



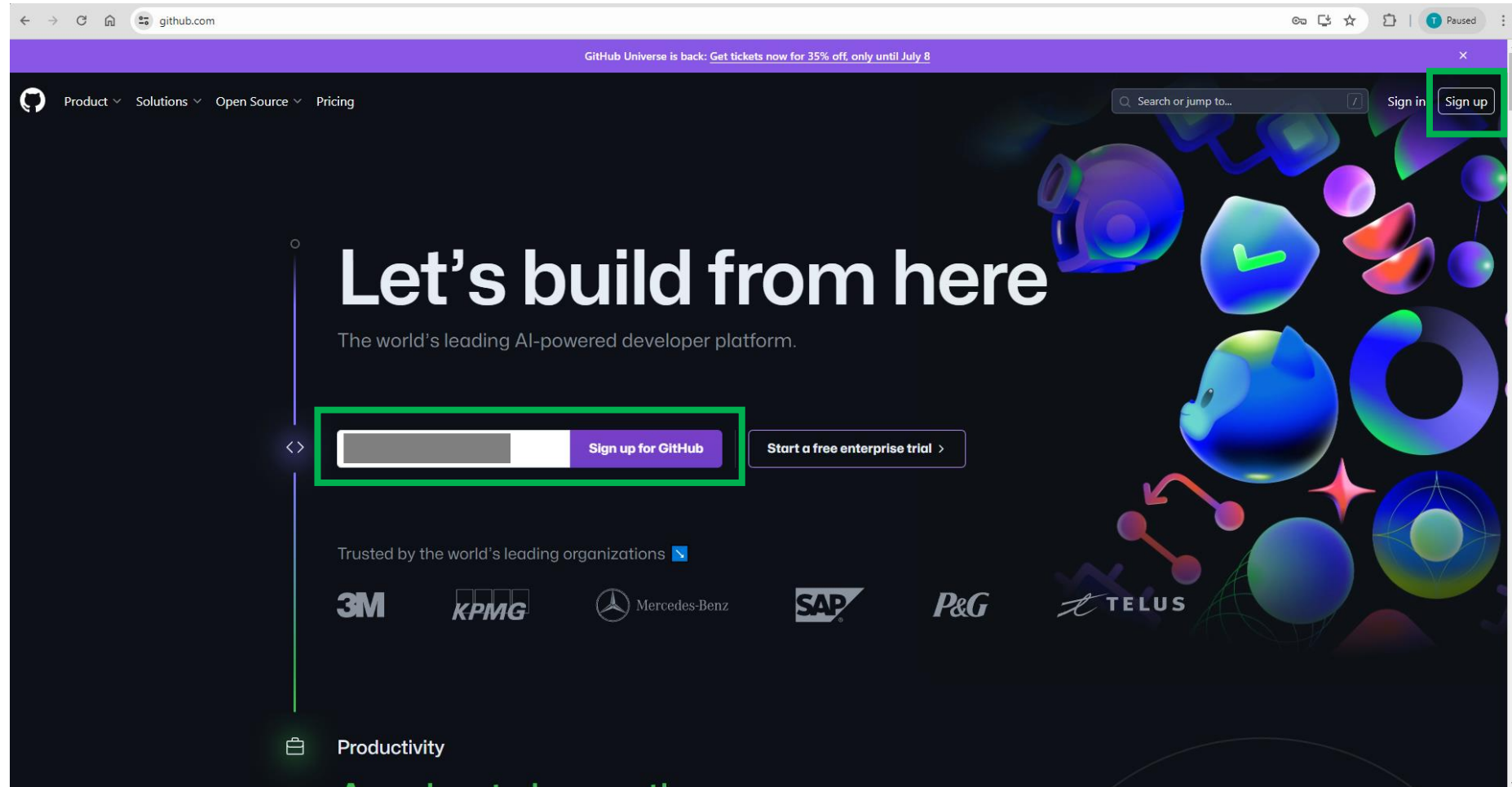
# lecture 0

GitHub and Google Colab

# สมัคร Account GitHub



- <https://github.com/> หรือ  
ค้นหาว่า GitHub ใน  
Google
- - กด Sign up
- - หรือกรอก Gmail และกด  
Sign up for GitHub



# สมัคร Account GitHub



- กรอก Gmail และกด Continue
- ตั้งรหัสผ่าน และกด Continue

The screenshot shows the GitHub sign-up interface. At the top left is the GitHub logo, and at the top right is the text "Already have an account? Sign in →". The main content area has a dark background with a starry pattern. A central white box contains the text "Welcome to GitHub!" and "Let's begin the adventure". Below this, the label "Enter your email\*" is followed by a text input field with a red cursor and a "Continue" button. The entire input section is highlighted with a green rectangular border.

The screenshot shows the next step in the GitHub sign-up process. The "Enter your email\*" field now has a green checkmark and a greyed-out input field, indicating the email has been accepted. Below it, the label "Create a password\*" is followed by a text input field with a red cursor and a "Continue" button. The password input section is highlighted with a green rectangular border.

# สมัคร Account GitHub



- ตั้ง username  
และกด Continue

The image shows the GitHub account creation interface. It has a dark blue background with a starry pattern. At the top left is the GitHub logo, and at the top right is the text 'Already have an account? Sign in →'. The main content area is a white box with the following text: 'Welcome to GitHub!', 'Let's begin the adventure', 'Enter your email\*', a green checkmark, a greyed-out email input field, 'Create a password\*', a green checkmark, and a password input field with dots. At the bottom, there is a red 'Enter a username\*' label, a red arrow pointing to a username input field, and a 'Continue' button. The entire bottom section is highlighted with a red border.

# สมัคร Account GitHub



- กดเครื่องหมายถูก  
และกด Continue

Welcome to GitHub!  
Let's begin the adventure

Enter your email\*

✓

Create a password\*

✓

Enter a username\*

✓

Email preferences

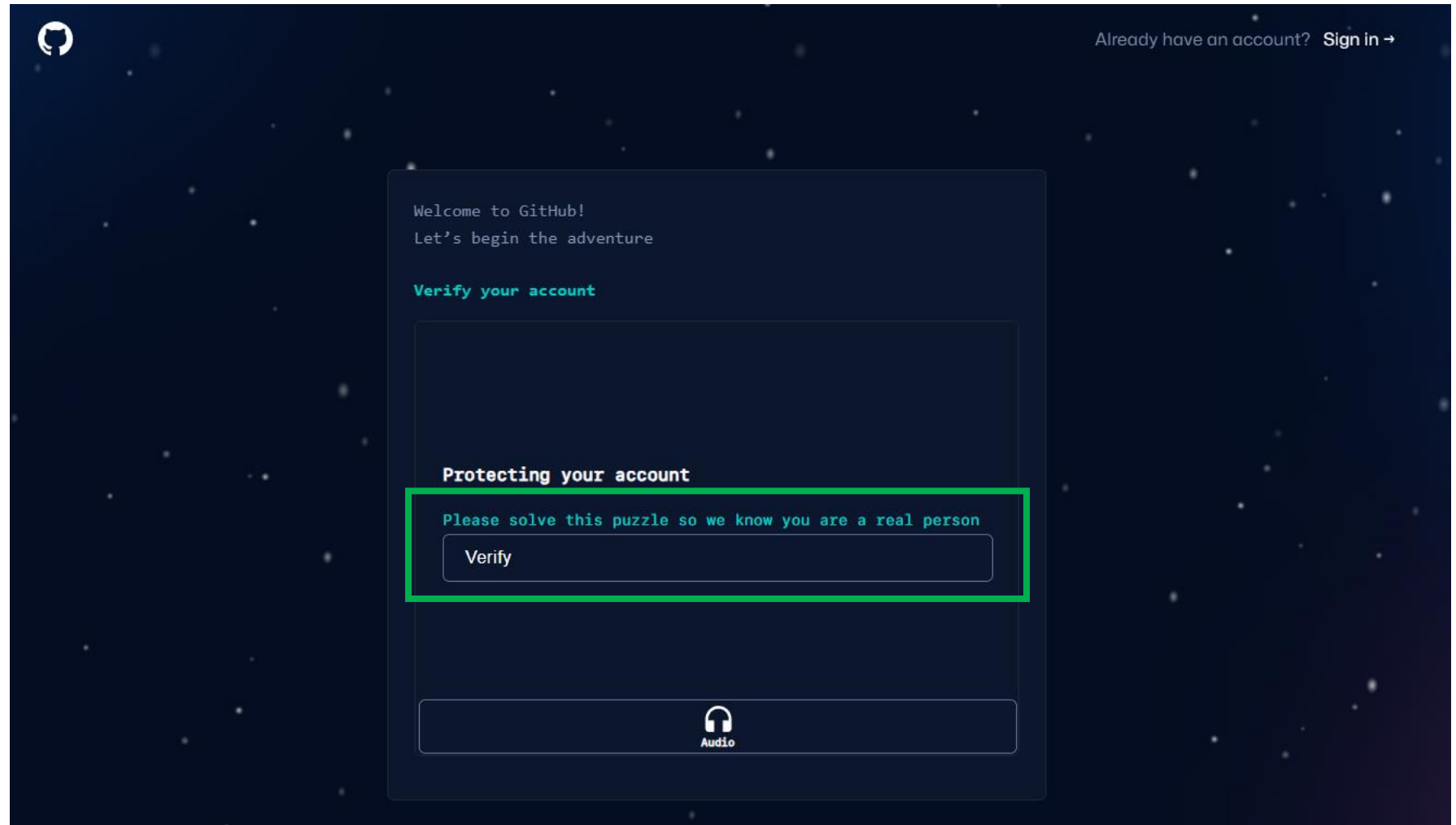
☒ Receive occasional product updates and announcements.

