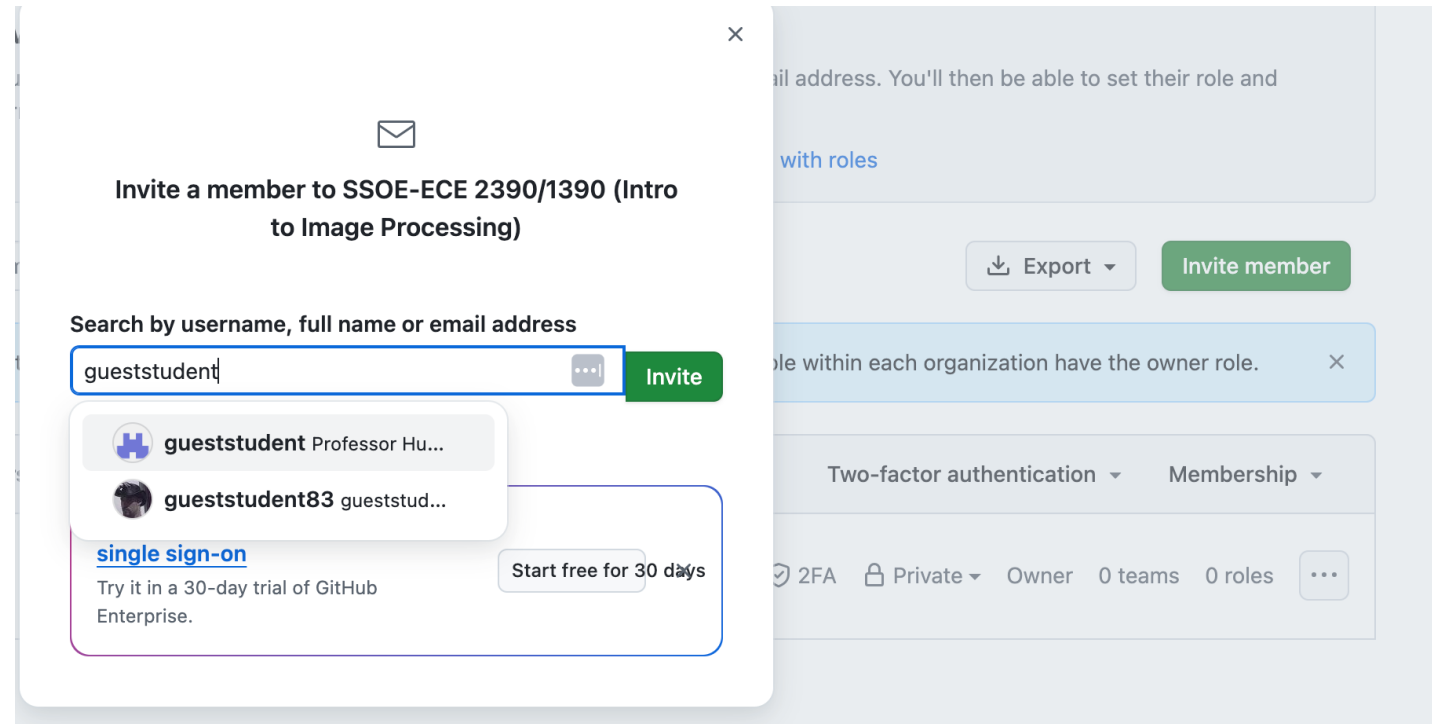


# Introduction to GitHub

## Teams/Organizations/Classroom

# Git Organization for course

- <https://github.com/SSOE-ECE1390>



# Companies search your GitHub !

- Chose your GitHub username appropriately (and professionally)
- Private vs Public Repos

# Homework 0

- Install VS-Code
  - <https://code.visualstudio.com/>
  - Add extensions for
    - GitHub Pull Requests (the official GitHub one)
    - GitHub Classroom
    - Python Language Support

# Homework 0

- Python 3.12 (not 3.13)
  - Create dedicated virtual env
  - install:
    - opencv-python
    - matplotlib
    - numpy
    - mediapipe

