



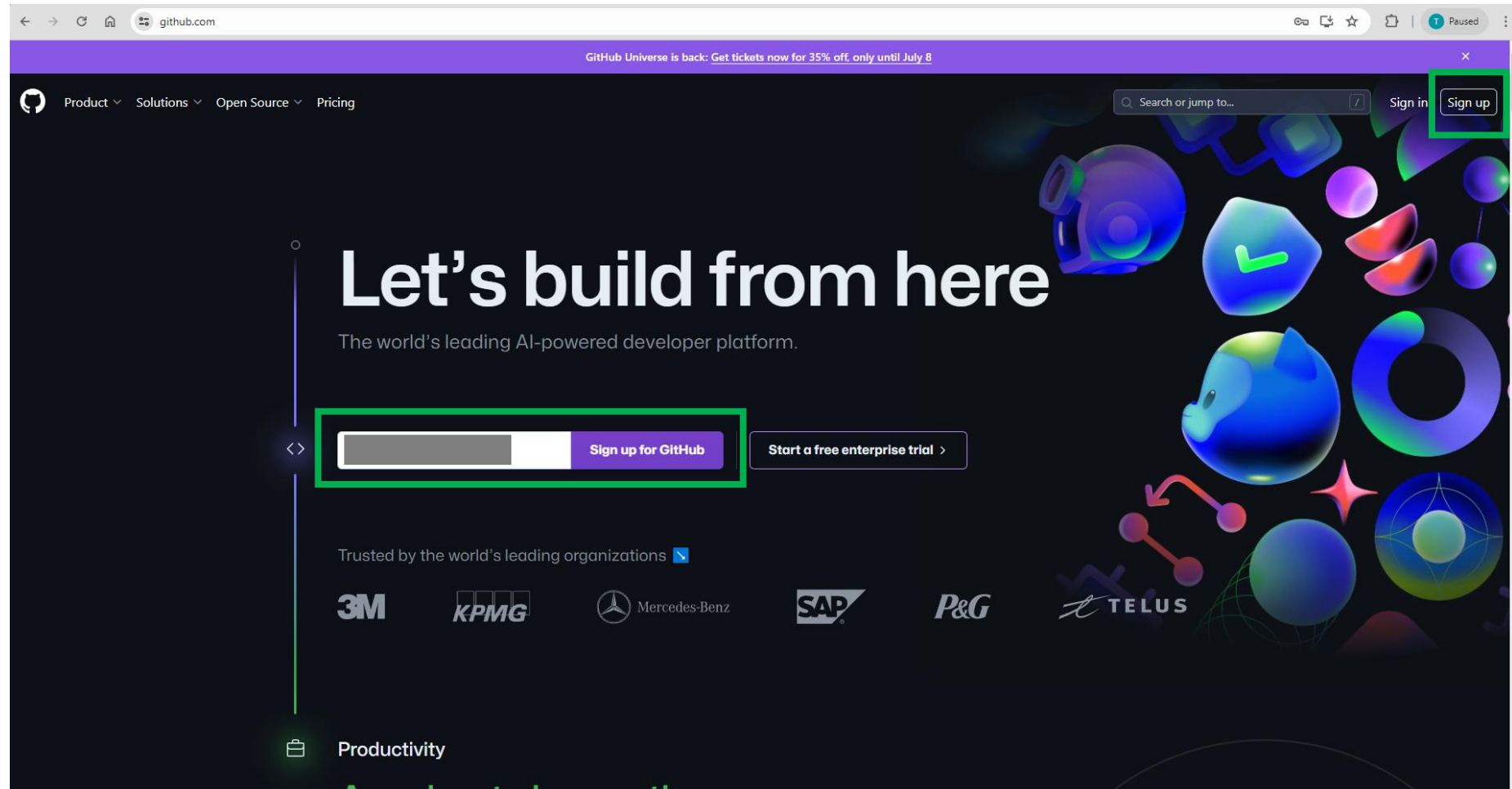
lecture 0

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! Let's begin the adventure". Below this, the label "Enter your email*" is followed by a text input field and a "Continue" button. A green rectangular box highlights the input field and the "Continue" button.

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 password input field and a "Continue" button. A green rectangular box highlights the password input field and the "Continue" button.

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 form is a dark grey box with the following elements:

- Text: 'Welcome to GitHub! Let's begin the adventure.'
- Field: 'Enter your email*' with a green checkmark and a grey input field.
- Field: 'Create a password*' with a green checkmark and a password input field showing dots.
- Field: 'Enter a username*' with a red arrow icon and an input field. This field and its label are highlighted with a green border.
- Button: 'Continue' next to the username input field.