Continue

# สมัคร Account GitHub



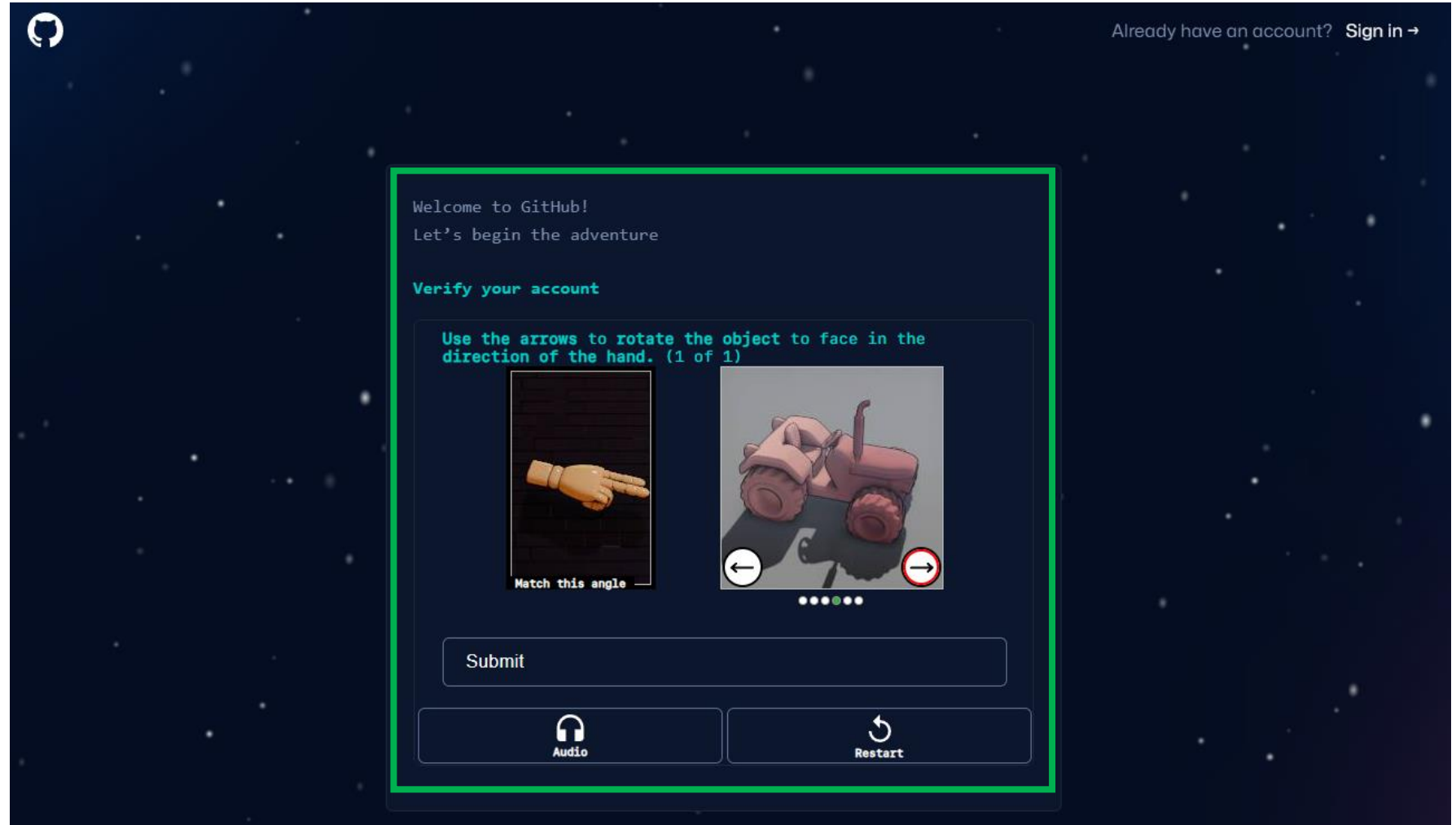
- กด Verify เพื่อยืนยันตัวตน
- โดยการแก้ puzzle แบบสุ่ม



# สมัคร Account GitHub



- ตัวอย่าง puzzle
- แก้ puzzle และกด Submit



# สมัคร Account GitHub



- ให้ไปที่ Gmail ที่ใช้สมัครเพื่อ  
รับ launch code

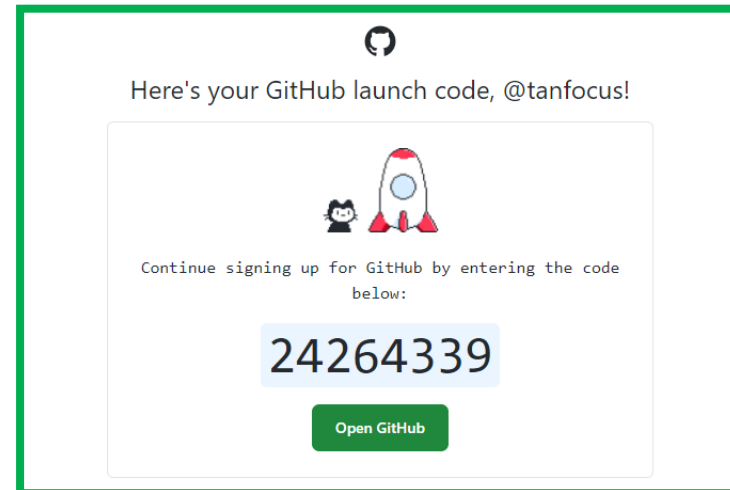
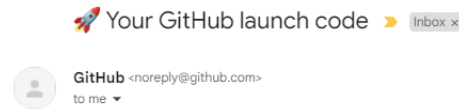




# สมัคร Account GitHub



- ตัวอย่าง launch code
- Copy launch code ไปกรอก  
ในหน้าก่อนหน้า
- หรือกด Open GitHub ใน  
Mail



Once completed, you can start using all of GitHub's features to explore, build, and share projects.

Not able to enter the code? Paste the following link into your browser:  
[https://github.com/users/tanfocustanfocus/emails/323456056/confirm\\_verification/24264339?via\\_launch\\_code\\_email=true](https://github.com/users/tanfocustanfocus/emails/323456056/confirm_verification/24264339?via_launch_code_email=true)

[Email preferences](#) · [Terms](#) · [Privacy](#) · [Sign in to GitHub](#)

# สมัคร Account GitHub



- กรอกข้อมูลและกด Continue

The image shows the GitHub welcome screen. On the left, the GitHub logo is at the top, followed by a speech bubble icon containing three people and an '@' symbol. Below this, the text 'Welcome to GitHub' is displayed in a large, bold, light blue font, with 'We are glad you're here.' in a smaller font underneath. At the bottom left, there is a link that says 'Skip personalization'. On the right side, a white box with a green border contains a personalization form. The form has a progress bar at the top. The text 'This will help us guide you to the tools that are best suited for your projects.' is at the top of the form. Below this, the question 'How many team members will be working with you?' is followed by six radio button options: 'Just me' (selected), '2-5', '5-10', '10-20', '20-50', and '50+'. Below these, the question 'Are you a student or teacher?' is followed by three radio button options: 'N/A', 'Student' (selected), and 'Teacher'. At the bottom of the form is a large blue button labeled 'Continue'.

# สมัคร Account GitHub



- เลือก tools ที่ต้องการใช้ใน GitHub
- เลือกทั้งหมดและกด Continue

**The tools you need to build what you want.**

Soup to nuts, GitHub has it all.

Select all that apply so we can point you to the right GitHub plan.

- ☒ Collaborative coding  
Codespaces, Pull requests, Notifications, Code review, Code review assignments, Code owners, Draft pull requests, Protected branches, and more.
- ☒ Automation and CI/CD  
Actions, Packages, APIs, GitHub Pages, GitHub Marketplace, Webhooks, Hosted runners, Self-hosted runners, Secrets management, and more.
- ☒ Security  
Private repos, 2FA, Required reviews, Required status checks, Code scanning, Secret scanning, Dependency graph, Dependabot alerts, and more.
- ☒ Client Apps  
GitHub Mobile, GitHub CLI, and GitHub Desktop.
- ☒ Project Management  
Projects, Labels, Milestones, Issues, Unified Contribution Graph, Org activity graph, Org dependency insights, Repo insights, Wikis, and GitHub Insights.
- ☒ Team Administration  
Organizations, Invitations, Team sync, Custom roles, Domain verification, Audit Log API, Repo creation restriction, and Notification restriction.
- ☒ Community  
GitHub Marketplace, GitHub Sponsors, GitHub Skills, and Electron.

**Continue**

# สมัคร Account GitHub



- เลื่อนลงมา และกด  
Continue for free

**Free**

- > Unlimited public/private repositories
- > 2,000 CI/CD minutes/month  
Free for public repositories
- > 500MB of Packages storage  
Free for public repositories
- > 120 core-hours of Codespaces compute
- > 15GB of Codespaces storage
- > Community support

**Get additional student benefits**

**GitHub Pro**

- > **Protect your branches**  
Ensure that collaborators on your repository cannot make irrevocable changes to branches.
- > Draft pull requests
- > Pages and Wikis
- > 3,000 CI/CD minutes/month  
Free for public repositories
- > 2GB of Packages storage  
Free for public repositories
- > 180 core-hours of Codespaces compute
- > 20GB of Codespaces storage
- > Web-based support

