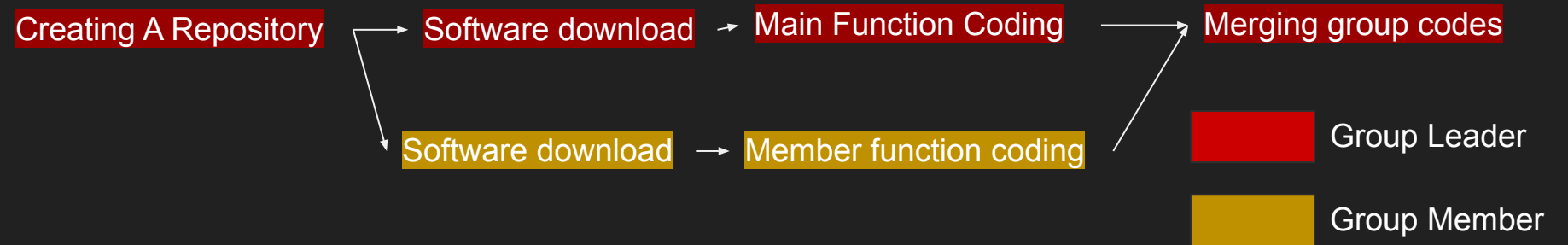


AAE2004 GitHub Project

Tutorial 1 Walkthrough

Tutorial 1 Workflow



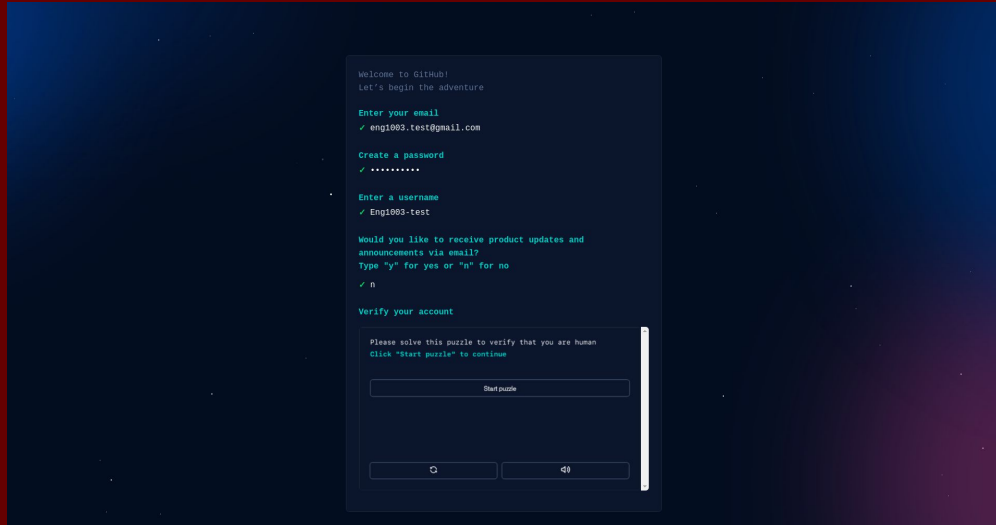
1. Initialize your GitHub project repository
2. Coding of the programming task
3. Combining the codes into one programme

- Group Leaders: Follow the red slides
- Group Members: Follow the yellow slides
- Everyone: Follow the blue slides

Initializing the GitHub Repository

1. Create your own GitHub account
2. Create a Repository for Tutorial 1
3. Invite everyone to the repository
4. Create a .py file for the repository

Create your own GitHub account

A screenshot of the GitHub account creation interface. The background is a dark blue gradient. A central white box contains the following text and input fields:

Welcome to GitHub!
Let's begin the adventure

Enter your email
✓ eng1003.test@gmail.com

Create a password
✓

Enter a username
✓ Eng1003-test

Would you like to receive product updates and announcements via email?
Type "y" for yes or "n" for no
✓ n

Verify your account

Please solve this puzzle to verify that you are human
Click "Start puzzle" to continue