สมัคร Account GitHub

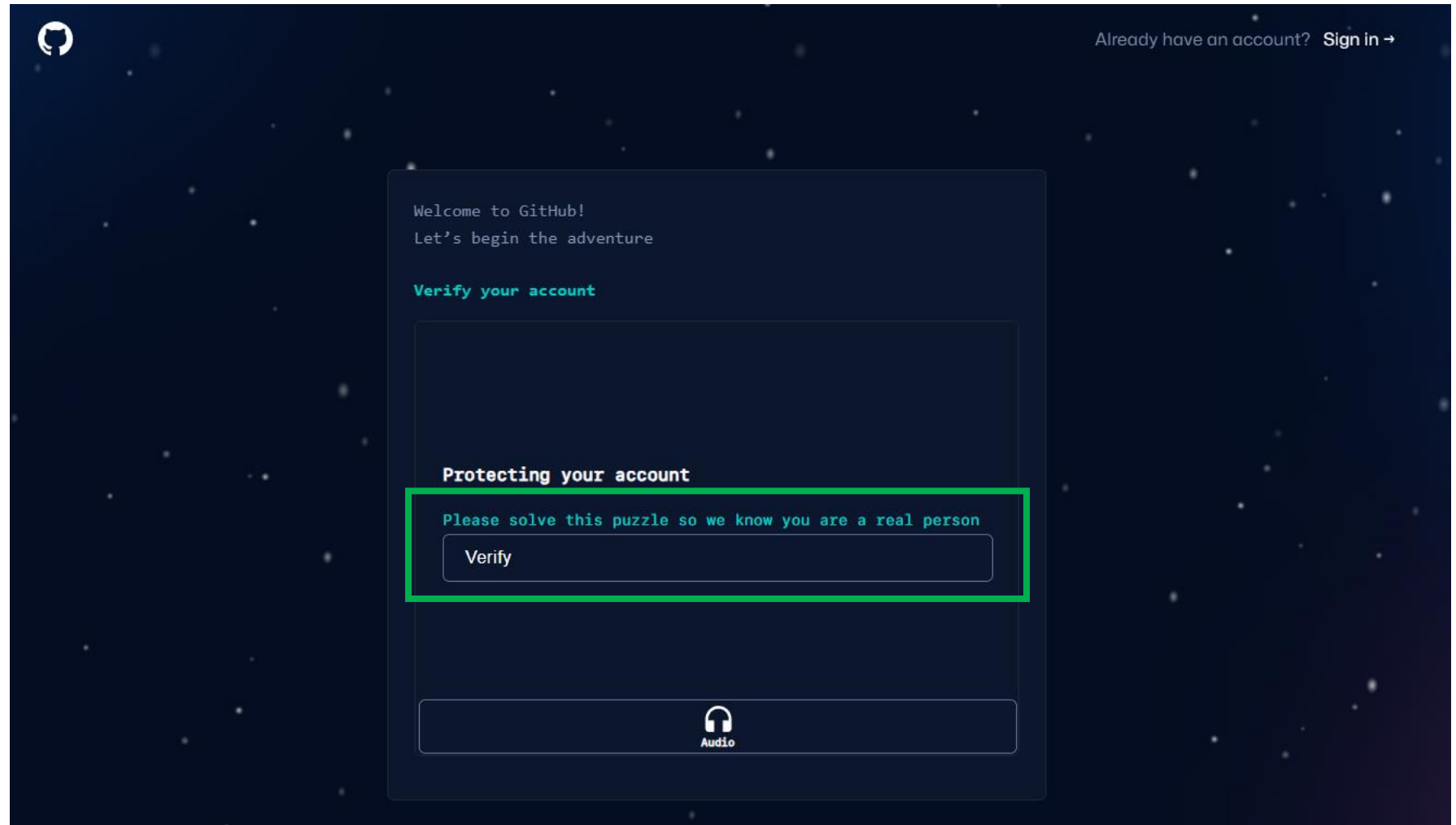


- กดเครื่องหมายถูก
และกด Continue

สมัคร Account GitHub



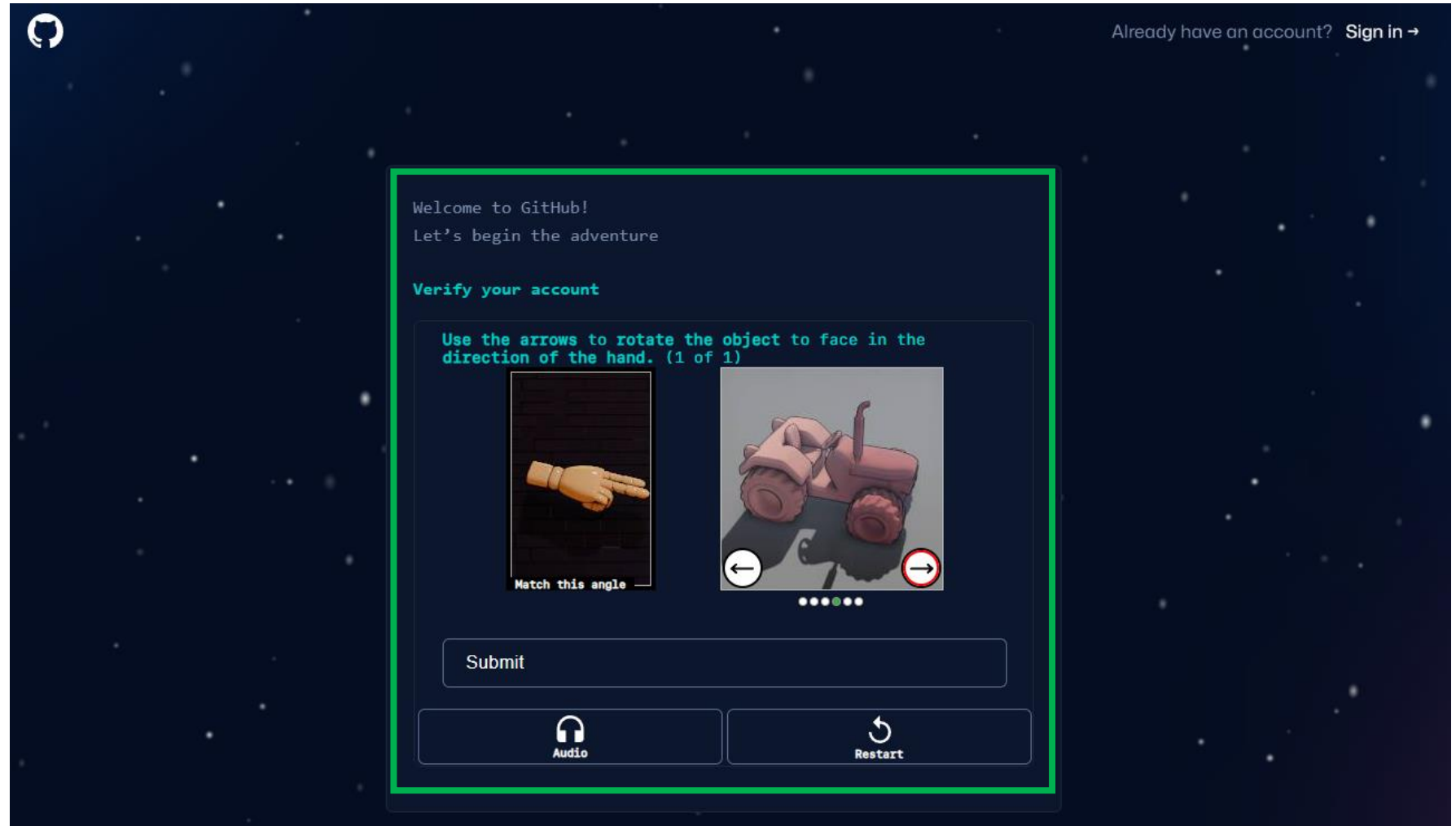
- กด Verify เพื่อยืนยันตัวตน
- โดยการแก้ puzzle แบบสุ่ม