**Continue for free**

# สมัคร Account GitHub



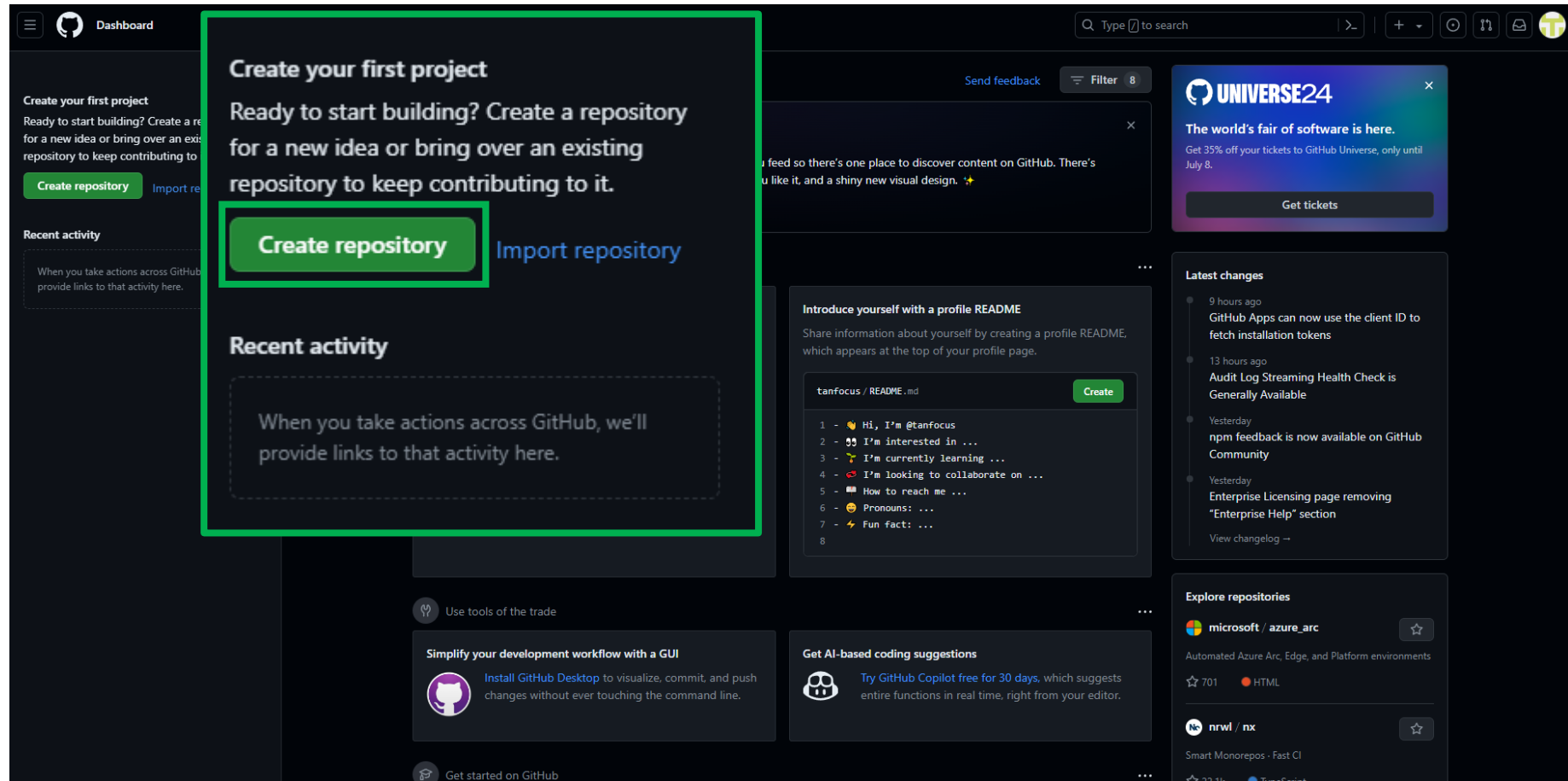
The screenshot shows the GitHub Dashboard with a dark theme. The top navigation bar includes the GitHub logo, the word "Dashboard", a search bar, and various utility icons. The main content area is divided into several sections:

- Left Sidebar:**
  - Create your first project:** A section with a description and two buttons: "Create repository" (highlighted in green) and "Import repository".
  - Recent activity:** A section with a description and a dashed box placeholder.
- Home Section:**
  - Updates to your homepage feed:** A notification about feed improvements with a "Learn more" link.
  - Start writing code:** A section with a sub-header "Start a new repository for tanfocus", a description, a text input for the repository name, and radio buttons for "Public" and "Private" visibility. A green "Create a new repository" button is at the bottom.
  - Introduce yourself with a profile README:** A section with a description and a code editor showing a README template for "tanfocus / README.md". A green "Create" button is at the bottom right.
- Right Sidebar:**
  - UNIVERSE24:** A promotional banner for GitHub Universe 2024 with a "Get tickets" button.
  - Latest changes:** A list of recent updates, including "GitHub Apps can now use the client ID to fetch installation tokens" and "npm feedback is now available on GitHub Community".
  - Explore repositories:** A list of featured repositories, including "microsoft / azure\_arc" and "nrwl / nx".
- Bottom Section:**
  - Simplify your development workflow with a GUI:** A section promoting GitHub Desktop.
  - Get AI-based coding suggestions:** A section promoting GitHub Copilot.
  - Get started on GitHub:** A section with a graduation cap icon.

# การสร้าง repository ใน GitHub



- กด Create repository



# การสร้าง repository ใน GitHub



- ตั้งชื่อ repository
- Basic-Programming-and-Data-Viz-2024
- เลือก Public
- เลือก Add a README file
- กด Create repository

**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 \* tanfocus / Repository name \* Basic-Programming-and-I  
Basic-Programming-and-Data-Viz-2024 is available.

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

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:

☒ **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: None

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. Change the default name in your [settings](#).

ⓘ You are creating a public repository in your personal account.

**Create repository**

# การสร้าง repository ใน GitHub



The screenshot shows a GitHub repository page for 'Basic-Programming-and-Data-Viz-2024' by user 'tanfocus'. The repository is public and has 1 branch (main) and 0 tags. It contains 1 commit (7c930c5) and 1 file (README.md). The README file is titled 'Basic-Programming-and-Data-Viz-2024'. The right sidebar shows the repository's statistics: 0 stars, 1 watching, and 0 forks. There are no releases or packages published yet.

tanfocus / Basic-Programming-and-Data-Viz-2024

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

Basic-Programming-and-Data-Viz-2024 Public

Pin Unwatch 1 Fork 0 Star 0

main 1 Branch 0 Tags

Go to file Add file Code

tanfocus Initial commit 7c930c5 · now 1 Commits

README.md Initial commit now

README

Basic-Programming-and-Data-Viz-2024

About

No description, website, or topics provided.

Readme Activity 0 stars 1 watching 0 forks

Releases

No releases published [Create a new release](#)

Packages

No packages published [Publish your first package](#)

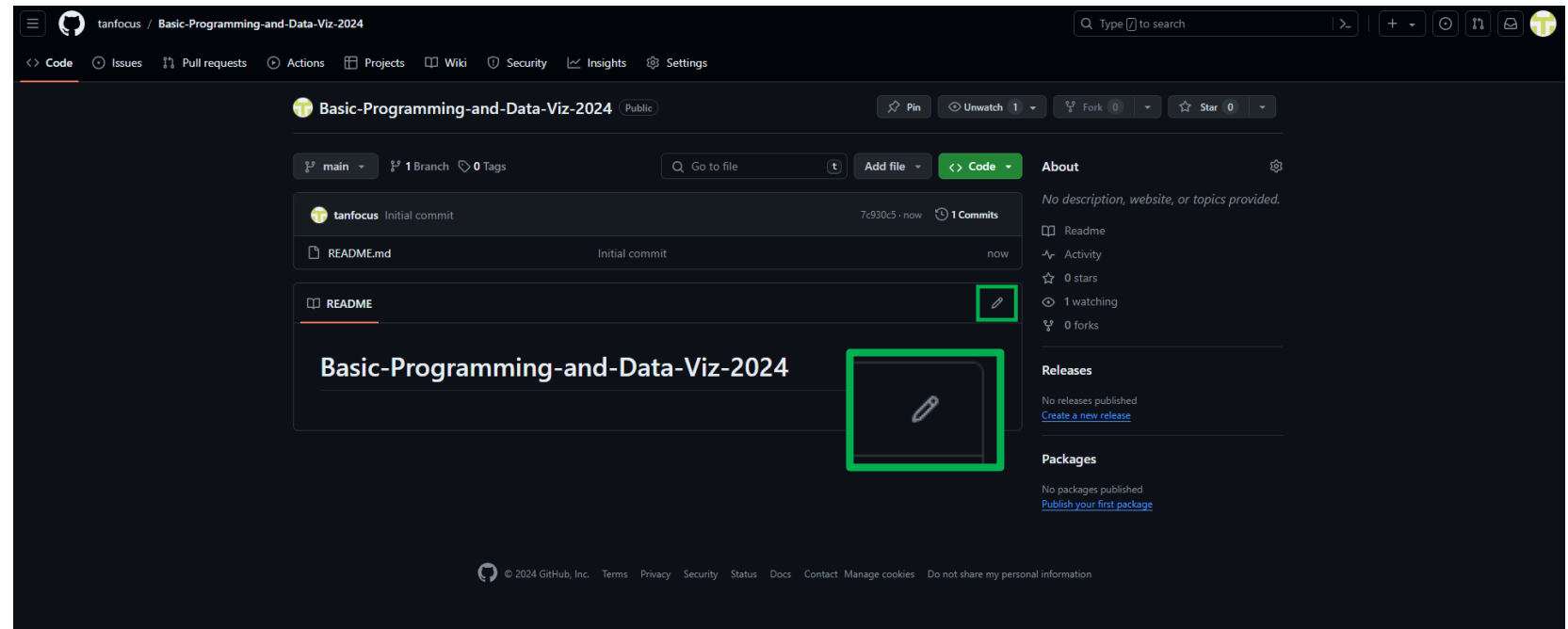
© 2024 GitHub, Inc. Terms Privacy Security Status Docs Contact Manage cookies Do not share my personal information



# README file



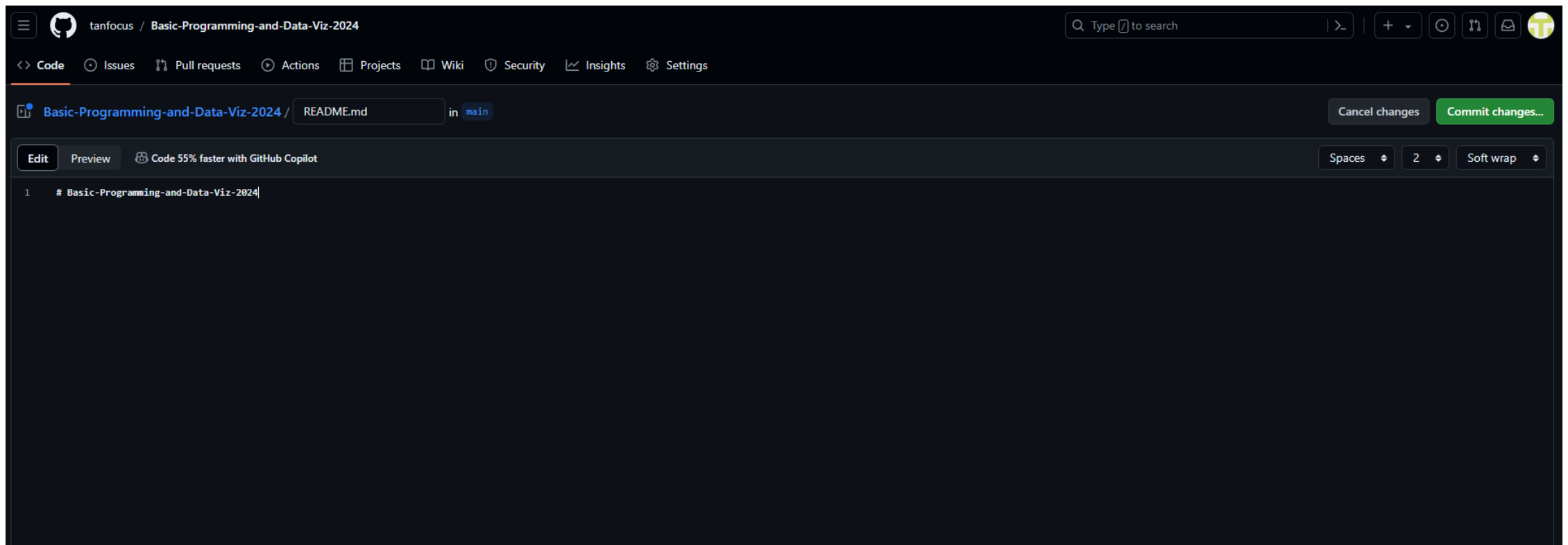
- กดสัญลักษณ์  เพื่อแก้ไข README file



# README file



- สามารถพิมพ์ข้อความที่ต้องการใส่ไฟล์ README โดยส่วนใหญ่จะใช้เขียนข้อความอธิบายเกี่ยวกับ repository ที่สร้าง