# Homework 0

- Clone the assignment repo (link found in canvas)

How this works with the org:

<https://github.com/orgs/SSOE-ECE1390>

- Creates a fork of the template repo (assignment) with your Git name. E.g. homework0\_huppertt
- Make edits, commit, and push your assignment to GitHub
  - Either within VS-code or command line, etc
  - If you want to change/update your answer, send a new commit to GitHub.
  - We will grade based on what is on GitHub and (when appropriate) make comments/grading as push requests into your repo

# Group Project

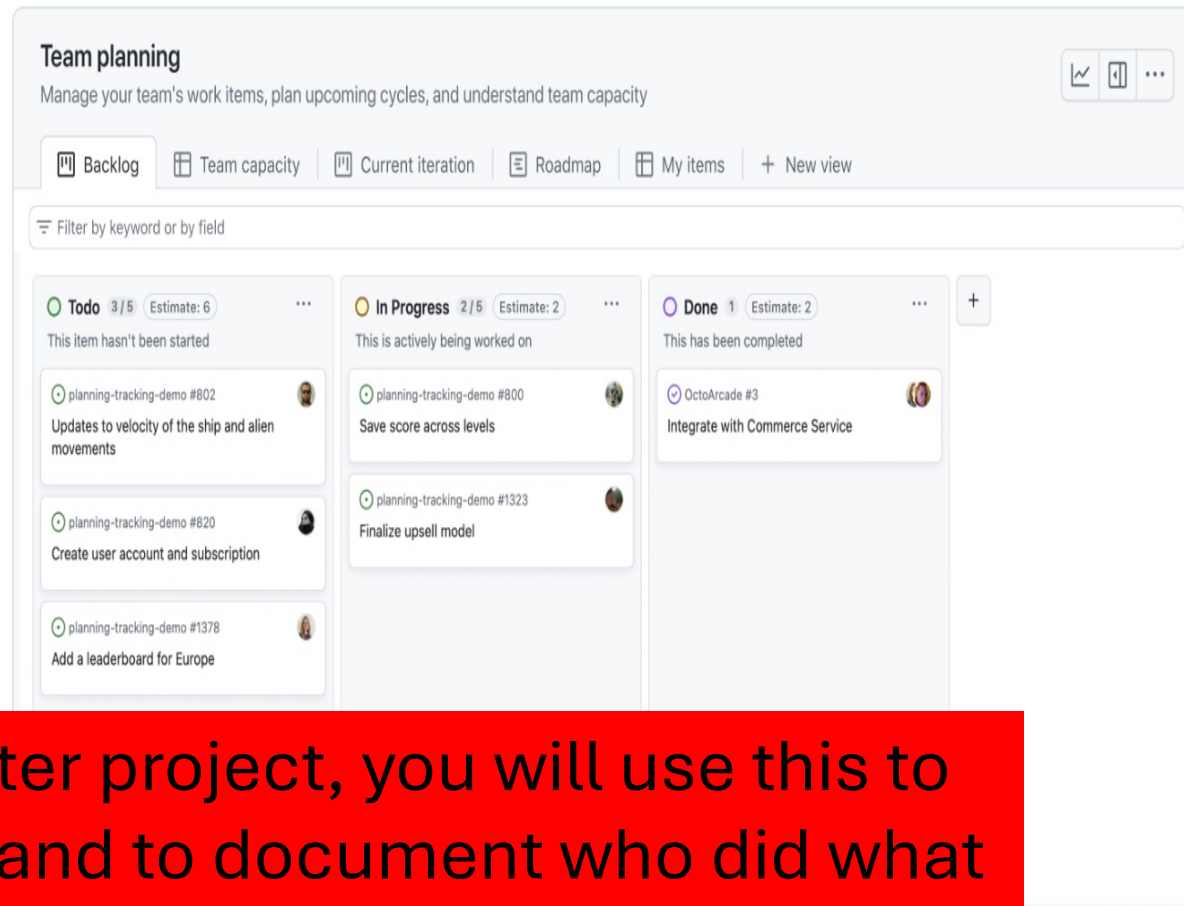
<https://github.com/SSOE-ECE1390>

- Once you accept the first homework assignment and link it to your GitHub account, I can add you to the organization group.
- Once you have a team for your project, then one person from will create a new Team within the organization. Then add the other members of the team
- Create a Project in your team
- Create a Repo in your team

Manage your team's work items, plan upcoming cycles, and understand team capacity

Project name

ExampleTeam\_Planning



In the semester project, you will use this to assign tasks and to document who did what for the project!