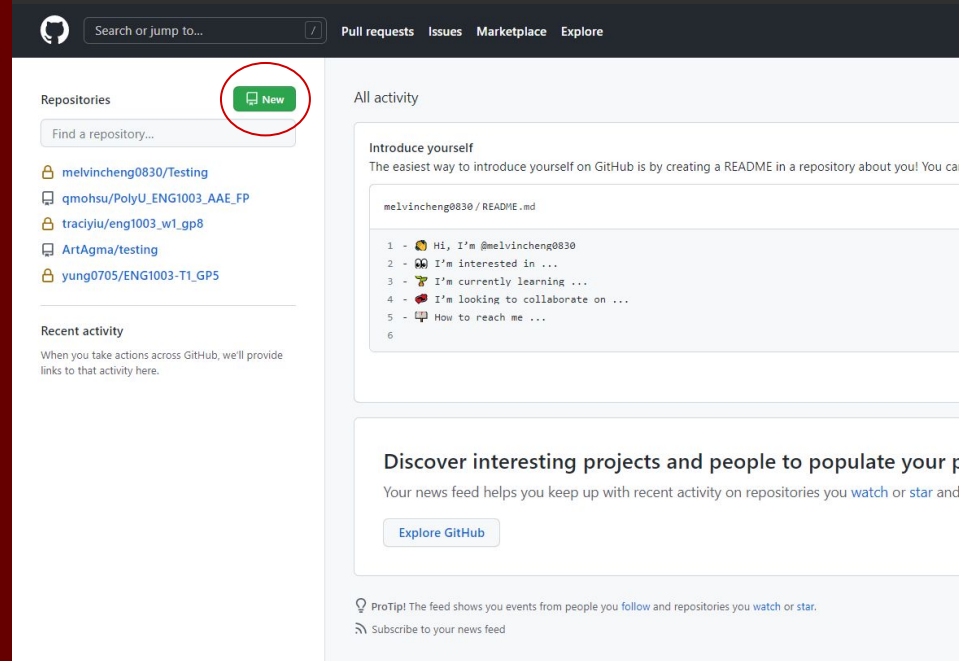
Start puzzle

Q dQ

- Search 'GitHub on Google
- Create your own personal GitHub account
- Receive an email confirmation
- Activate your account using the email received

Create a Repository for Tutorial 1

- Click the new repository button once your logged into GitHub




Create a Repository for Tutorial 1

- Create a new repository
- Set it public
- Give the repository a correct name

Create a new repository


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


Owner * Repository name *

 melvincheng0830

Great repository names are short and unique. [ENG1003_w1_11 is available.](#) How about [miniature-bassoon](#)?

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.](#)

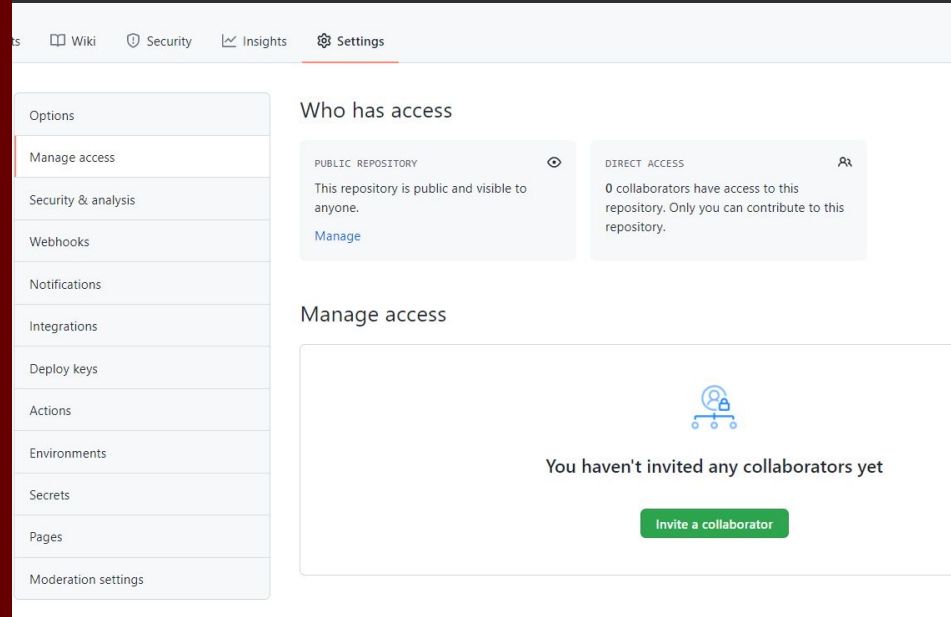
☐ **Add .gitignore**
Choose which files not to track from a list of templates. [Learn more.](#)

☐ **Choose a license**
A license tells others what they can and can't do with your code. [Learn more.](#)

[Create repository](#)

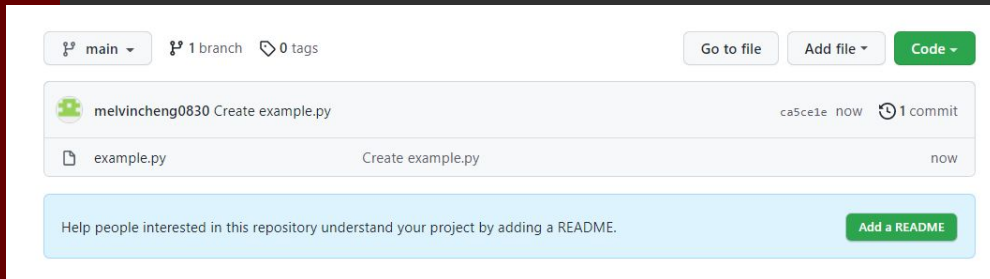
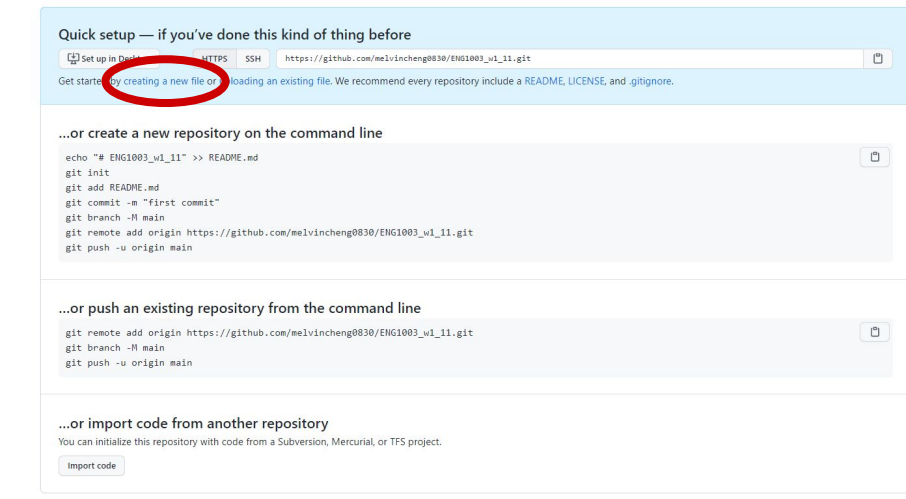
Invite everyone to your repository