# README file



- # Basic-Programming-and-Data-Viz-2024
- KKU Basic Programming for Data Science and Data Visualization<br />
- ชื่อ-นามสกุล รหัสนักศึกษา
- # GradingA top 10-15 B+ ถึง F ตามเกณฑ์<br />
- \* Homework (เดี่ยว,กลุ่ม-สุม) 25%
- \* Quiz (เดี่ยว) 10%\* Project (กลุ่ม-เลือกเอง) 30%
- \* Mid-term Exam (เดี่ยว) 15%
- \* Final Exam (กลุ่ม-สุม) 20%Final Score = Score
- \* Attendance
- ### [Basic writing and formatting syntax](https://pages.github.com/)(https://docs.github.com/en/get-started/writing-on-github/getting-started-with-writing-and-formatting-on-github/basic-writing-and-formatting-syntax))

# README file



- ให้ Copy ข้อความสไลด์ก่อนหน้านี้วางใน Edit README file ใส่ ชื่อ-นามสกุล รหัสนักศึกษา ของตัวเอง
- กด Commit changes...

```
1 # Basic-Programming-and-Data-Viz-2024
2 KKU Basic Programming for Data Science and Data Visualization<br />
3 ชื่อ-นามสกุล รหัสนักศึกษา
4 # GradingA top 10-15 B+ ถึง F ตามเกณฑ์<br />
5 * Homework (เดี่ยว,กลุ่ม-สัปดาห์) 25%
6 * Quiz (เดี่ยว) 10%* Project (กลุ่ม-เลือกเอง) 30%
7 * Mid-term Exam (เดี่ยว) 15%
8 * Final Exam (กลุ่ม-สัปดาห์) 20%Final Score = Score
9 * Attendance
10 ### [Basic writing and formatting syntax](https://pages.github.com/)(https://docs.github.com/en/get-started/writing-on-github/getting-started-with-writing-and-formatting-on-github/basic-writing-and-formatting-syntax))
```

# README file



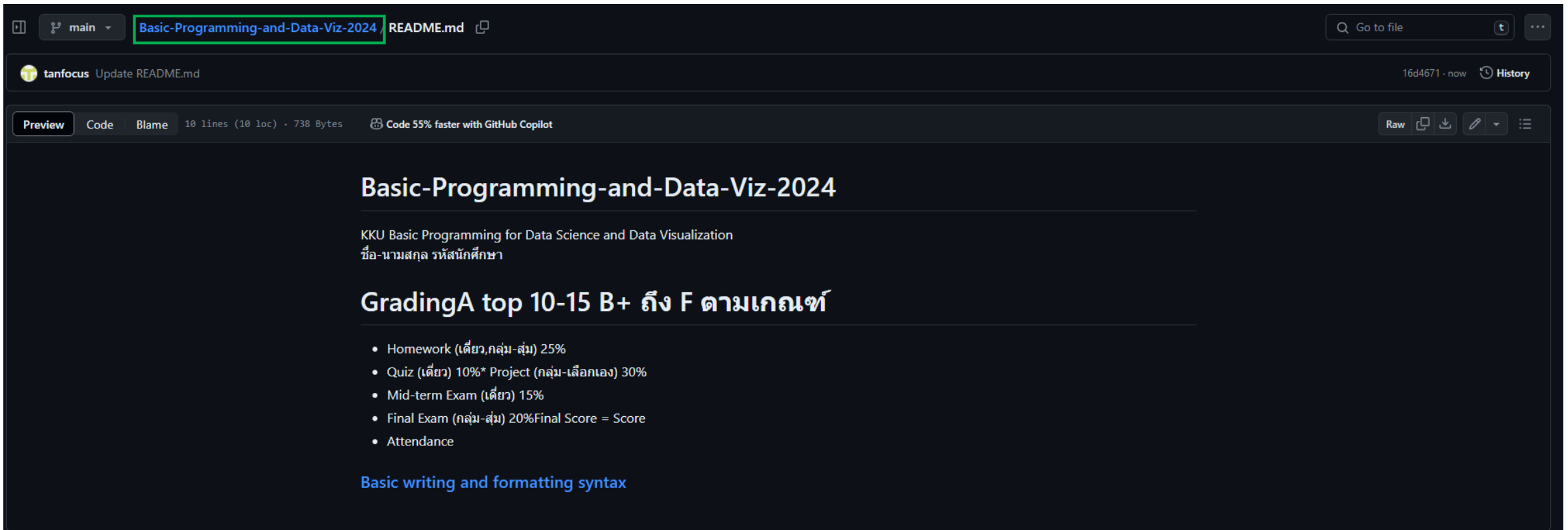
- สามารถเขียน Commit message ได้ว่าเขียนหรือแก้ไขไฟล์ README.md อะไรไปบ้าง
- กด Commit changes

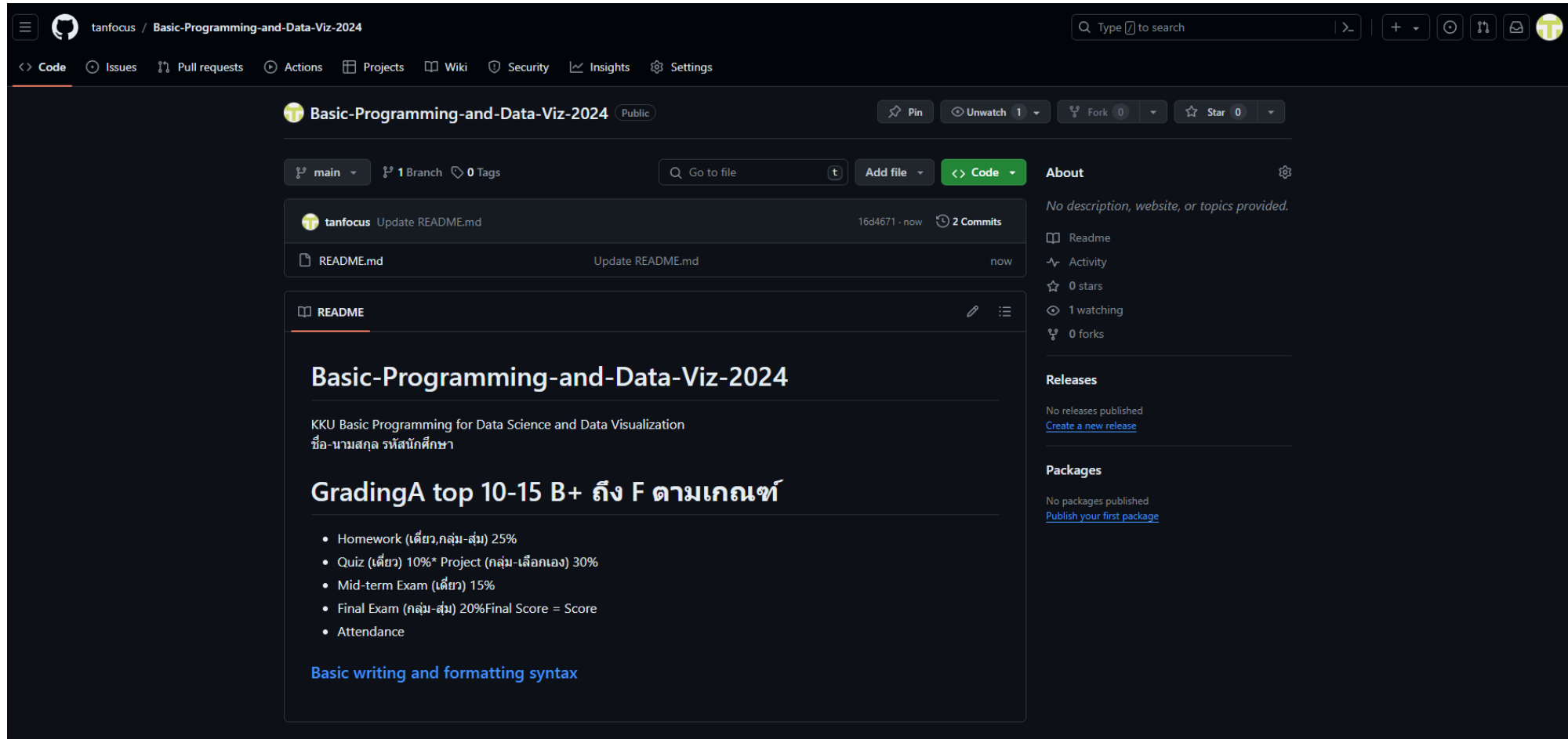
A screenshot of a "Commit changes" dialog box. The dialog has a title bar "Commit changes" with a close button. It contains a "Commit message" section with a text input field containing "Update README.md". Below this is an "Extended description" section with a text area containing the placeholder "Add an optional extended description..". At the bottom, there are two radio button options: "Commit directly to the main branch" (which is selected) and "Create a new branch for this commit and start a pull request" (with a link to "Learn more about pull requests"). At the very bottom, there are two buttons: "Cancel" and "Commit changes", which is highlighted with a green rectangular border.