## GitHub Projects

- Not actual code
- Milestones/tasks /roadmaps
- Might refer to management of multiple repos as part of a larger project

Create project



⚙️ Project settings

👤 Manage access

Custom fields + New Field

☑ Status

🔄 Sub-issues progress

☑ Priority

☑ Size

1/2 Estimate

🔄 Iteration

📅 Start date

📅 End date

## Project settings

### Project name

ExampleTeam

### Short description

Virtual WebCam Project for ECE1390/2390

### README

Write

Preview

H B I | ☰ <> 🔗 | ☰ ☰ ☰ | @ ↗ ↶

**\*\*Virtual WebCam Project\*\***

A virtual webcam is a software program that re-broadcasts a video feed allowing modifications of the video. This project will build a virtual webcam to allow modification of a live camera feed into Zoom, which will allow the user to add visual effects onto the video.

Q Filter by keyword or by field

Discard

Save

Title	...	Assignees	...	Status	...	Priority	...	+
-------	-----	-----------	-----	--------	-----	----------	-----	---

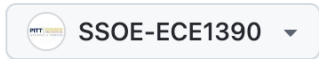
+ You can use **Control + Space** to add an item

## Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

Required fields are marked with an asterisk (\*).

Owner \*



Repository name \*

ExampleTeam

✔ ExampleTeam is available.

Great repository names are short and memorable. Need inspiration? How about **congenial-parakeet** ?

Description (optional)

Example Project Repo for VirtualWebCam



Public

Anyone on the internet can see this repository. You choose who can commit.



Private

You choose who can see and commit to this repository.

Initialize this repository with:



Add a README file

This is where you can write a long description for your project. [Learn more about READMEs.](#)

Add .gitignore

.gitignore template: None

Choose which files not to track from a list of templates. [Learn more about ignoring files.](#)

Choose a license

License: MIT License

A license tells others what they can and can't do with your code. [Learn more about licenses.](#)

This will set  main as the default branch.

## GitHub Repos

- Is the actual code
- You will have one main repo for your project; however, you will create branches from this repo such that each group member can work on their part of the code.
- I would like to see push requests and code review (for ECE 2390 groups, this is a requirement).

# Creating a fork, making edits, and requesting review for a pull request

- 1) In the GitHub ORG site on your team, select the parent repo and create a fork  
→ This creates a copy in YOUR GitHub account that only you have access to
- 2) Clone this repo from your account and make any edits. Commit and push the changes to your account.
- 3) When done, on the repo on your account, open a pull request. Add details about the changes. Select a reviewer for the request.
- 4) The reviewer will then get a notice that a pull request has been created and is ready for review. They can make comments and send back or approve and merge the request.

gueststudent requested your review on this pull request.

Add your review

# Added details to the readme page for the project #2

Edit <> Code

Open gueststudent wants to merge 1 commit into main from 1-add-readme-about-project

Conversation 0

Commits 1

Checks 0

Files changed 1

+20 -0



gueststudent commented 2 minutes ago

Added the readme file to the project as part of the first homework assignment in the class.



Added details to the readme page for the project

38f7608

added the documentation label 2 minutes ago

gueststudent requested a review from huppertt 2 minutes ago

## Reviewers

huppertt

Still in progress? Learn about draft PRs

## Assignees

No one—[assign yourself](#)

## Labels

documentation

```
1  # ExampleTeam
2  Example Project Repo for VirtualWebCam
3  +
4  + Brief Description:
5  + The goal of this project is to build a virtual webcam to allow manipulations of
   live-video feeds from a webcam to be used in Zoom
6  +
7  + Team Members:
8  + Dr Huppert (huppert1@pitt.edu)
9  + The class TA (someone@pitt.edu)
10 +
```



**huppertt**

Pending



Add [GuestStudent@pitt.edu](mailto:GuestStudent@pitt.edu)



Reply...

```
11 +
12 + Proposed project specs:
13 + * Background replacement (greenscreen)
14 + Include feature to change background of video
```

## Finish your review



Write

Preview

H

B

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Leave a comment



Markdown is supported



Paste, drop, or click to add files

☒ **Comment**

Submit general feedback without explicit approval.