สมัคร Account GitHub



- ตัวอย่าง puzzle
- แก้ puzzle และกด Submit



สมัคร Account GitHub



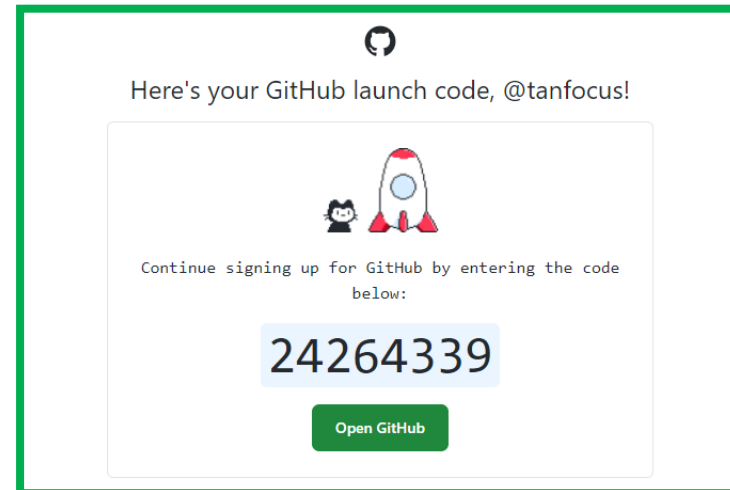
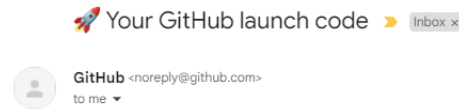
- ให้ไปที่ Gmail ที่ใช้สมัครเพื่อ
รับ launch code



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


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

สมัคร Account GitHub



- กรอกข้อมูลและกด Continue





Welcome to GitHub

We are glad you're here.

This will help us guide you to the tools that are best suited for your projects.

How many team members will be working with you?

☒ Just me ☐ 2-5 ☐ 5-10

☐ 10-20 ☐ 20-50 ☐ 50+

Are you a student or teacher?

☐ N/A ☒ Student ☐ Teacher

[Continue](#)

[Skip personalization](#)

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



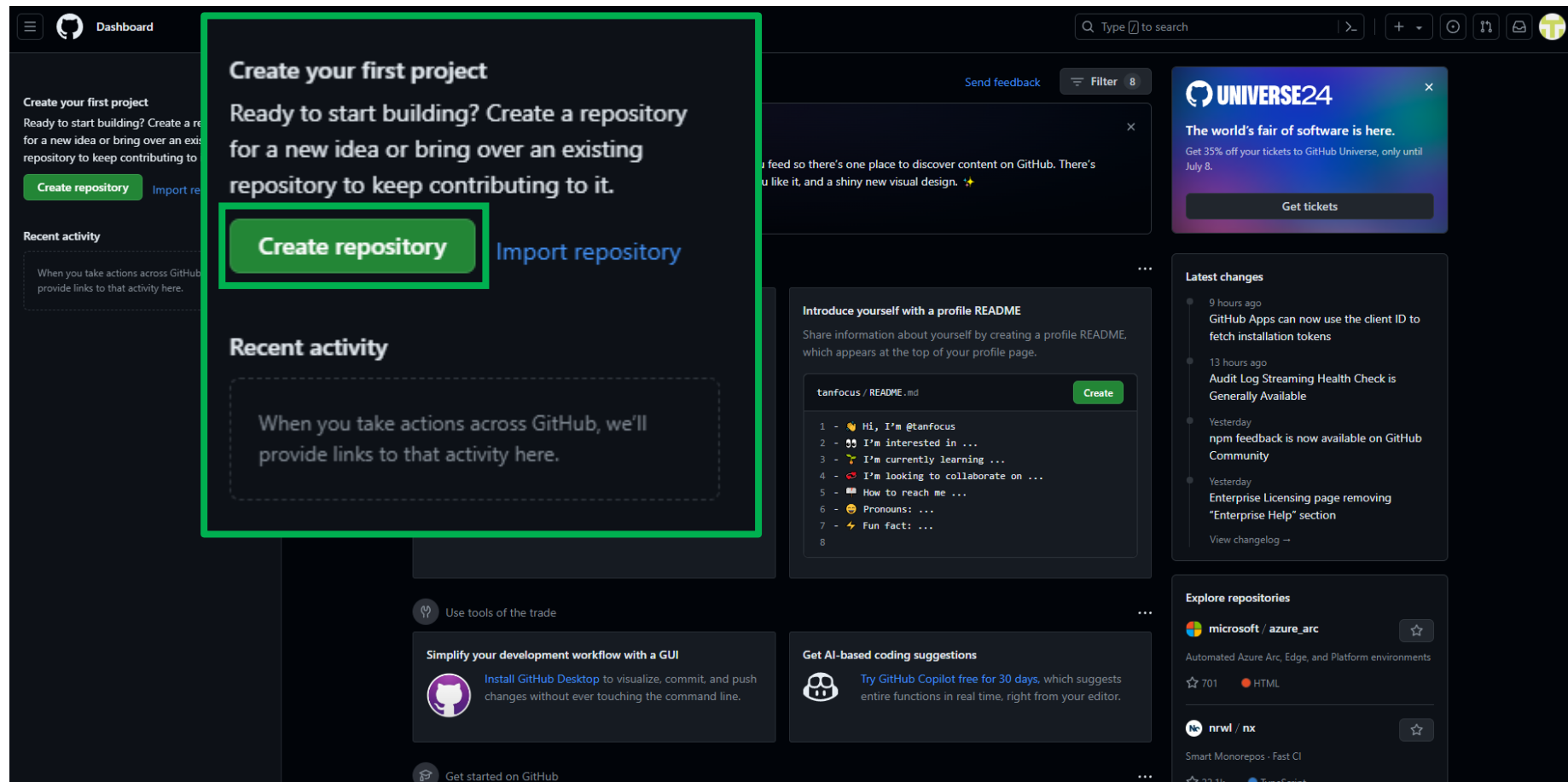
The screenshot shows the GitHub Dashboard with a dark theme. The top navigation bar includes the GitHub logo, the word "Dashboard", a search bar, and various utility icons. The main content area is divided into several sections:

- 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 dashed border and a message: "When you take actions across GitHub, we'll provide links to that activity here."
- Home Section:**
 - Updates to your homepage feed:** A card with a close button, a description of the new feed, and a "Learn more" link.
 - Start writing code:** A section with a code icon and a "Start a new repository for tanfocus" card. This card includes a text input for the repository name, radio buttons for "Public" and "Private" (with "Private" selected), and a green "Create a new repository" button.
 - Use tools of the trade:** A section with a wrench icon and a "Simplify your development workflow with a GUI" card. This card features the GitHub Desktop logo and text about installing the desktop app.
 - Get started on GitHub:** A section with a graduation cap icon.
- Right Sidebar:**
 - UNIVERSE24:** A promotional banner for GitHub Universe 2024 with a "Get tickets" button.
 - Latest changes:** A section with 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 section showing a list of repositories, including "microsoft / azure_arc" and "nrwl / nx", each with a star icon and a brief description.