- In settings -> manage access
- Use 'invite a collaborator to invite a new account to the repository
- Invite 4 group members and the assessor (Lecturer)
- You can find your corresponding assessor in the AAE2004's GitHub page



Create a .py file for the repository

- Click 'create a new file'
- Name the file with .py as ending

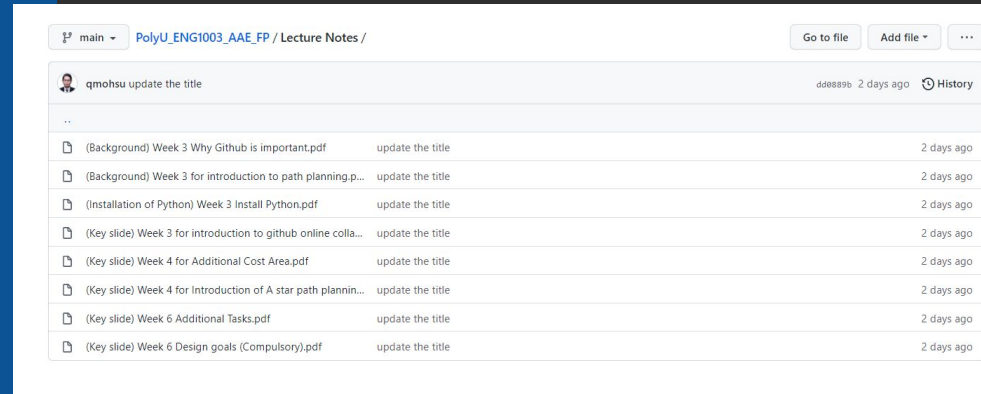


Coding of the programming Task

1. Software download
2. Create your own branch
3. Link GitHub with your local repository
4. Start Coding:
 - a. For group leaders
 - b. For group members
5. Create pull request

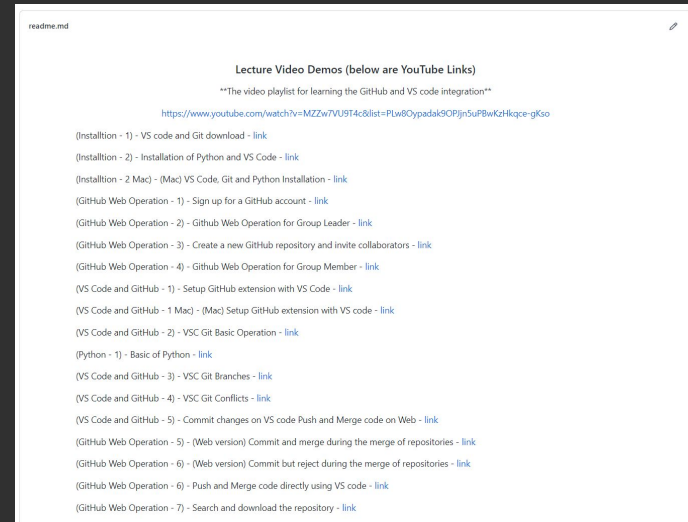
Software Download

- You have to first download the following Softwares:
 - Python
 - VS Code
 - Git
- You can find all installation tutorial under 'Lecture Notes' and 'Lecture Videos'



The screenshot shows a GitHub repository page. At the top, the breadcrumb navigation reads 'PolyU_ENG1003_AAE_FP / Lecture Notes /'. Below this, a commit by user 'qmohsu' is shown with the message 'update the title'. A table lists the files in the repository, each with a file icon, the filename, the commit message 'update the title', and the time '2 days ago'.

File Name	Commit Message	Time
..
(Background) Week 3 Why Github is important.pdf	update the title	2 days ago
(Background) Week 3 for introduction to path planning.p...	update the title	2 days ago
(Installation of Python) Week 3 Install Python.pdf	update the title	2 days ago
(Key slide) Week 3 for introduction to github online colla...	update the title	2 days ago
(Key slide) Week 4 for Additional Cost Area.pdf	update the title	2 days ago
(Key slide) Week 4 for Introduction of A star path plannin...	update the title	2 days ago
(Key slide) Week 6 Additional Tasks.pdf	update the title	2 days ago
(Key slide) Week 6 Design goals (Compulsory).pdf	update the title	2 days ago



The screenshot shows the content of a 'readme.md' file. It is titled 'Lecture Video Demos (below are YouTube Links)' and contains a list of links to YouTube videos for learning GitHub and VS code integration. The links are categorized by topic and numbered.

readme.md

Lecture Video Demos (below are YouTube Links)

****The video playlist for learning the GitHub and VS code integration****

<https://www.youtube.com/watch?v=MZZw7VU9T4c&list=PLw8OypadaK9OPjn5uPBwK2tHkqce-gKso>