☐ **Approve**

Submit feedback and approve merging these changes.

☐ **Request changes**

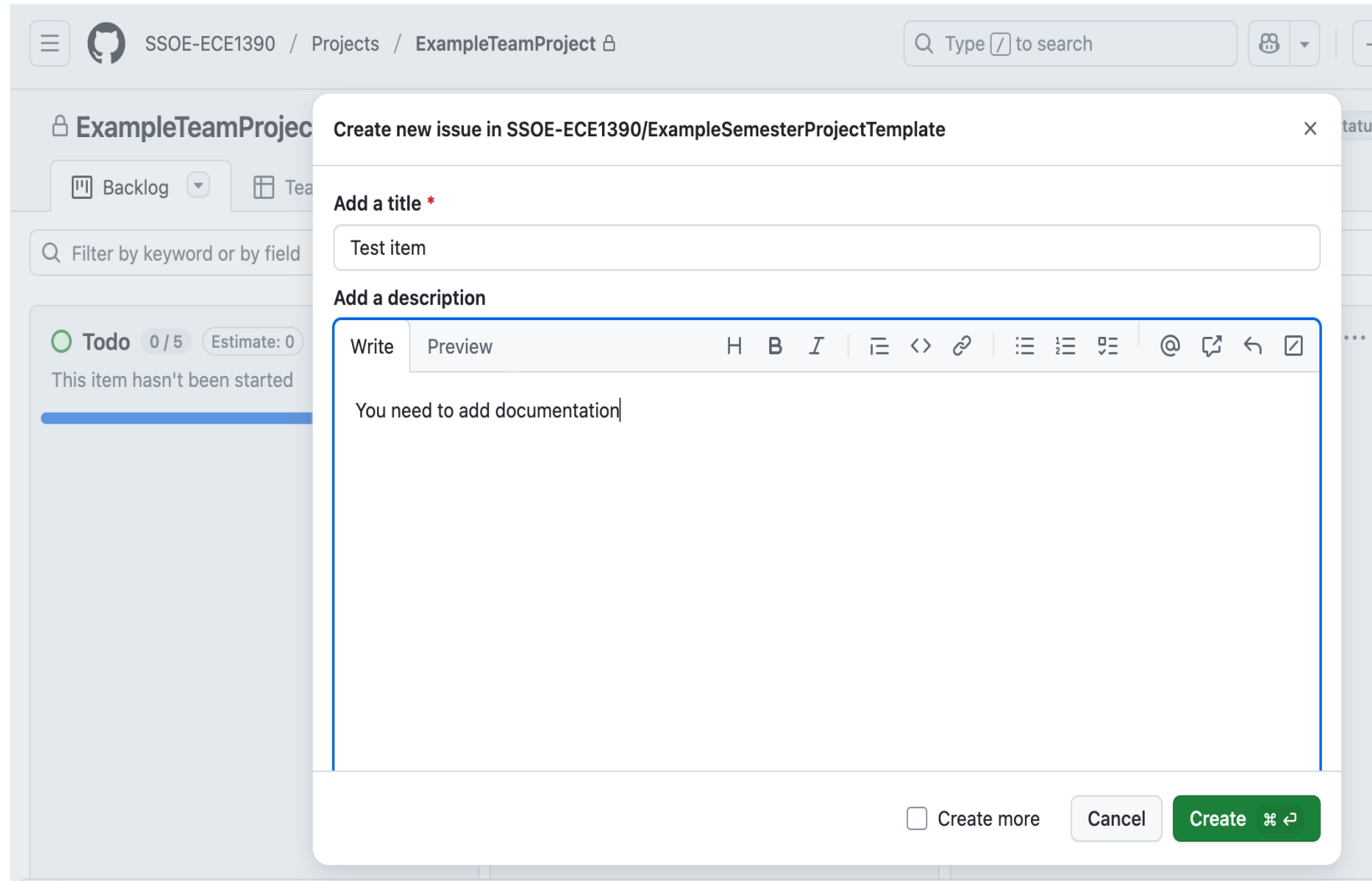
Submit feedback that must be addressed before merging.

