

Lab Overview

Software Testing 2023

2023/02/16

#whoami

- Software Quality Lab @ EC547
- TA
 - a. 蔡惠喬
 - hctsai.cs10@nycu.edu.tw
 - b. 陳舜寧
 - xdev11.cs11@nycu.edu.tw

Facebook Group

Facebook Group

1. Facebook

a. <https://www.facebook.com/groups/softwaretesting.nycu>

b.



Community

Community

1. Line

a. <https://reurl.cc/1eQgxY>

b.



Live Stream

Live Stream

1. Microsoft Teams

- a. Login by Office 365 (NYCU)
 - i. `user@m365.nycu.edu.tw`
- b. <https://reurl.cc/8qlyy4>
- c.



Handout

1. Microsoft Teams (same as E3)

- a. Login by Office 365 (NYCU)
 - i. user@m365.nycu.edu.tw
- b. <https://reurl.cc/Dm99nN>
- c.



Lab and Homework

Lab and Homework

- 8 Lab
 - a. *Unit Testing (Python unittest)*
 - b. *Mock Testing (unittest.mock)*
 - c. *Continuous Integration (Python, Github CI)*
 - d. *Web Applications Testing (Selenium)*
 - e. *LLVM Pass*
 - f. *Program Security Detect*
 - g. *Fuzz Testing (AFL)*
 - h. *Symbolic Execution*
- 4 Homework

Exam and Group Work

- Exam
 - Midterm
 - Final
- Group Work
 - Group Homework 1
 - Final Project Proposal
 - Final Project Report

Github

- [NYCU-Software-Testing-2023](#)

Lab 0

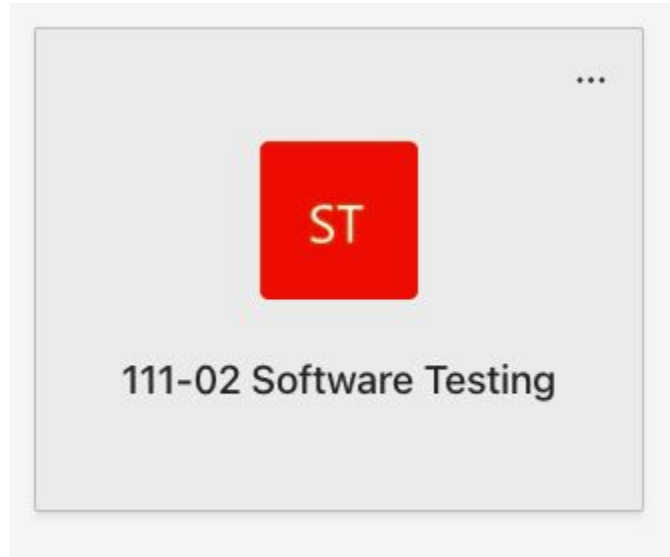
Lab 0

1. Join **Facebook group** and **Community**.
2. Screenshot "Join Teams"
 - a. Upload ***StudentID_Teams.jpg*** to E3.

Do not compress the files !

Screenshot - example

Example_Teams.jpg:



Lab 0

3. Create a **private** git repository named <student_id>-ST-2023

- Please submit your repo url to E3

GitHub Repo

Create a **private** git repository named <student_id>-ST-2023

- Your GitHub > Repository > New > ... > Create Repository
 - ex. 310551555-ST-2023
- Create a README.rst / README.md
 - specify your student id and name
 - add github action status badge
- Add TA as collaborators
 - Your Repo > Settings > Collaborators > Manage access
 - TA GitHub id: XDEv11, chameleon10712, skhuang

NYCU-Software-Testing-2023

310551555 張O軍

 GitHub Actions Demo **passing**

Create a new repository

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

Owner *



chameleon10712 ▾

Repository name *

310551555-ST-2023



Great repository names are short and memorable. Need inspiration? How about [didactic-train](#)?

Description (optional)



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:

Skip this step if you're importing an existing repository.



Add a README file

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

⚙ General

Access

👤 **Collaborators**

Code and automation

🔗 Branches

🏷 Tags

▶ Actions

🔗 Webhooks

📁 Codespaces

📄 Pages

Security

🔍 Code security and analysis

🔑 Deploy keys

🔒 Secrets and variables

Integrations

Who has access

PRIVATE REPOSITORY

Only those with access to this repository can view it.

[Manage](#)

DIRECT ACCESS

1 has access to this repository. 1 [collaborator](#).

Manage access

[Add people](#)

☐ Select all

Type ▾

🔍 Find a collaborator...

☐



XDEv11

XDEv11 • Collaborator

[Remove](#)

GitHub Action

GitHub Action

- [Tutorial](#)

Creating your first workflow

- 1 Create a `.github/workflows` directory in your repository on GitHub if this directory does not already exist.
- 2 In the `.github/workflows` directory, create a file named `github-actions-demo.yml` . For more information, see "[Creating new files](#)."
- 3 Copy the following YAML contents into the `github-actions-demo.yml` file:


GitHub Action

- [sample yaml file](#)

 [octo-org](#) / [octo-repo](#) Private

 Watch ▾ 1

 Star 0

 Fork 1

 Code

 Issues 5

 Pull requests 24

 Actions

 Projects 8

 Wiki

 Security

 Insights

 Settings

Workflows

[New workflow](#)[All workflows](#) GitHub-Actions-Demo

All workflows

Showing runs from all workflows

1 workflow run

Event ▾

Status ▾

Branch ▾

Actor ▾



Create github-actions-demo.yaml

GitHub-Actions-Demo #1: Commit cb426d2 pushed by codertocat

codertocat-patch-1



2 minutes ago



16s

Workflows

[New workflow](#)[All workflows](#) GitHub-Actions-Demo

All workflows

Showing runs from all workflows

1 workflow run

Event ▾

Status ▾

Branch ▾

Actor ▾



Create github-actions-demo.yaml

GitHub-Actions-Demo #1: Commit cb426d2 pushed by codertocat

codertocat-patch-1



36 minutes ago



16s

Explore-GitHub-Actions


succeeded 2 minutes ago in 6s

🔍 Search logs



- > Set up job 3s
- > Run echo "🔔 The job was automatically triggered by a push event." 0s
- > Run echo "🐧 This job is now running on a Linux server hosted by GitHub!" 0s
- > Run echo "💡 The name of your branch is refs/heads/codertocat-patch-1 and your repository is codertocat/octo-repo." 0s
- > Check out repository code 3s
- > Run echo "💡 The codertocat/octo-repo repository has been cloned to the runner." 0s
- > Run echo "💻 The workflow is now ready to test your code on the runner." 0s
- > List files in the repository 0s
- > Run echo "🍏 This job's status is success." 0s
- > Post Check out repository code 0s
- > Complete job 0s

>  Run echo " The workflow is now ready to test your code on the runner." 0s

▼  List files in the repository 0s

```
1 ▶ Run ls /home/runner/work/octo-repo/octo-repo
4 README.md
5 file01.yaml
6 file02.js
7 file03.ps1
```

>  Run echo " This job's status is success." 0s

Add a workflow status badge

- rst file
 - .. image:: https://github.com/<github_id>/<repo_name>/actions/workflows/<yml_file_name>/badge.svg
- md file
 - ![example workflow](https://github.com/<github_id>/<repo_name>/actions/workflows/<yml_file_name>/badge.svg)