# README file



- หน้าตาผลลัพธ์
- กดกลับไปหน้า repository

A screenshot of a GitHub repository's README file. The repository name is 'Basic-Programming-and-Data-Viz-2024'. The file is named 'README.md' and was updated by 'tanfocus'. The README content includes the title 'Basic-Programming-and-Data-Viz-2024', a subtitle 'KKU Basic Programming for Data Science and Data Visualization', and a list of grading criteria: 'GradingA top 10-15 B+ ถึง F ตามเกณฑ์'. The criteria are: Homework (เดี่ยว,กลุ่ม-สัปดาห์) 25%, Quiz (เดี่ยว) 10%\* Project (กลุ่ม-เลือกเอง) 30%, Mid-term Exam (เดี่ยว) 15%, Final Exam (กลุ่ม-สัปดาห์) 20%, and Attendance. The final score is calculated as 'Final Score = Score'. There is also a link to 'Basic writing and formatting syntax'.



The screenshot shows a GitHub repository page for "Basic-Programming-and-Data-Viz-2024" by user "tanfocus". The repository is public and has 1 branch (main) and 0 tags. The commit history shows a recent update to README.md. The README content includes the course title, a description in Thai, and a grading scale.

**Repository Details:**

- Repository: Basic-Programming-and-Data-Viz-2024 (Public)
- Owner: tanfocus
- Branches: 1 Branch (main)
- Tags: 0 Tags
- Commits: 2 Commits

**README Content:**

**Basic-Programming-and-Data-Viz-2024**

KKU Basic Programming for Data Science and Data Visualization  
ชื่อ-นามสกุล รหัสนักศึกษา

**GradingA top 10-15 B+ ถึง F ตามเกณฑ์**

- Homework (เดี่ยว,กลุ่ม-ส่วน) 25%
- Quiz (เดี่ยว) 10%\* Project (กลุ่ม-เลือกเอง) 30%
- Mid-term Exam (เดี่ยว) 15%
- Final Exam (กลุ่ม-ส่วน) 20%Final Score = Score
- Attendance

[Basic writing and formatting syntax](#)

**Repository Statistics:**

- Stars: 0
- Forks: 0
- Watching: 1

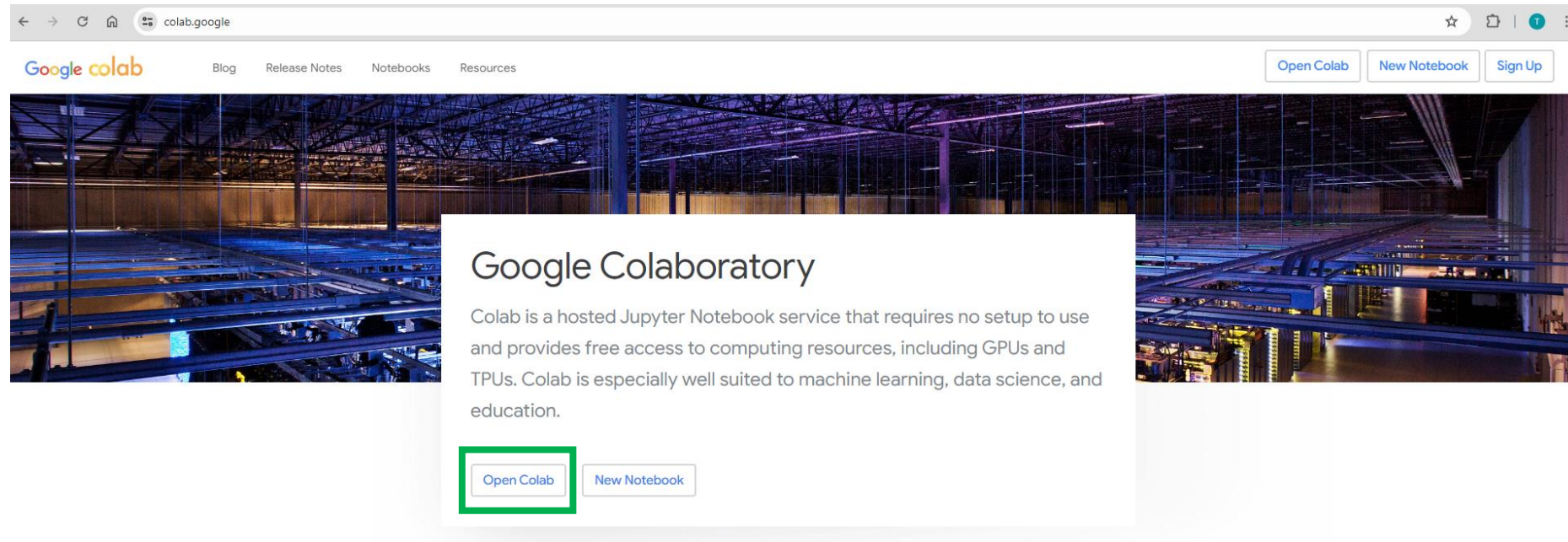
**Releases:** No releases published. [Create a new release](#)

**Packages:** No packages published. [Publish your first package](#)

# สมัคร Google Colab



- <https://colab.google/> หรือ  
ค้นหาว่า Google Colab ใน  
Google
- - กด Open Colab