1 pending comment

Submit review

# Acting on issues

In the Project, create an issue by adding it to the workflow



The screenshot shows a GitHub project page for 'SSOE-ECE1390 / Projects / ExampleTeamProject'. A modal window titled 'Create new issue in SSOE-ECE1390/ExampleSemesterProjectTemplate' is open. The modal has a title field with the text 'Test item' and a description field with the text 'You need to add documentation'. The description field has a rich text editor toolbar with options for bold, italic, link, and other formatting. At the bottom of the modal, there are buttons for 'Create more', 'Cancel', and 'Create' (with a keyboard shortcut icon).

SSOE-ECE1390 / Projects / ExampleTeamProject

Search Type to search

ExampleTeamProject

Backlog Team

Filter by keyword or by field

Todo 0 / 5 Estimate: 0

This item hasn't been started

Create new issue in SSOE-ECE1390/ExampleSemesterProjectTemplate

Add a title \*

Test item

Add a description

Write Preview

H B I

You need to add documentation

Create more Cancel Create ⌘ ↵



# Acting on issues

Once created, you can open the issue and add more details

Assign to a person on the team

Add info about what type of issue this is

Add comments or attach files

## Test item #4

Open

Feature

SSOE-ECE1390/ExampleSemesterProjectTemplate Public

huppertt opened 1 minute ago

Member

...

You need to add documentation

Create sub-issue

😊

📅 huppertt added this to 📅 ExampleTeamProject 1 minute ago

📅 huppertt moved this to Todo in 📅 ExampleTeamProject 1 minute ago

👤 huppertt self-assigned this now

🏷️ huppertt added documentation now

🏷️ huppertt added the Feature issue type now

👤 huppertt

Add a comment

Write Preview

H B I

☰ < > 🔗

☰ ☰ ☰

@ 📎 ↩️

Use Markdown to format your comment

Edit

📄

🌟

...

×

Assignees

👤 huppertt

Labels

documentation

Type

Feature

Projects

📅 ExampleTeamProject

Status

Todo

Priority

Choose an option

Size

Choose an option

Estimate

Enter number...

Iteration

Choose an iteration

Start date

No date

End date

No date

# Acting on issues

At the bottom, you can create a branch or assign it to an existing pull request.

Branches – stay with the Org account. These are sub-repos

Forks – your local GitHub. These are copies of the repo.

The image shows a GitHub interface with a modal dialog for creating a branch and a sidebar with issue management options.

**Create a branch for this issue**

Branch name: 4-test-item

Repository destination: SSOE-ECE1390/ExampleSemesterProjectTemplate

Branch source: main

What's next?

- ☒ Checkout locally
- ☐ Open branch with GitHub Desktop

Create branch

End date: No date

Milestone: No milestone

Relationships: None yet

Development: [Create a branch](#) for this issue or link a pull request.

Notifications: [Unsubscribe](#)

Participants:

→ Transfer issue

Duplicate issue

# Acting on issues

If you are working with branches, you need to switch the branch you are working on, make edits, and then eventually merge with a pull request.

If you are working with forks, you need to clone the fork, make edits, and then eventually merge with a pull request.



## Commit message

Merge pull request #2 from SSOE-ECE1390/1-add-readme-about-project

## Extended description

Added details to the readme page for the project

This commit will be authored by 47926714+huppertt@users.noreply.github.com.

Confirm merge

Cancel



Add a comment

# Acting on issues

Once an issue is completed, move it to the DONE category.

If you close an issue, it disappears (which is fine if you aren't tracking issues), but companies often want to save documentation of such changes.

