.* **Note 2:** *You should have a separate template repo for each assignment.*
2. Back in your GitHub Classroom, in the Assignments tab, click 'New Assignment.'
3. Choose a name for your new assignment. This will become the prefix for all student assignment repos that get auto-created (e.g. an assignment named 'Assignment 1' will become a repo named 'assignment-1-teddy' for a student with GitHub username 'teddy').
4. Other recommended assignment settings (in order of the assignment wizard):

Deadline: Up to you. Students can still push changes after the deadline.

Repository visibility? Private

Grant students admin access to their assignment repo? Yes? (allow later ownership transfer)

Add a template repository: Select your template repo (if you have one...not required)

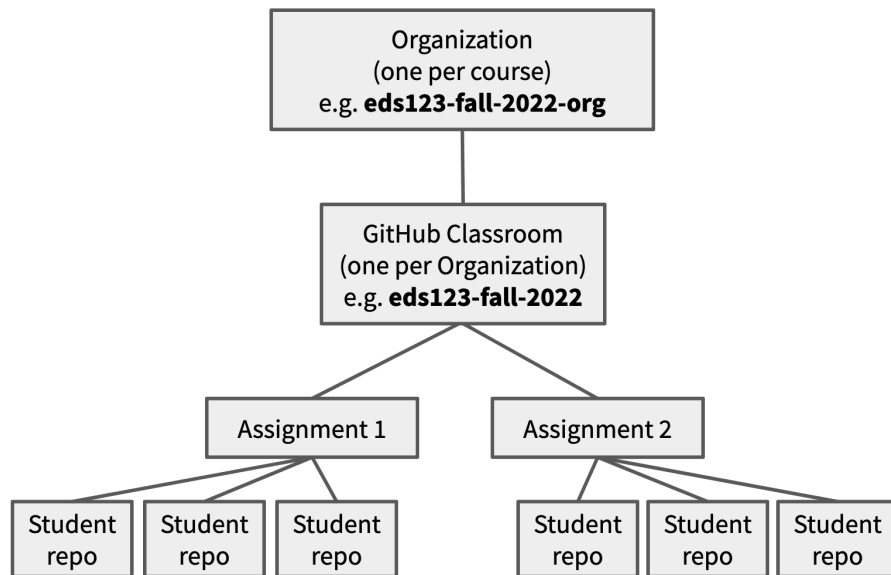
Allow students to use an online IDE: Ignore this

Add autograding tests: Haven't tested, no advice here

Enable feedback pull requests: Recommend not enabling PR feedback (but up to you)

5. Click 'Create assignment.'
6. Copy the Assignment Invite URL (atop the Assignment page). Share the link with all students on the roster (e.g. via email or Slack). Once they accept the assignment, their individual repo is created and they're ready to start the assignment.

Summary of GitHub Classroom structure:



Grading with GitHub Classroom

A. Set up GitHub CLI

1. Install Homebrew
2. Install the GitHub CLI: **brew install gh**
3. Install the GitHub Classroom extension: **gh extension install github/gh-classroom**
4. If needed, upgrade the extension: **gh extension upgrade classroom**
5. Clone student repos: **gh classroom clone student-repos -a [NNNNNN]**
 - a. [NNNNNN] will be your assignment code

[More about GitHub CLI](#)

Resources:

- [GitHub Classrooms](#)
- J. Fiksel's [GitHub Classrooms Guide for Teachers](#)
- Fiksel et al. [Using GitHub Classroom to Teach Statistics](#)