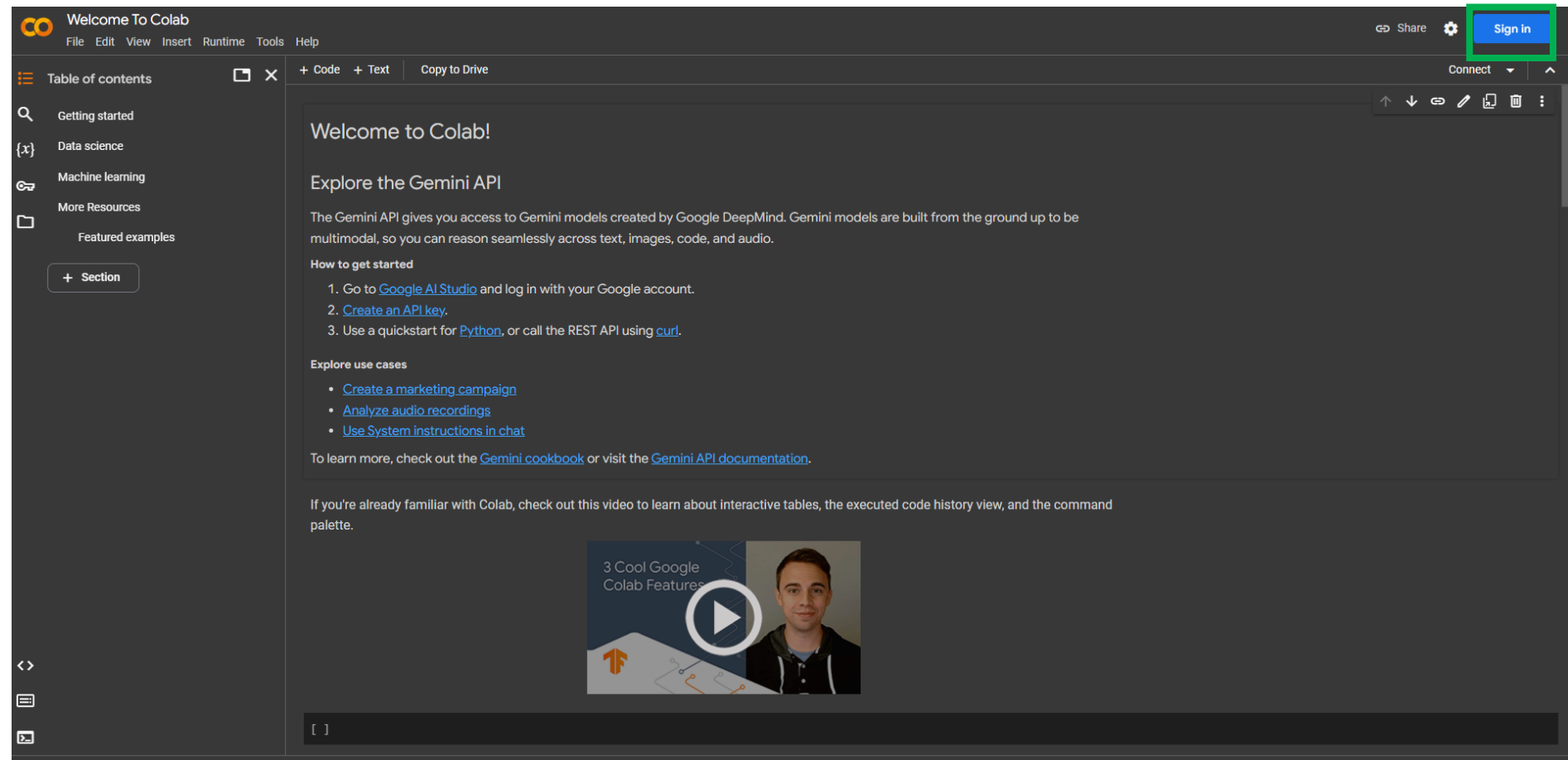




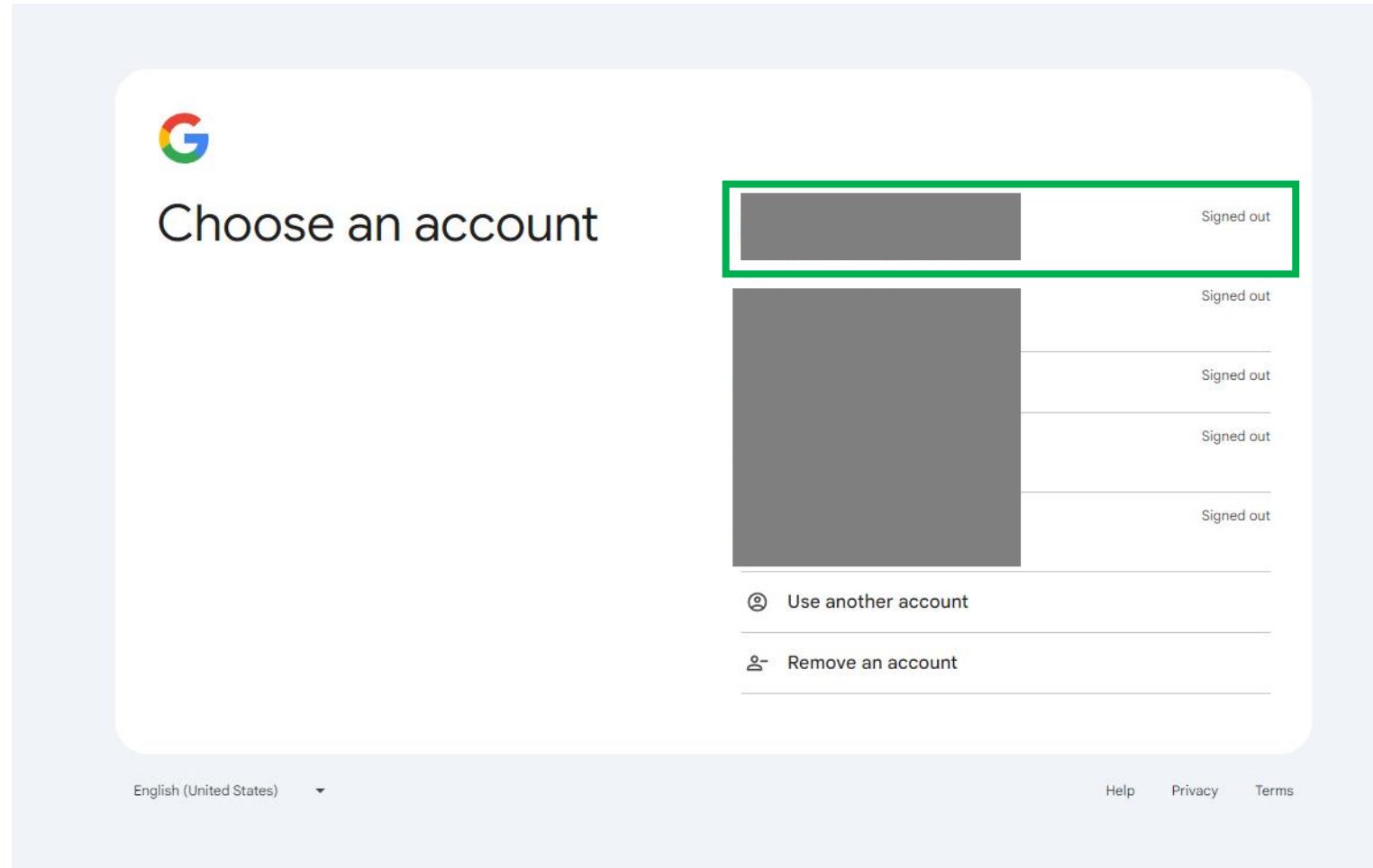
# สมัคร Google Colab



- กด Sign in มุมขวาบน



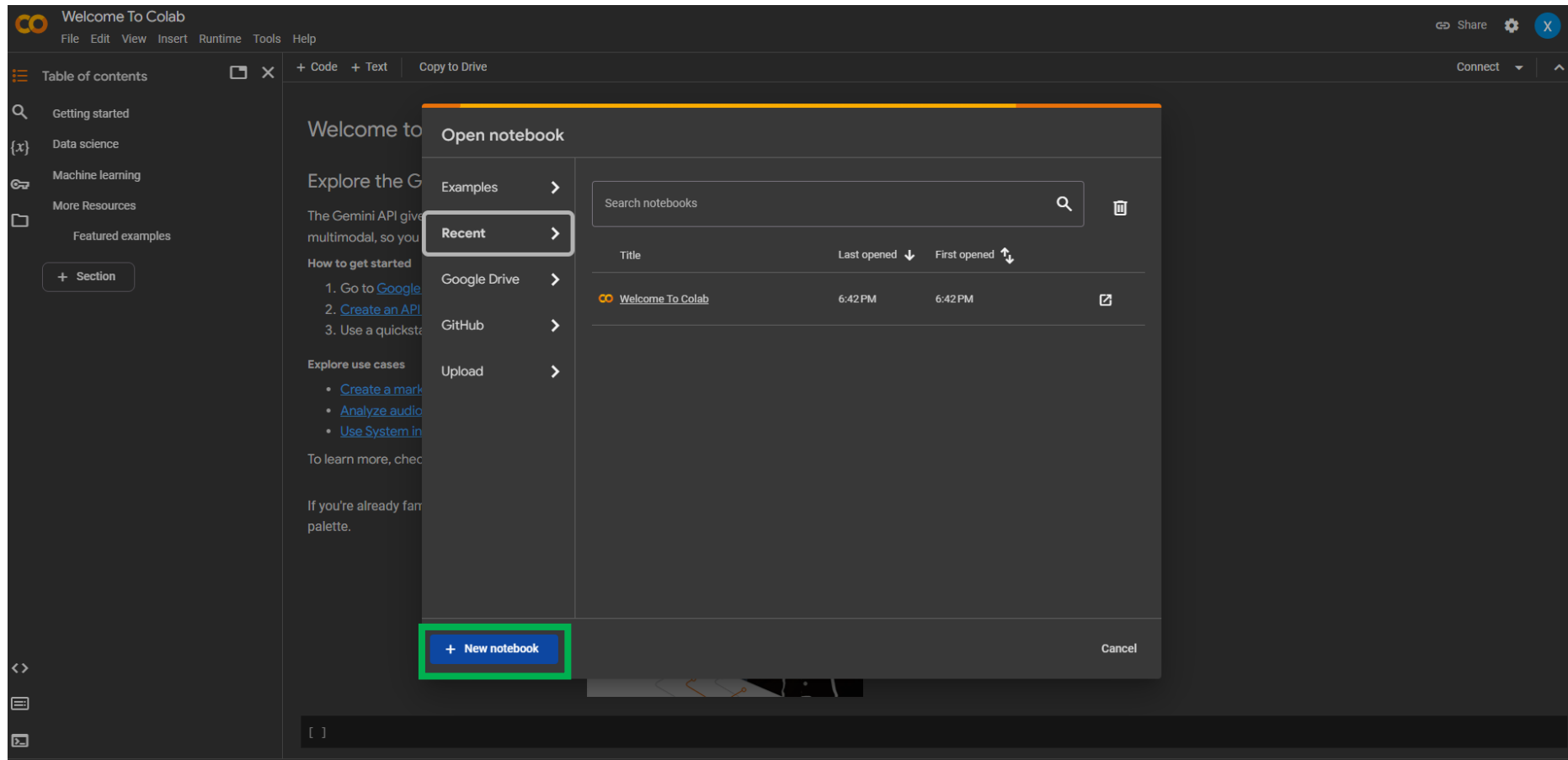
- เลือก account ที่ใช้สมัคร  
GitHub และกรอก password