(Installation - 1) - VS code and Git download - [link](#)

(Installation - 2) - Installation of Python and VS Code - [link](#)

(Installation - 2 Mac) - (Mac) VS Code, Git and Python Installation - [link](#)

(GitHub Web Operation - 1) - Sign up for a GitHub account - [link](#)

(GitHub Web Operation - 2) - GitHub Web Operation for Group Leader - [link](#)

(GitHub Web Operation - 3) - Create a new GitHub repository and invite collaborators - [link](#)

(GitHub Web Operation - 4) - GitHub Web Operation for Group Member - [link](#)

(VS Code and GitHub - 1) - Setup GitHub extension with VS Code - [link](#)

(VS Code and GitHub - 1 Mac) - (Mac) Setup GitHub extension with VS code - [link](#)

(VS Code and GitHub - 2) - VSC Git Basic Operation - [link](#)

(Python - 1) - Basic of Python - [link](#)

(VS Code and GitHub - 3) - VSC Git Branches - [link](#)

(VS Code and GitHub - 4) - VSC Git Conflicts - [link](#)

(VS Code and GitHub - 5) - Commit changes on VS code Push and Merge code on Web - [link](#)

(GitHub Web Operation - 5) - (Web version) Commit and merge during the merge of repositories - [link](#)

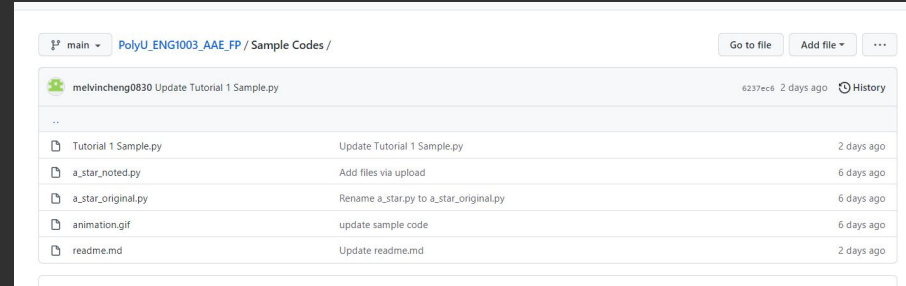
(GitHub Web Operation - 6) - (Web version) Commit but reject during the merge of repositories - [link](#)

(GitHub Web Operation - 6) - Push and Merge code directly using VS code - [link](#)

(GitHub Web Operation - 7) - Search and download the repository - [link](#)

Coding

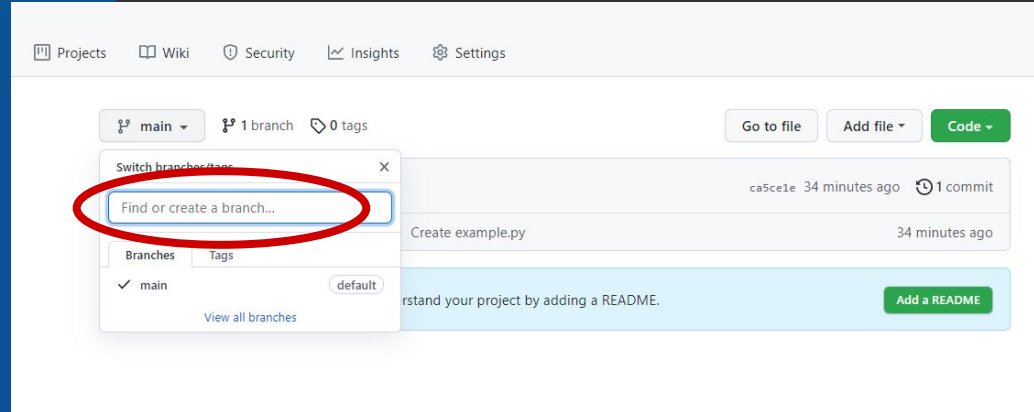
- Group Leaders:
 - Make a main function that can run 4 different functions made by members
- Group members:
 - Choose and make **ONE** function for the group leader
 - There are 4 members so there should be 4 functions made



- You can find a sample of the code 'Tutorial 1 Sample.py' under 'Sample Code'

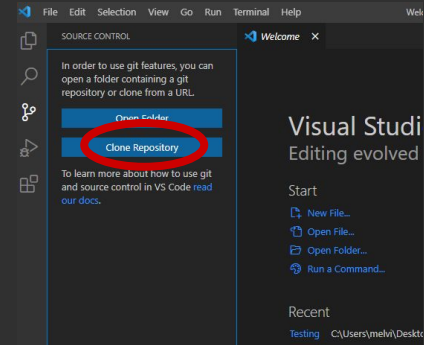
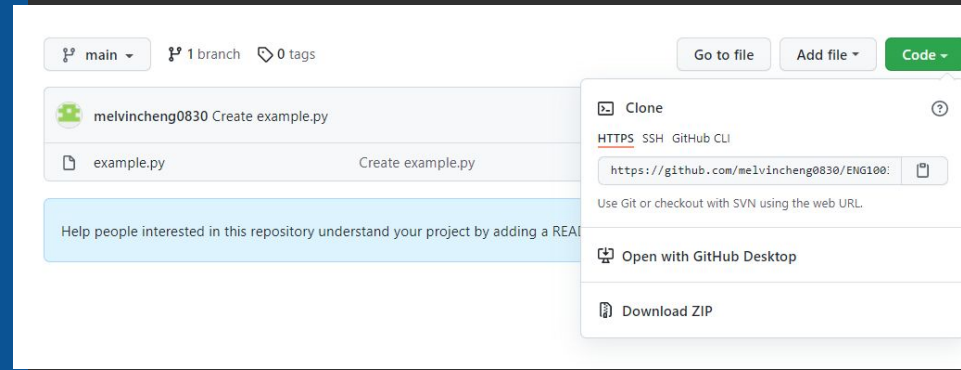
Create your own branch