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

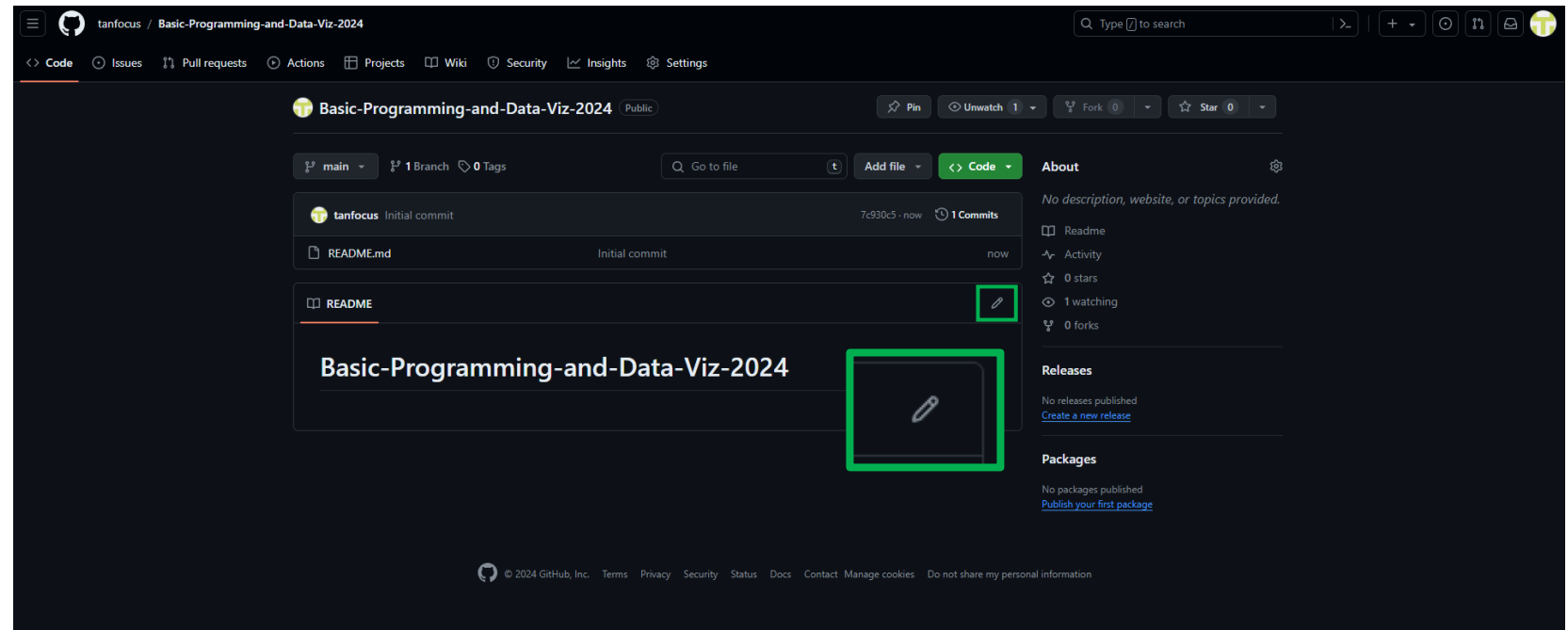


The screenshot shows a GitHub repository page for 'Basic-Programming-and-Data-Viz-2024' by user 'tanfocus'. The repository is public and has 1 branch (main) and 0 tags. It contains 1 commit (7c930c5) and 1 file (README.md). The README file is titled 'Basic-Programming-and-Data-Viz-2024'. The right sidebar shows the repository's statistics: 0 stars, 1 watching, and 0 forks. The footer of the page includes the GitHub logo, copyright information (© 2024 GitHub, Inc.), and links to Terms, Privacy, Security, Status, Docs, Contact, Manage cookies, and Do not share my personal information.

README file



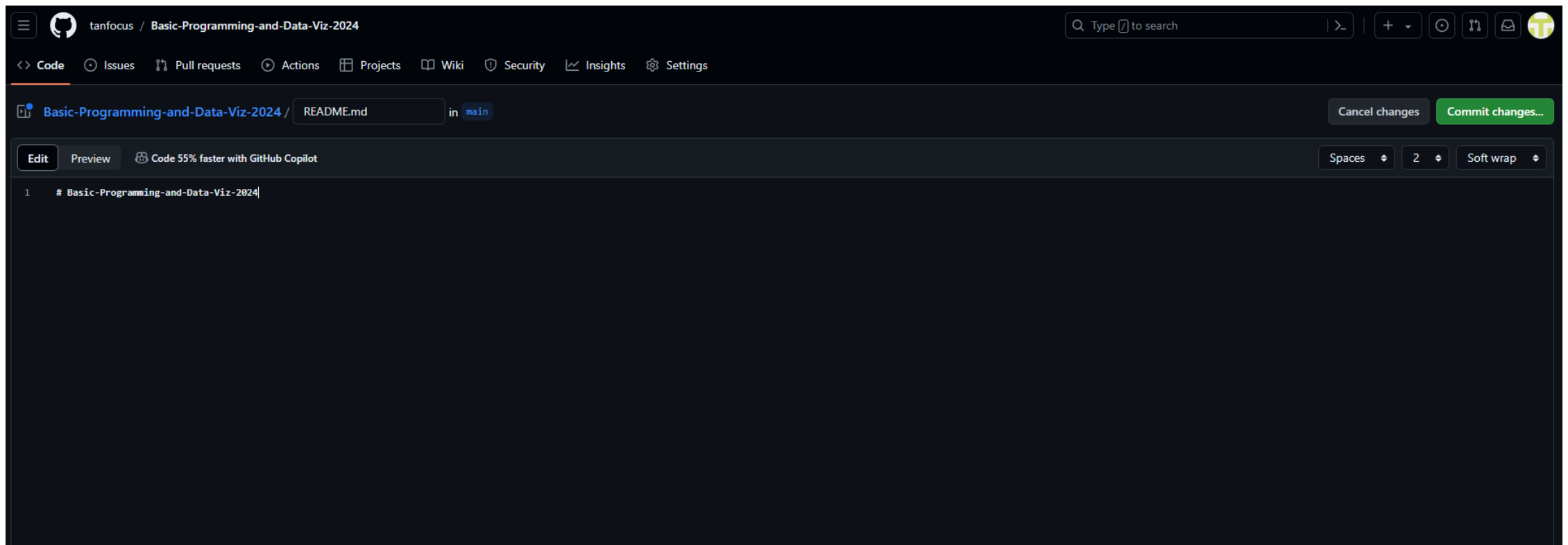
- กดสัญลักษณ์  เพื่อแก้ไข README file



README file



- สามารถพิมพ์ข้อความที่ต้องการใส่ไฟล์ README โดยส่วนใหญ่จะใช้เขียนข้อความอธิบายเกี่ยวกับ repository ที่สร้าง