# การใช้งาน Google Colab



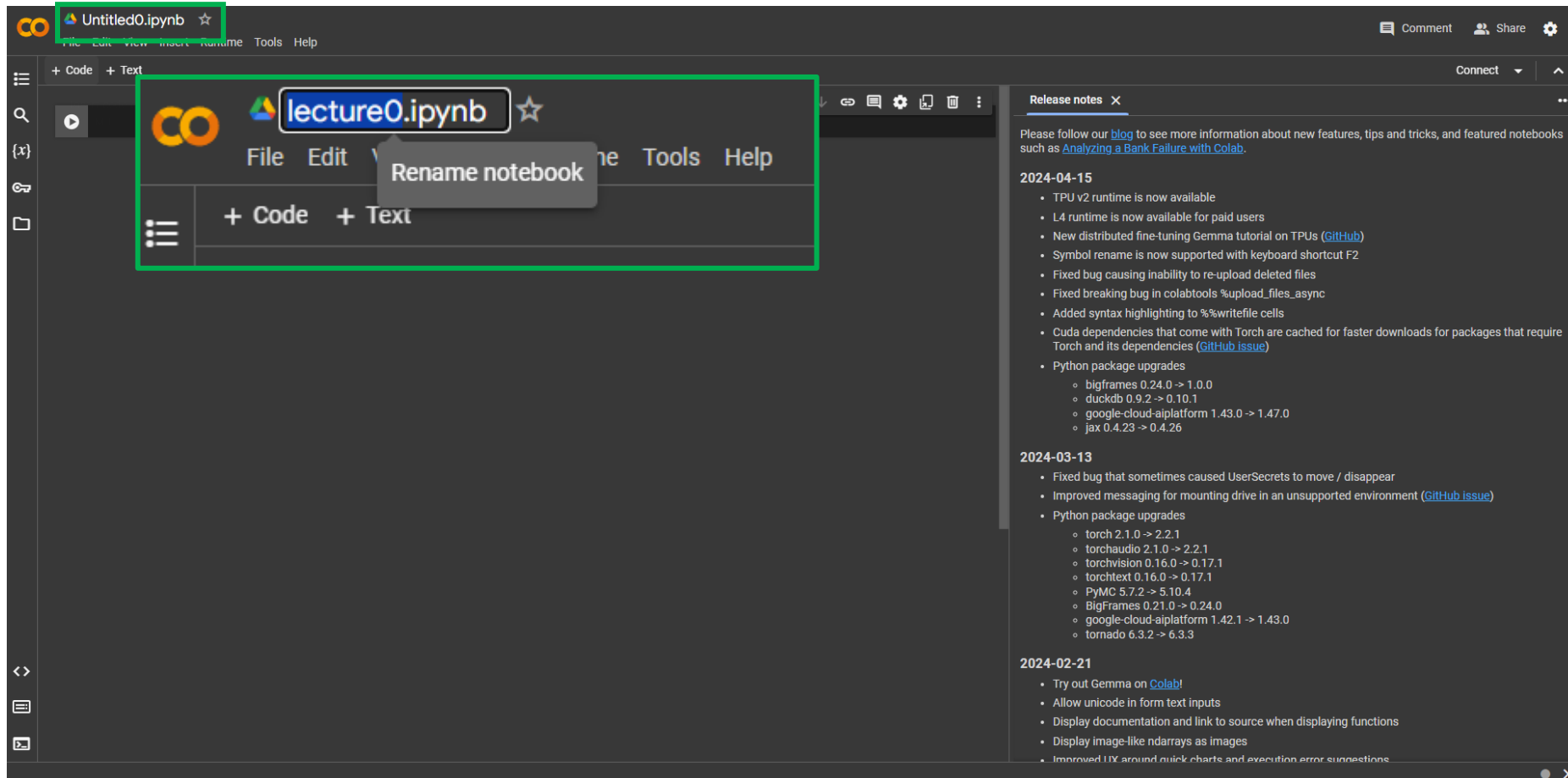
- กด New notebook



# การใช้งาน Google Colab



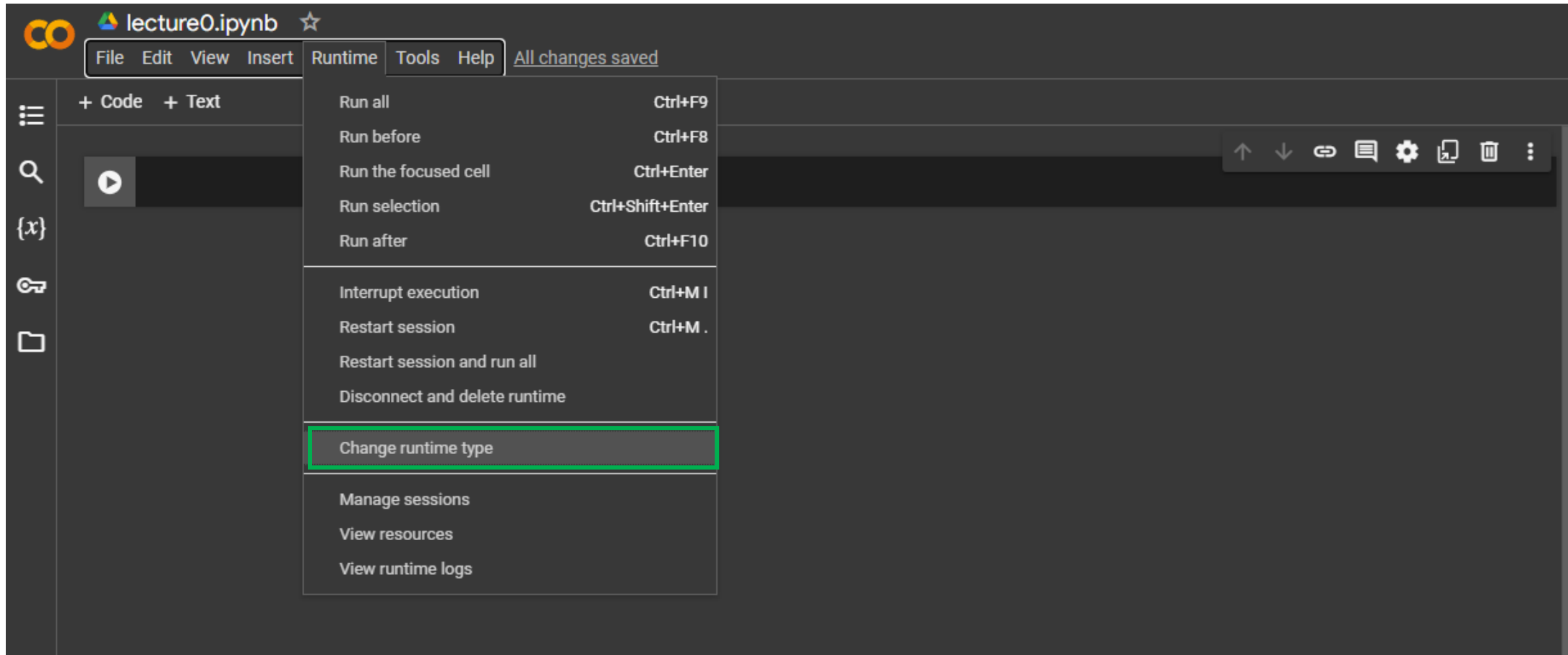
- เปลี่ยนชื่อ notebook ตามที่เราต้องการ



# การใช้งาน Google Colab



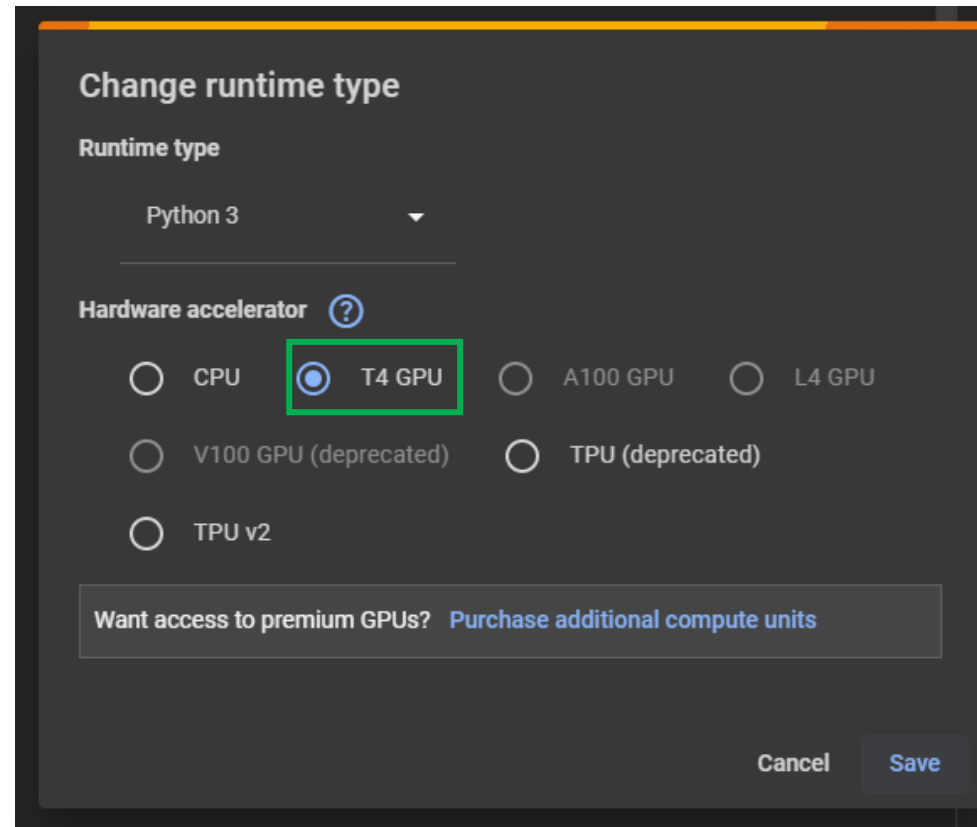
- เปลี่ยน runtime type ให้เป็น GPU



# การใช้งาน Google Colab




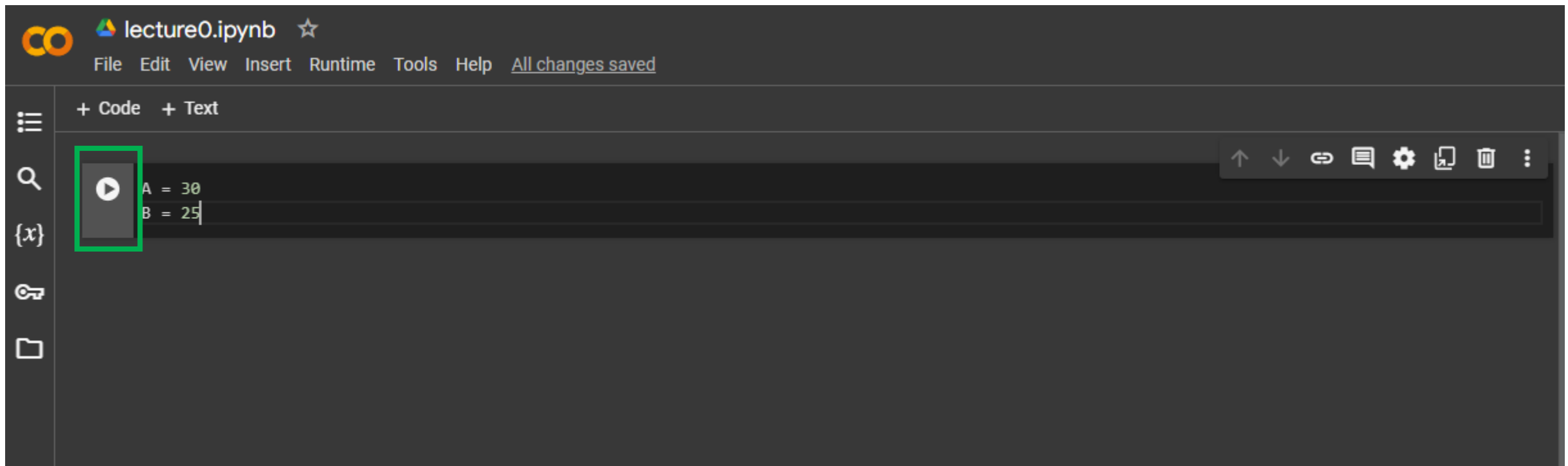
- เลือก GPU จะมีข้อความขึ้นถามถึงการ reset runtime ให้กด OK และกด Save



# สมัคร Google Colab




- การ Run code แต่ละบรรทัดสามารถกดสัญลักษณ์  หรือกด Shift + Enter ใน Keyboard ก็ได้



# สมัคร Google Colab



- การ Run code แต่ละบรรทัดสามารถกดสัญลักษณ์  หรือกด Shift + Enter ใน Keyboard ก็ได้