1. Go back to GitHub
2. Create your own branch



Link GitHub with your local repository

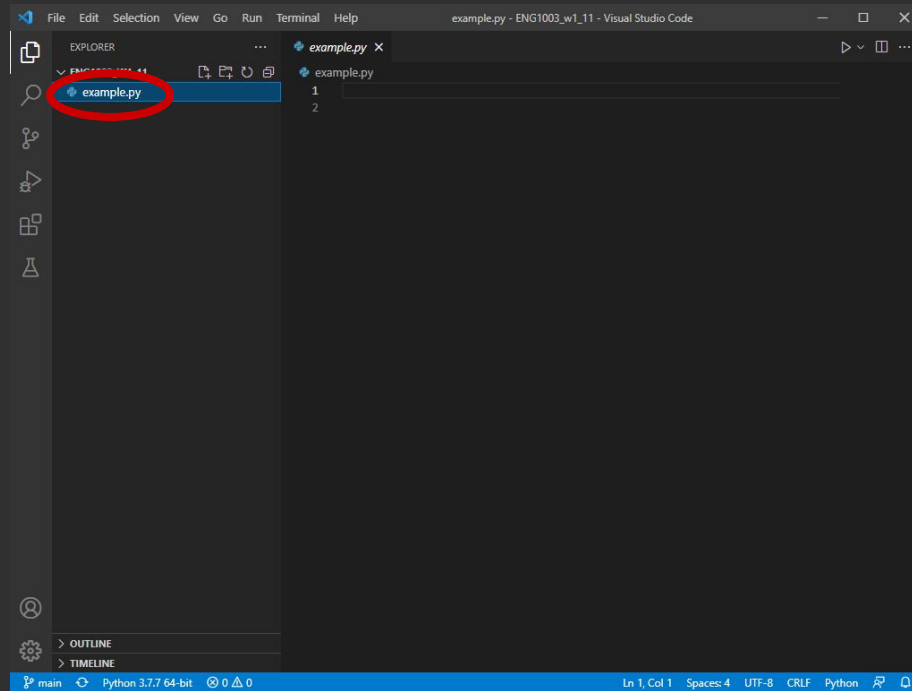
1. Copy the repository link from GitHub
2. Clone your repository to VS Code using Git Clone



- You can find additional tutorial under 'Lecture Notes' and 'Lecture Videos'

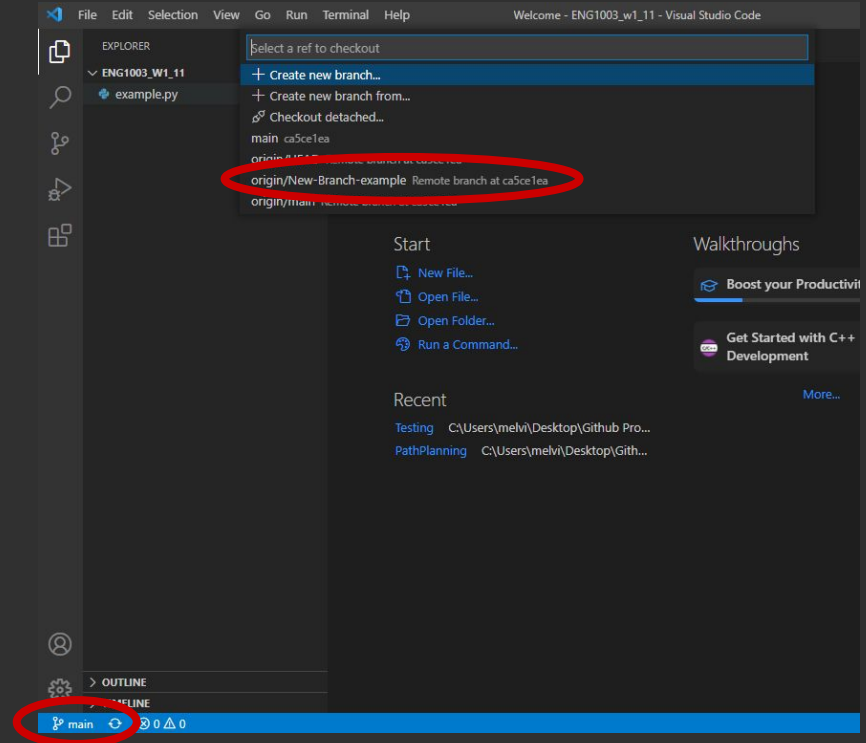
Link GitHub with your local repository

1. Cloning is successful if:
 - a. You can see the file you created in GitHub
 - b. You see you are in the main branch
 - c. You see the repository name is the same as the one in GitHub