README file



- # Basic-Programming-and-Data-Viz-2024
- KKU Basic Programming for Data Science and Data Visualization

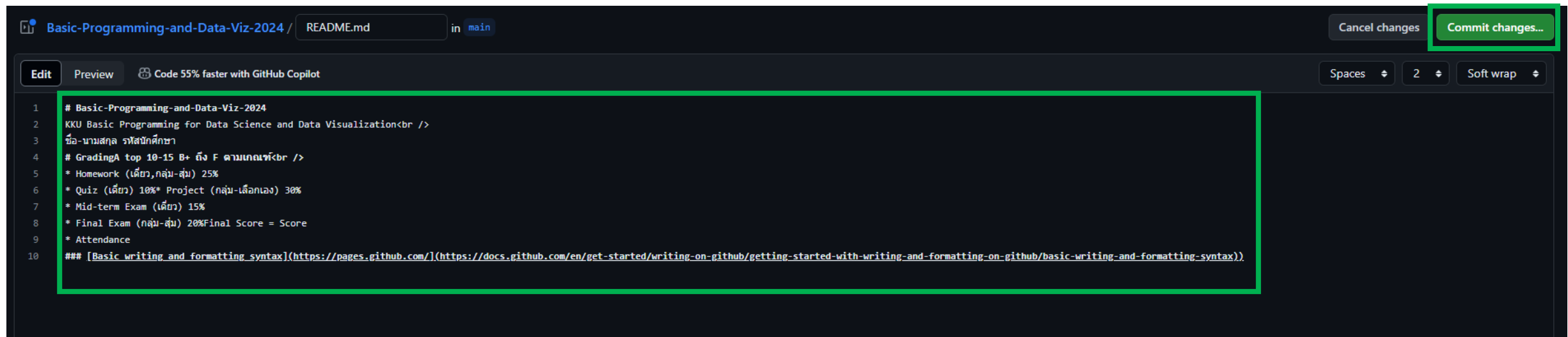
- ชื่อ-นามสกุล รหัสนักศึกษา
- # GradingA top 10-15 B+ ถึง F ตามเกณฑ์

- * 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...

