

ICS GitHub Submission 草案

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Existed Problems

以往的 Lab 提交流程存在以下问题：

1. DDL 临近时，提交人数激增；迟交现象严重，且未必反映在评分中
2. 代码提交不规范，导致评分困难
3. 评分过程繁琐，容易出错
4. 缺乏 Feedback，学生无法及时了解评分情况
5. 不易追踪学生的提交历史，以维护学术诚信

Introducing GitHub Classroom

GitHub Classroom 是 GitHub 提供的一个教学工具，可以帮助教师更好地管理课程、学生和作业，非常适用于计算机科学课程。

优势

- 自动化：自动分发作业，自动截止提交
- 规范化：以标准的 Git Workflow 进行代码提交，顺便学习 SCM
- 可追踪：学生提交内容和历史一目了然，压缩可供 argue 的空间
- 实时评分：学生可实时查看目标环境的评分情况
- 快速反馈：学生存储库中的 Feedback PR 可以快速进行 Code Review

UC Berkeley CS161's Experience



An Example Usage

Classroom



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RUCICS-classroom-2024

RUCICS

☆ **Assignments** 1 👤 **Students** 4 👤 **TAs and Admins** 1 ⚙️ **Settings**

Assignments

+ New assignment

[Intro to Data Structure](#)

● Active 👤 Individual assignment

📄 Copy invite link



Roster

The screenshot shows the 'Classroom Roster' management page. At the top, there are tabs for 'Assignments' (1), 'Students' (4), and 'Settings'. The 'Students' tab is active. Below the tabs, the 'Classroom Roster' section shows a list of students under the 'All students' (4) tab. The list includes: andylizf (Unlinked user), HuanCheng65 (@HuanCheng65), Jarden Out! (Unlinked user), and 我是胡一菲 (Unlinked user). To the right of the list are 'Update students' and 'Download' buttons. Below the list is a 'Danger zone' section with a warning about deleting the roster and a 'Delete roster' button. A modal titled 'Add students to your roster' is open in the center. It has two sections: 'Import students from your institution' with a 'Sync from Google Classroom' button, and 'Create your roster manually' with a text area for 'Student identifier' and an 'Add students' button. There is also an 'Upload a CSV or text file' button at the bottom left of the modal.

☆ Assignments 1 👤 Students 4 ⚙️ Settings

Classroom Roster

All students 4 Unlinked Google Classroom

- andylizf
Unlinked user
- HuanCheng65
@HuanCheng65
- Jarden Out!
Unlinked user
- 我是胡一菲
Unlinked user

Update students **Download**

Import students from your institution

Connecting GitHub Classroom to your Google Classroom learning management system will allow you to automatically import your roster. For more information, see "[Connect to a LMS](#)".

Sync from Google Classroom

Create your roster manually

We are updating our Learning Tools Interoperability (LTI) to v1.3. The existing LMS **Canvas**, **Moodle**, **Sakai** or other LMS integration will ask to upload the roster manually before that.

Enter your list of students' identifiers, **one per line**.

Student identifier

Upload a CSV or text file **Add students**

Danger zone

Deleting the roster will delete all student information. This will not delete assignments, as they are stored separately. After deleting your roster, repositories will remain in your repository list.

Delete roster

Link to GitHub account

Link to GitHub account

Link to GitHub account

Link to GitHub account

Assignment



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Intro to Data Structure

Individual assignment - Deadline Passed Active VS Code

<https://classroom.github.com/a/nHwSKVSY>



Run tests

Edit ▾

Download ▾

Assignment Details

Students total 5

4 Rostered

1 Added students

Accepted assignments 2

2 Students

Assignment submissions 2

1 Submitted

1 Not submitted

Passed students 0

0/2 Passed



Filters ▾

Search for an assignment



Filter by unlinked accounts ▾

Filter by accepted ▾

Filter by passing ▾

Sort ▾

Classroom roster



andyfizf

Not submitted

[Link to student](#) 0 commits

Repository

Feedback



HuanCheng65

Submitted

On-time

@HuanCheng65 [Submitted yesterday](#) 2 commits

Repository

Feedback



Streamlined Workflow

为了确保 Lab 提交的规范性和高效性，我们计划采用如下流程：

1. **创建 Classroom**：对每学期的课程创建一个 Classroom，导入学生名单，设置 TA
2. **分享 Classroom**：将 Classroom 链接分享给学生，学生加入 Classroom，选择对应学生名单中的真实姓名

对于每个 Lab：

1. **创建 Assignment**：每次 Lab 创建一个 Private Assignment，设置 Starter Code, Autograder 及 Deadline
2. **分享 Assignment**：将 Assignment 链接分享给学生，学生 Accept Assignment 后，自动对 Starter Code 进行 Fork
3. **提交 Assignment**：学生在 Fork 的存储库中进行代码编写，完成后提交 commits。TA 可随时在 Assignment Dashboard 查看提交和评分情况
4. **评价 Assignment**：在 Deadline 后，TA 可增加 Test Cases 并重新评分。TA 还可以在 Feedback PR 中提供具体评价和建议
5. **公布 Assignment**：TA 可在 Assignment Dashboard 中公布分数分布，还可将 Assignment 转为 Public 以供学生学习优秀实现

Thank You!

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