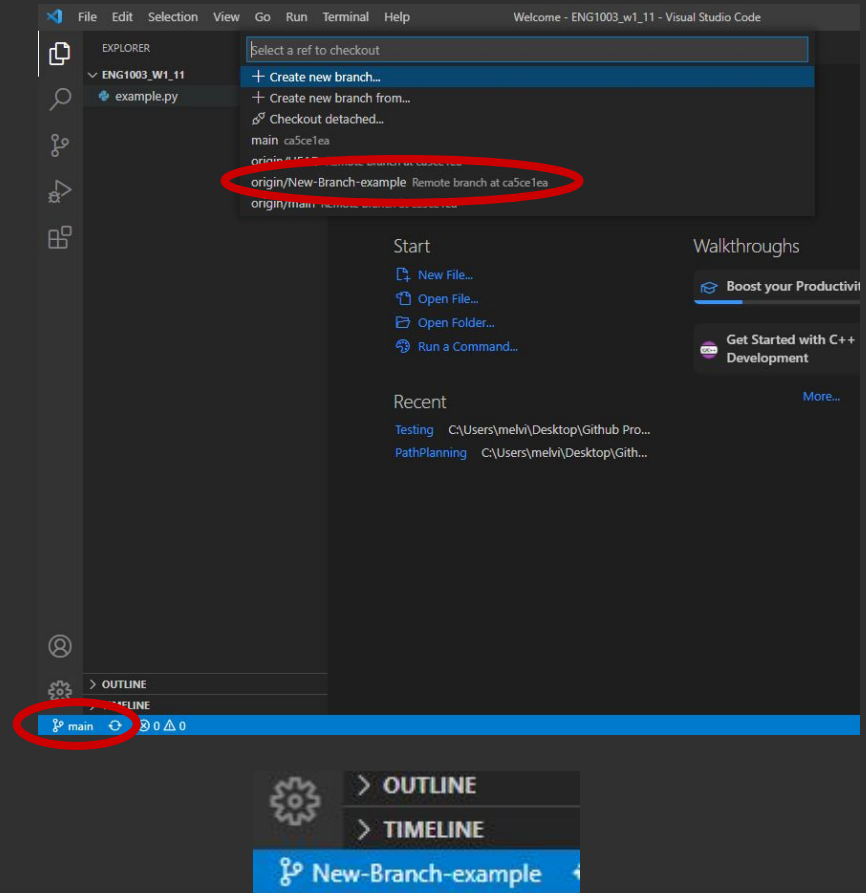
Switch to your own branch

1. Click the 'main' icon on the bottom left corner
2. Select the branch you created for yourself
3. You will see the 'main' icon replaced by the name of your own branch



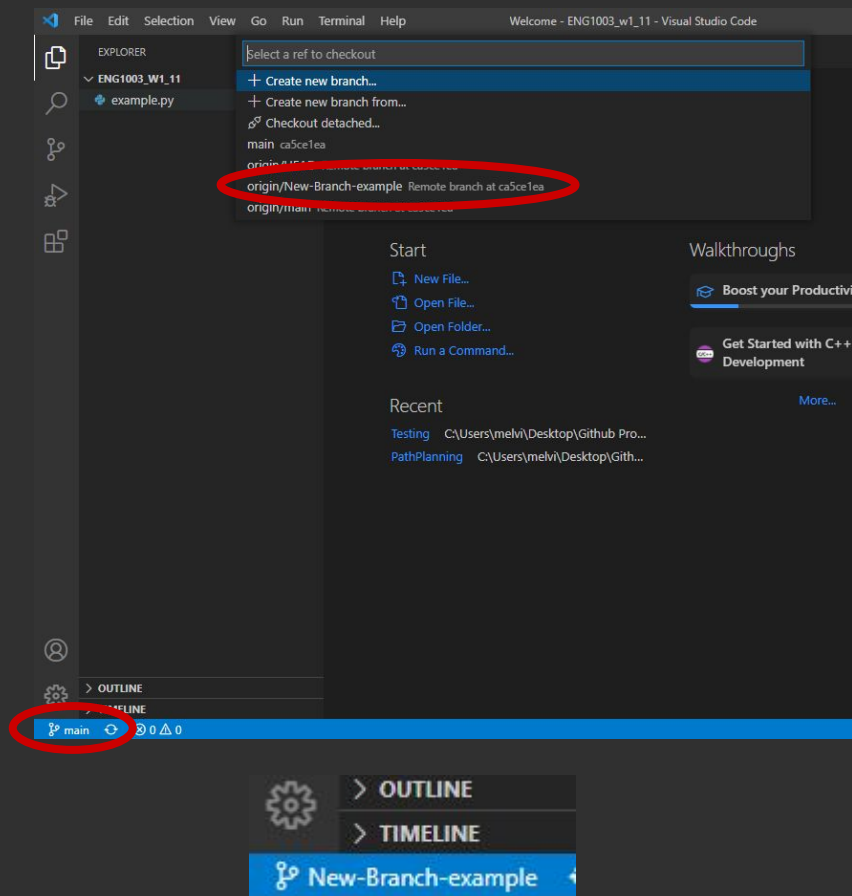
Switch to your own branch

1. Click the 'main' icon on the bottom left corner
2. Select the branch you created for yourself
3. You will see the 'main' icon replaced by the name of your own branch