A screenshot of the GitHub web interface for editing a README file. The browser address bar shows 'Basic-Programming-and-Data-Viz-2024 / README.md in main'. The top right has 'Cancel changes' and 'Commit changes...' buttons, with the latter highlighted by a green box. The editor has tabs for 'Edit' and 'Preview', and a GitHub Copilot suggestion. The code content is as follows:

```
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



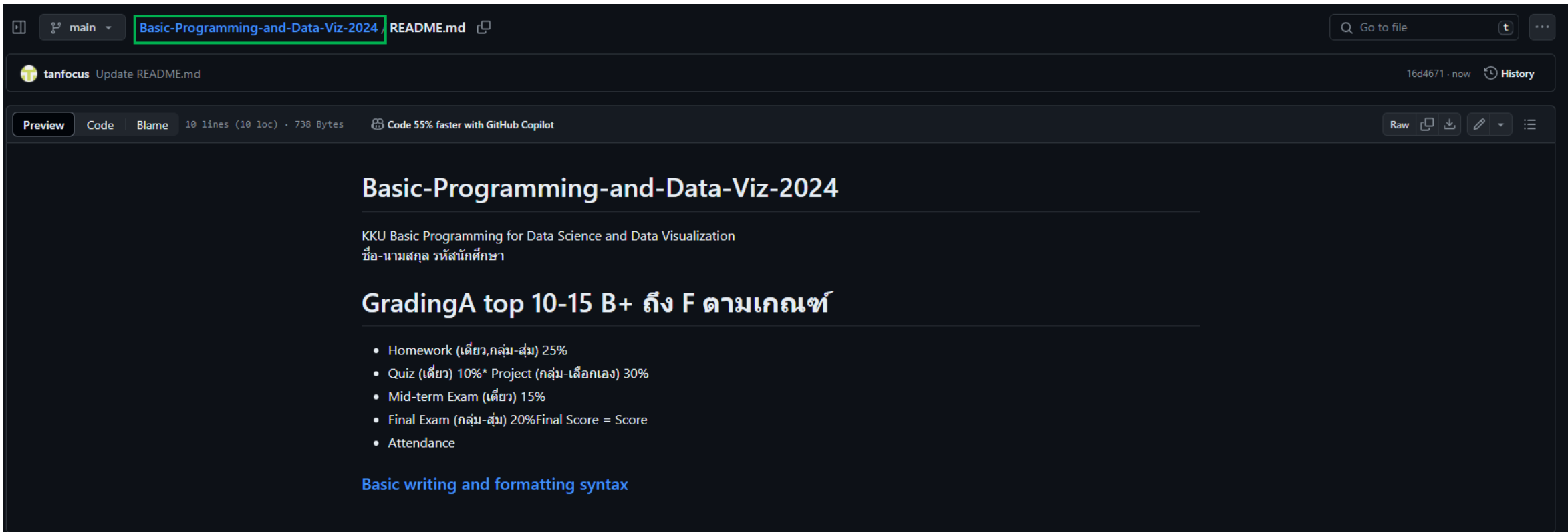
- สามารถเขียน Commit message ได้ว่าเขียนหรือแก้ไขไฟล์ README.md อะไรไปบ้าง
- กด Commit changes

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

README file



- หน้าตาผลลัพธ์
- กดกลับไปหน้า repository