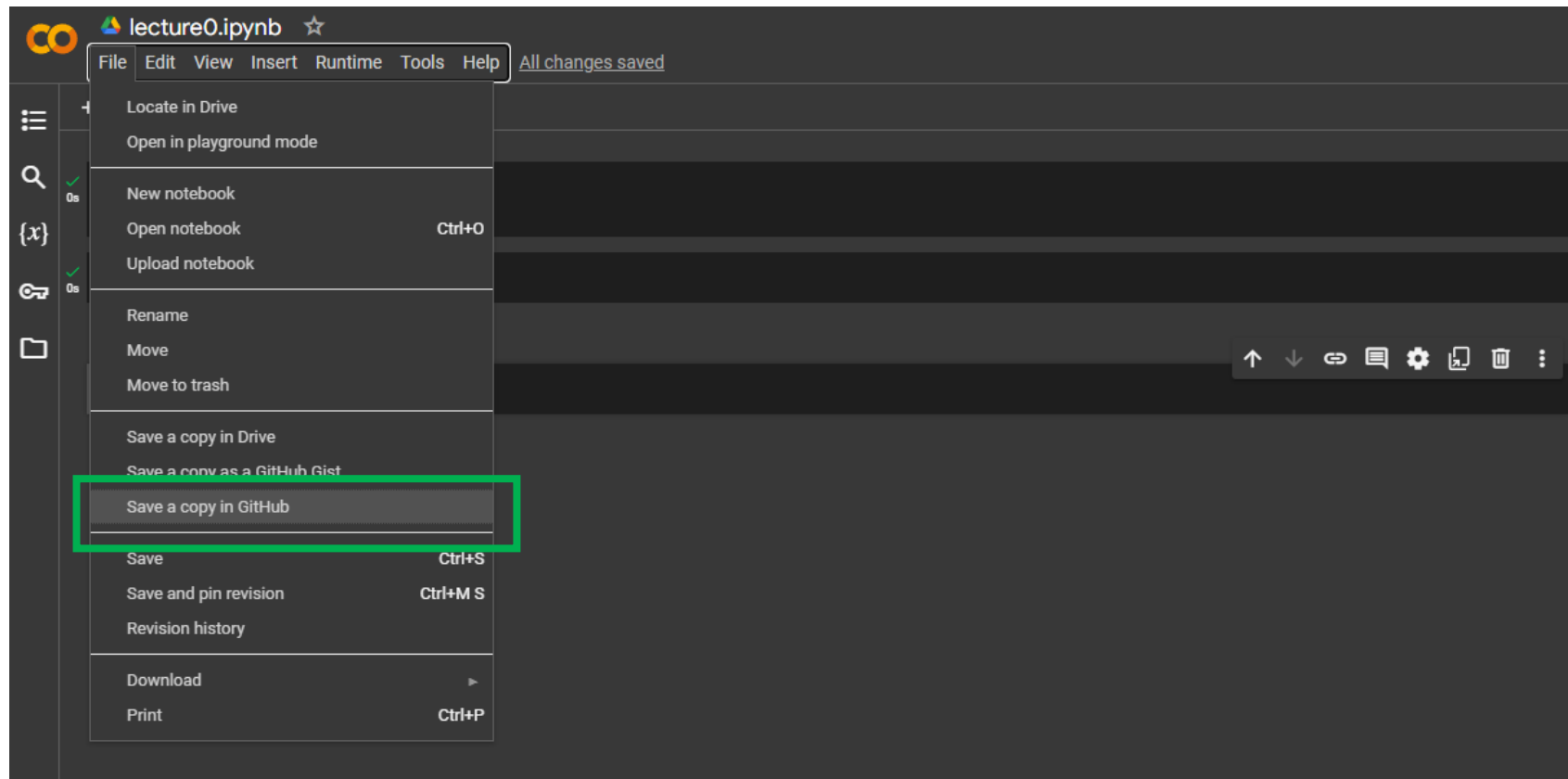
The screenshot shows the Google Colab interface for a file named 'lecture0.ipynb'. The top menu bar includes 'File', 'Edit', 'View', 'Insert', 'Runtime', 'Tools', and 'Help', with a status message 'All changes saved'. Below the menu, there are buttons for '+ Code' and '+ Text'. The main workspace contains two code cells, both of which are highlighted with a green rectangular box. The first cell, labeled '[1]', contains the code 'A = 30' and 'B = 25', and its output is displayed as '0s'. The second cell, labeled '[2]', contains the code 'A + B', and its output is displayed as '55'. At the bottom of the interface, there is a 'Run' button (a play icon) and a text input field. On the right side of the workspace, there is a toolbar with icons for undo, redo, link, chat, settings, copy, and delete.



# การ Commit Google Colab ส่งไป GitHub



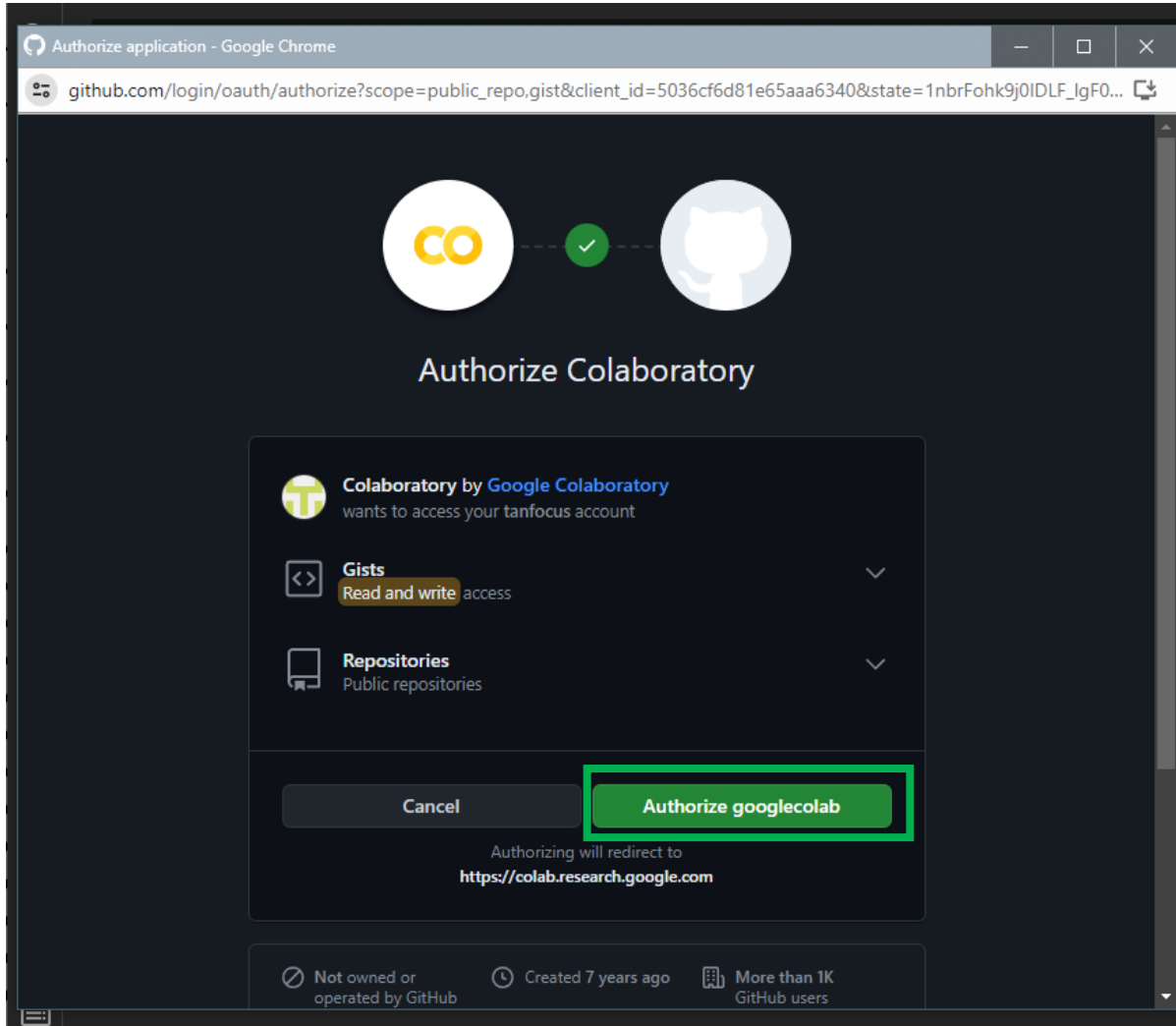
- กด File > Save a copy in GitHub



# การ Commit Google Colab ส่งไป GitHub



- กด Authorize googlecolab





# การ Commit Google Colab ส่งไป GitHub

- กด File > Save a copy in GitHub อีกครั้ง
- เลือก Repository ที่ต้องการบันทึก
- สามารถเขียน Commit message ว่าแก้ไขหรือเพิ่มเติม เรียนเรื่องอะไรใน notebook ของ googlecolab นี้ไปแล้วบ้าง
- จากนั้นกด OK

**Copy to GitHub**

Repository: [tanfocus/Basic-Programming-and-Data-Viz-2](#) Branch: [main](#)

File path\*  
lecture0.ipynb

Commit message  
A = 30 และ B = 25 ดังนั้น A + B = ?

☒ Include a link to Colab

Cancel OK

# การ Commit Google Colab ส่งไป GitHub



- หลังบันทึกเสร็จจะมาหน้า GitHub
- สามารถกด Open in Colab ผ่าน GitHub เพื่อเปิด notebook google colab ได้

The screenshot displays the GitHub web interface for a repository named 'Basic-Programming-and-Data-Viz-2024' by user 'tanfocus'. The 'Files' sidebar on the left shows the file structure, with 'lecture0.ipynb' selected. The main content area shows the file's details, including the commit hash 'f1b9da6' and a 'History' link. The file content is displayed in a Jupyter Notebook format, with a 'Preview' tab active. The code in the notebook defines variables A and B, and calculates their sum. An 'Open in Colab' button is visible at the top of the code editor area.

```
In [1]: A = 30
        B = 25

In [2]: A + B

Out[2]: 55

In [ ]:
```

# การ Commit Google Colab ส่งไป GitHub



The screenshot shows a GitHub repository page for 'Basic-Programming-and-Data-Viz-2024' by user 'tanfocus'. The repository is public and has 1 branch (main) and 0 tags. The file list shows 'README.md' (updated 50 minutes ago) and 'lecture0.ipynb' (updated 3 minutes ago). The README content includes the title 'Basic-Programming-and-Data-Viz-2024', a description 'KKU Basic Programming for Data Science and Data Visualization ชื่อ-นามสกุล รหัสนักศึกษา', a grading scale 'GradingA top 10-15 B+ ถึง F ตามเกณฑ์', and a list of assessment criteria: Homework (25%), Quiz (10%), Project (30%), Mid-term Exam (15%), Final Exam (20%), and Attendance. The repository also has a 'Code' button and a 'Fork' button.

tanfocus / Basic-Programming-and-Data-Viz-2024

main 1 Branch 0 Tags

Go to file Add file <> Code

tanfocus A = 30 และ B = 25 ดังนั้น A + B = ? f1b9da6 · 3 minutes ago 3 Commits

README.md Update README.md 50 minutes ago

lecture0.ipynb A = 30 และ B = 25 ดังนั้น A + B = ? 3 minutes ago

README

## Basic-Programming-and-Data-Viz-2024

KKU Basic Programming for Data Science and Data Visualization  
ชื่อ-นามสกุล รหัสนักศึกษา

### GradingA top 10-15 B+ ถึง F ตามเกณฑ์

- Homework (เดี่ยว,กลุ่ม-ส่ม) 25%
- Quiz (เดี่ยว) 10%\* Project (กลุ่ม-เลือกเอง) 30%
- Mid-term Exam (เดี่ยว) 15%
- Final Exam (กลุ่ม-ส่ม) 20%Final Score = Score
- Attendance

Basic writing and formatting syntax

About

No description, website, or topics provided.

Readme

Activity

0 stars

1 watching

0 forks

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No releases published  
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Packages

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Languages

Jupyter Notebook 100.0%