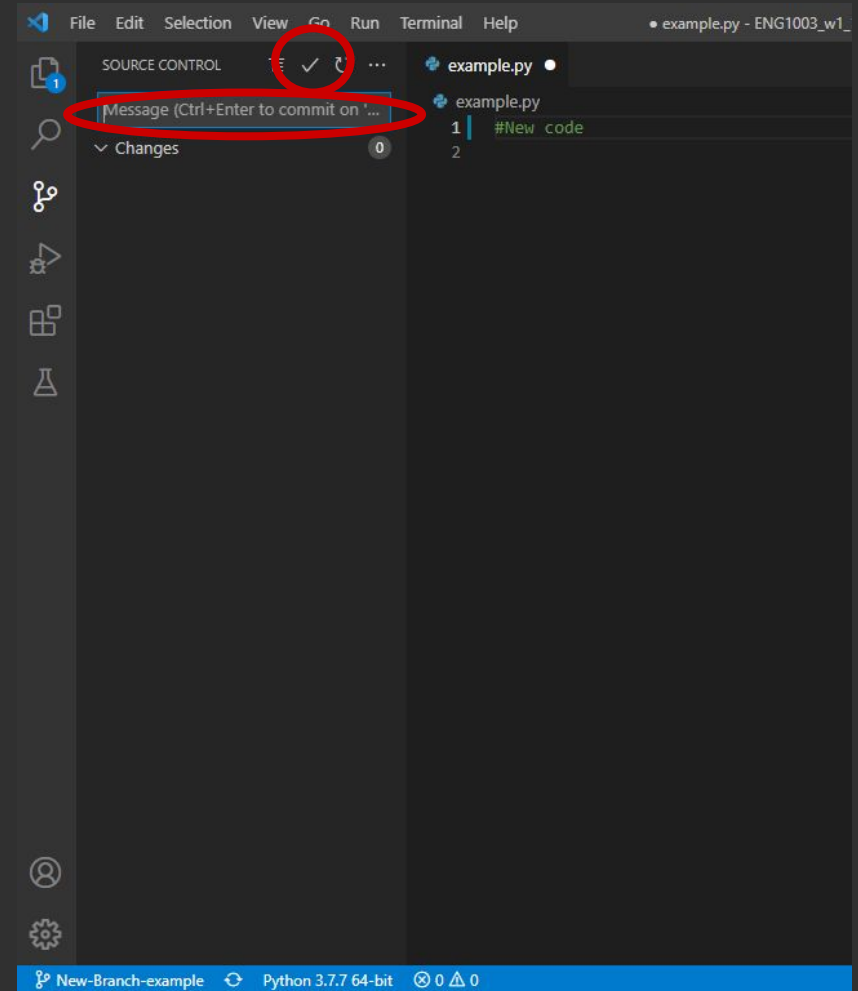
Coding

1. Edit the code once you are in your own branch



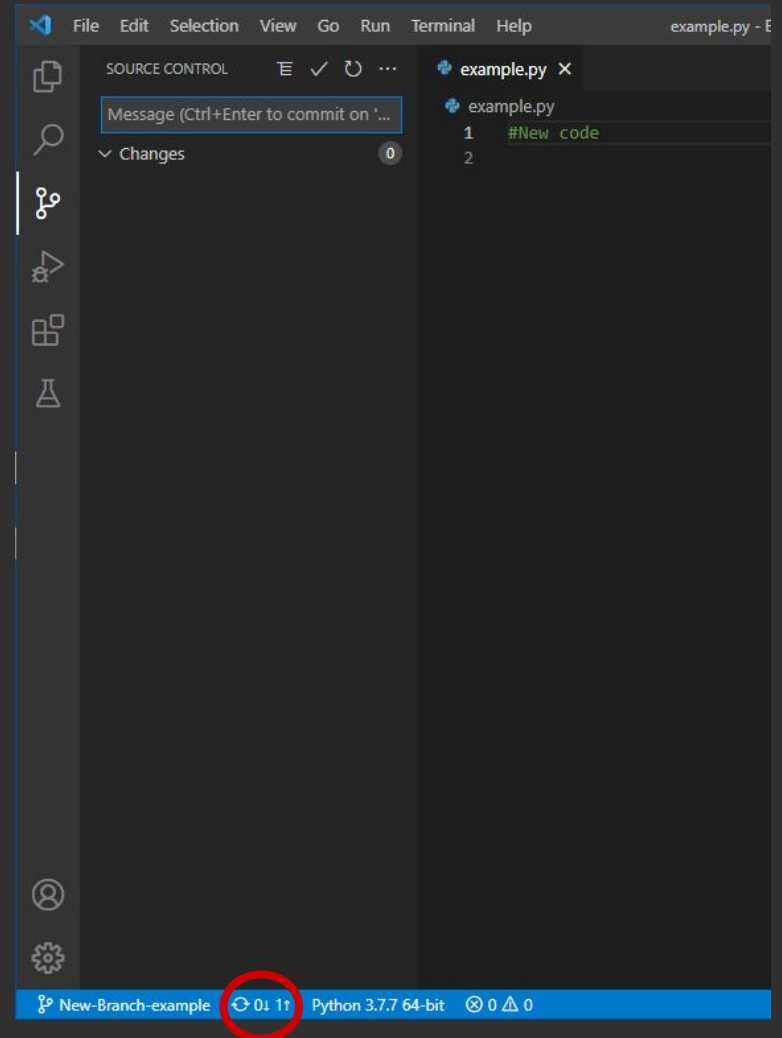
Commit Changes

1. Once you finish editing the code:
 - a. Type in a commit message
 - b. Click the tick button



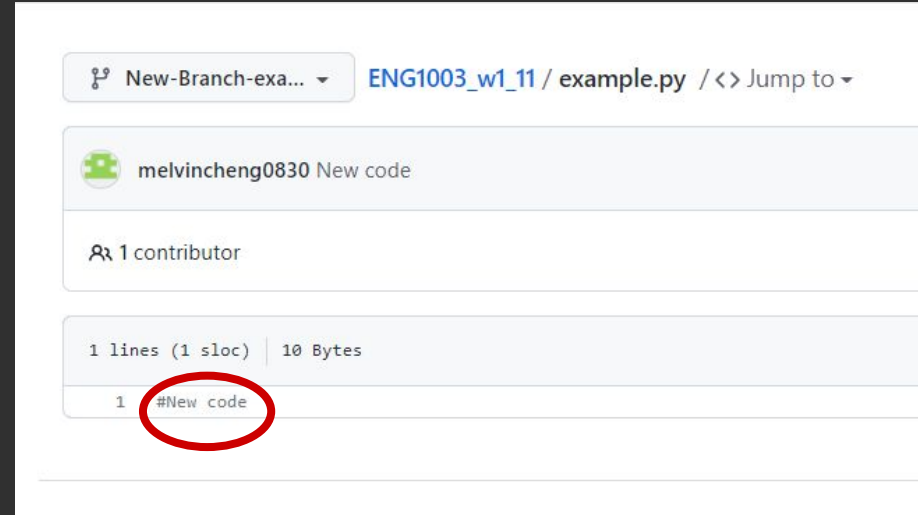
Push

1. Once you committed your changes to the local repository:
 - a. Click the push button
(Shown on the right)



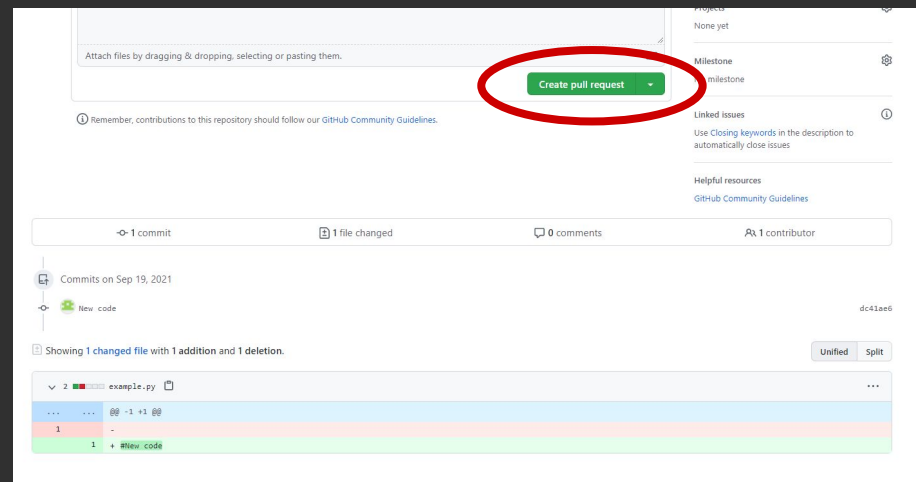
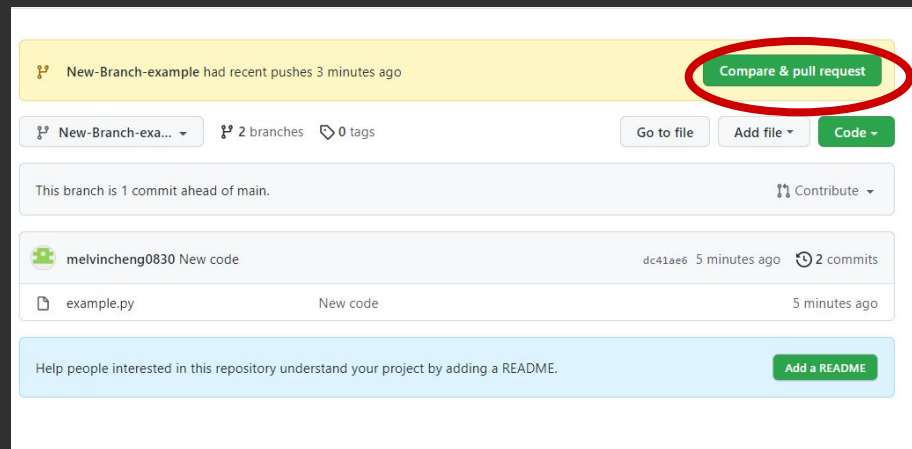
Check if push is finished

1. Go back to GitHub
2. Go to your own branch
3. See if the changes were made



Create pull request

1. Once you completed your part:
 - a. Go to your branch
 - b. Click compare and pull request
 - c. Create a pull request



Combining the codes into one programme

1. Go to 'pull request'
2. Manage all pull requests created for the repository
3. Press 'merge pull request' if you think the code is good
4. Review with your groupmates if there is any problems with the code