A screenshot of a GitHub repository page for 'Basic-Programming-and-Data-Viz-2024'. The repository is owned by 'tanfocus'. The README file is 10 lines (10 loc) and 738 Bytes. The content of the README 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 README also mentions 'Basic writing and formatting syntax'.

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

Type to search

+

+

+

+

+

<> 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

About

tanfocus Update README.md 16d4671 · now 2 Commits

README.md

Update README.md

now

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

[Basic writing and formatting syntax](#)

No description, website, or topics provided.

Readme

Activity

0 stars

1 watching

0 forks

Releases

No releases published

[Create a new release](#)

Packages

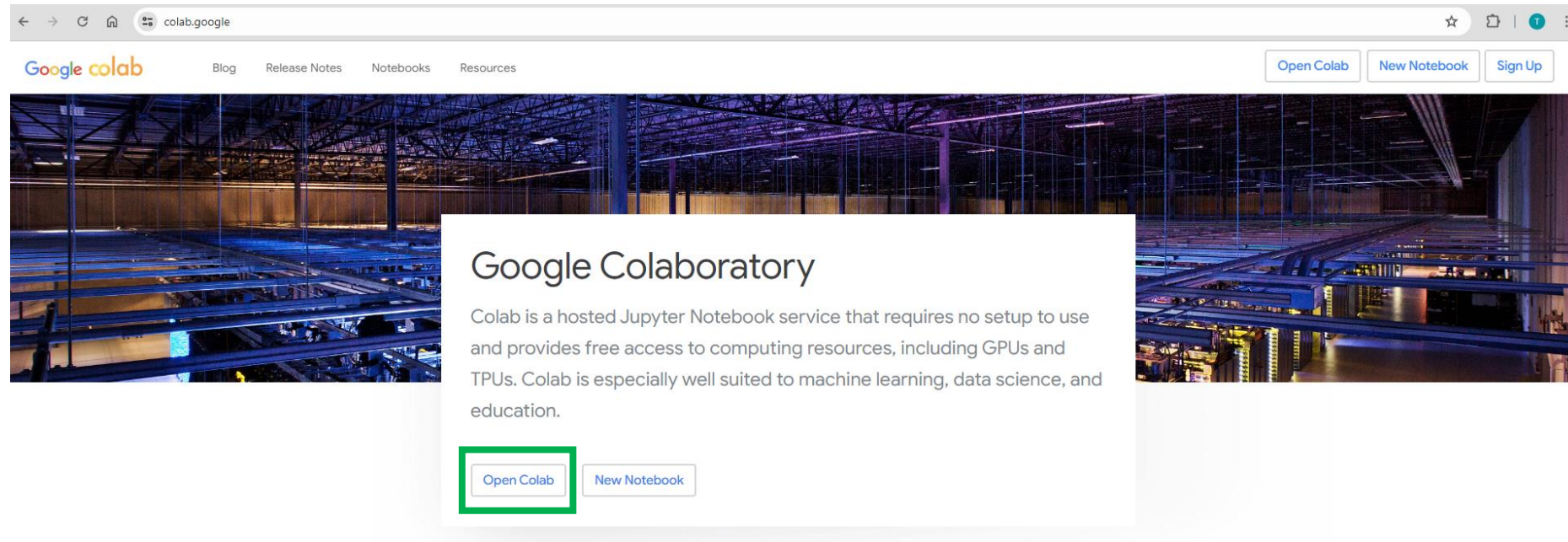
No packages published

[Publish your first package](#)

สมัคร Google Colab



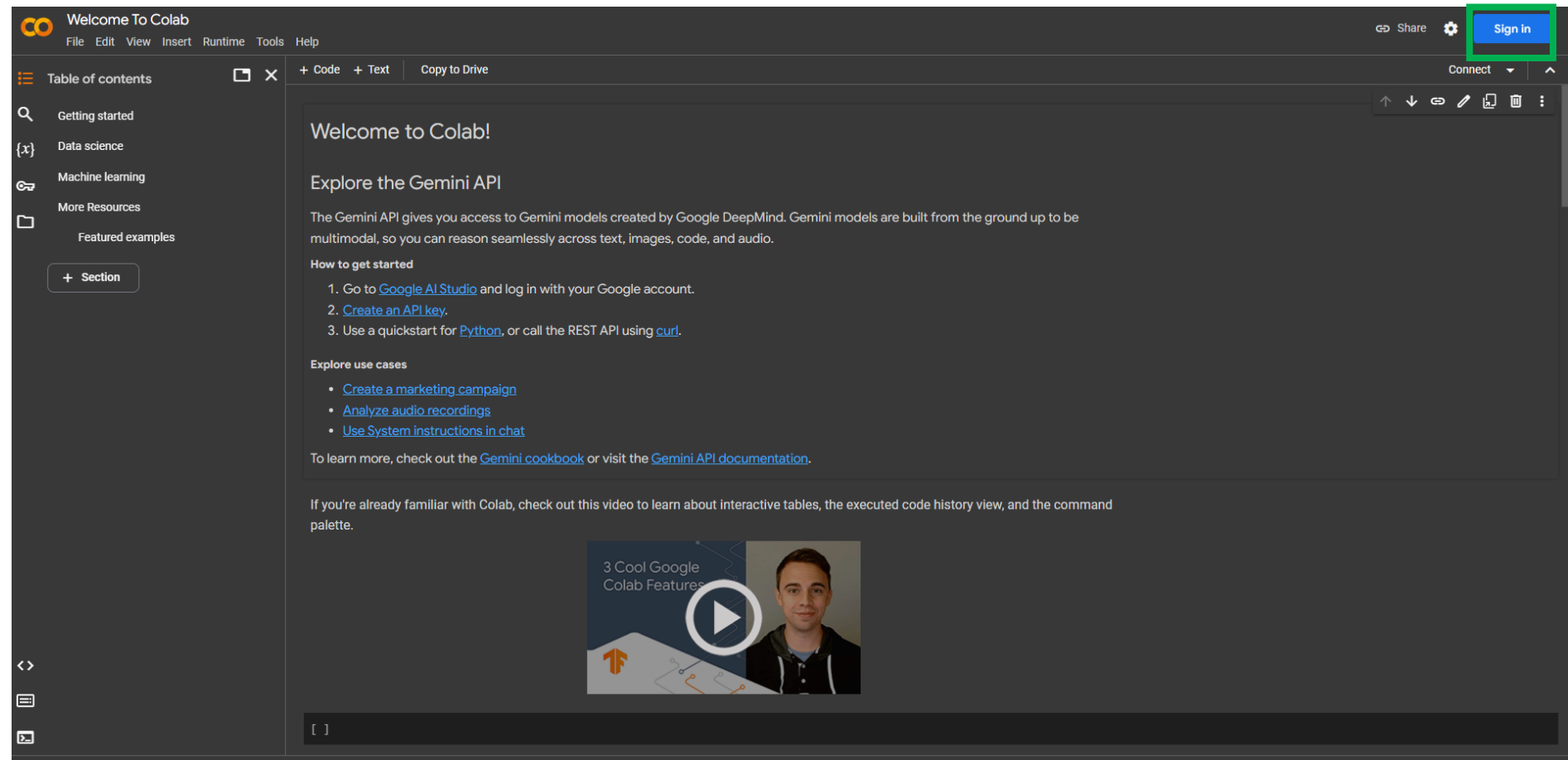
- <https://colab.google/> หรือ
ค้นหาว่า Google Colab ใน
Google
- - กด Open Colab



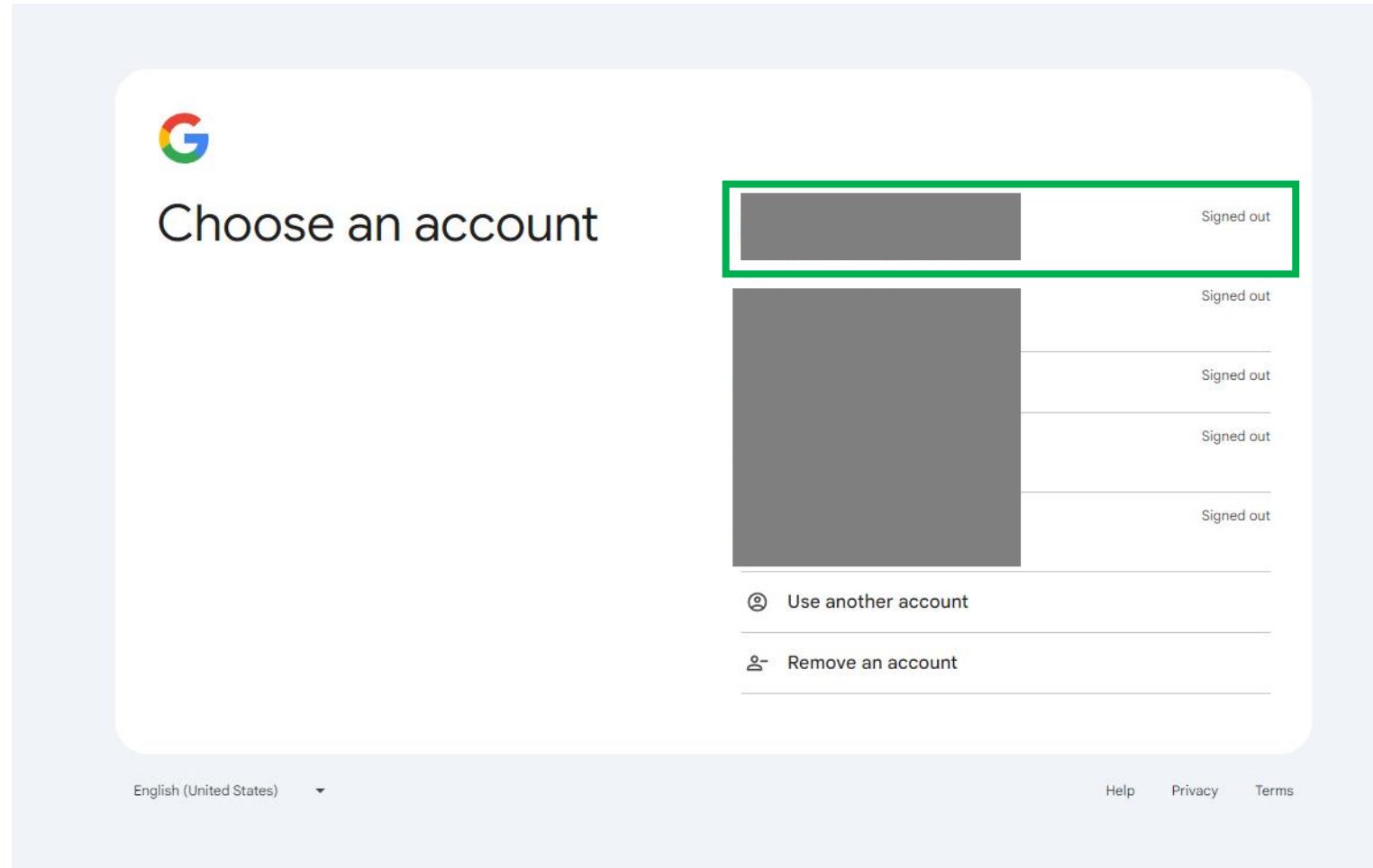
สมัคร Google Colab



- กด Sign in มุมขวาบน



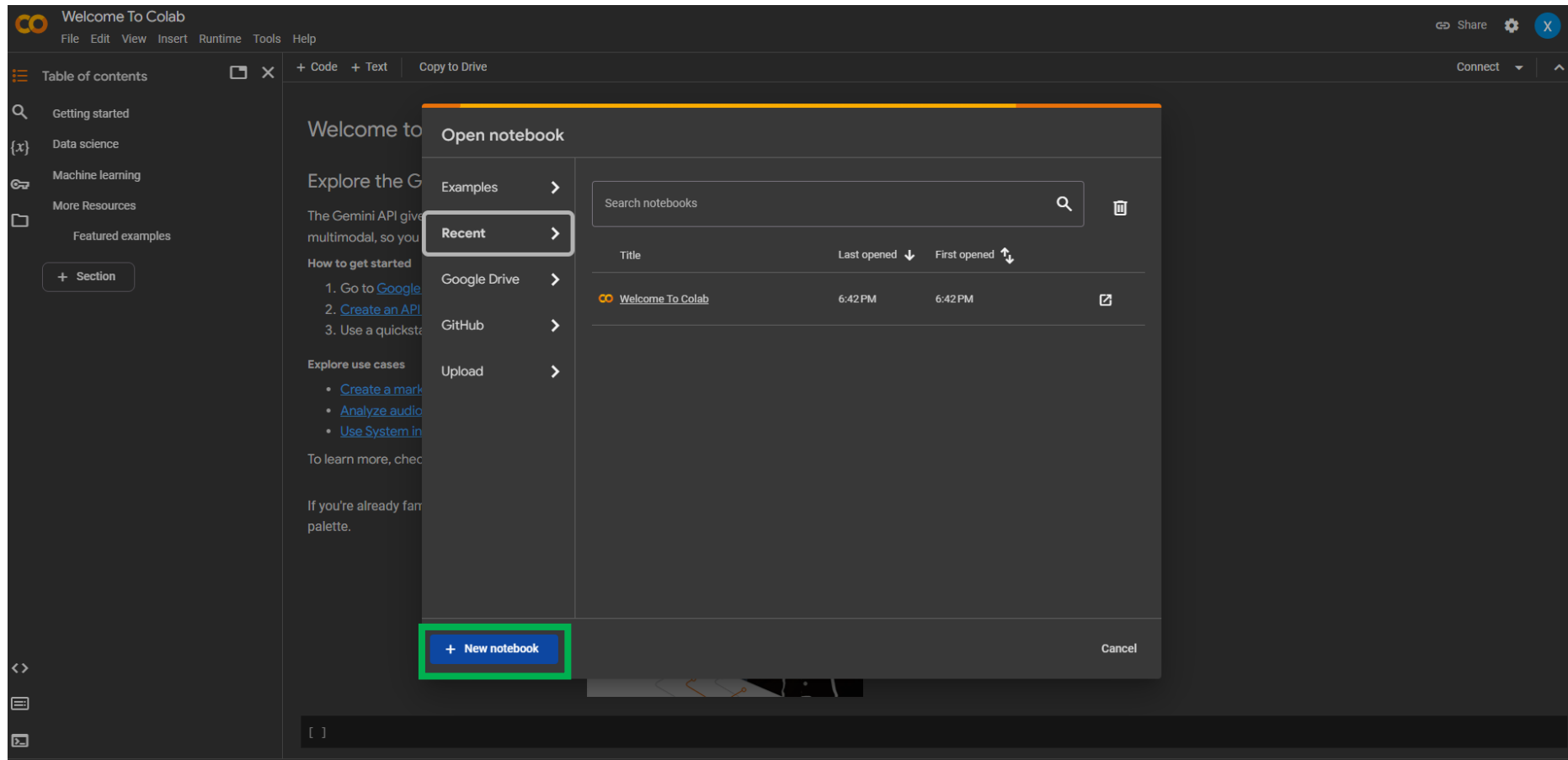
- เลือก account ที่ใช้สมัคร
GitHub และกรอก password



การใช้งาน Google Colab



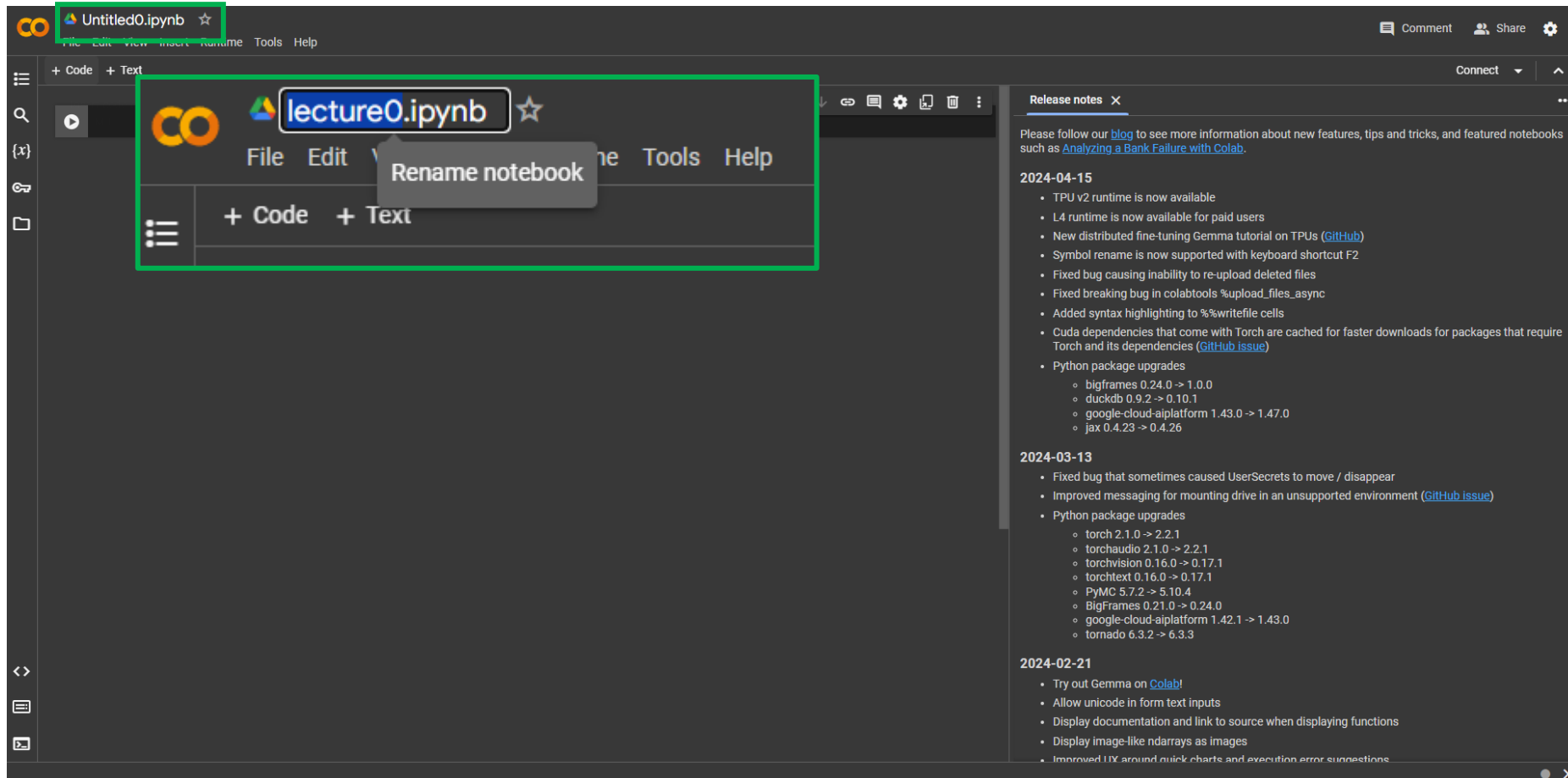
- กด New notebook



การใช้งาน Google Colab



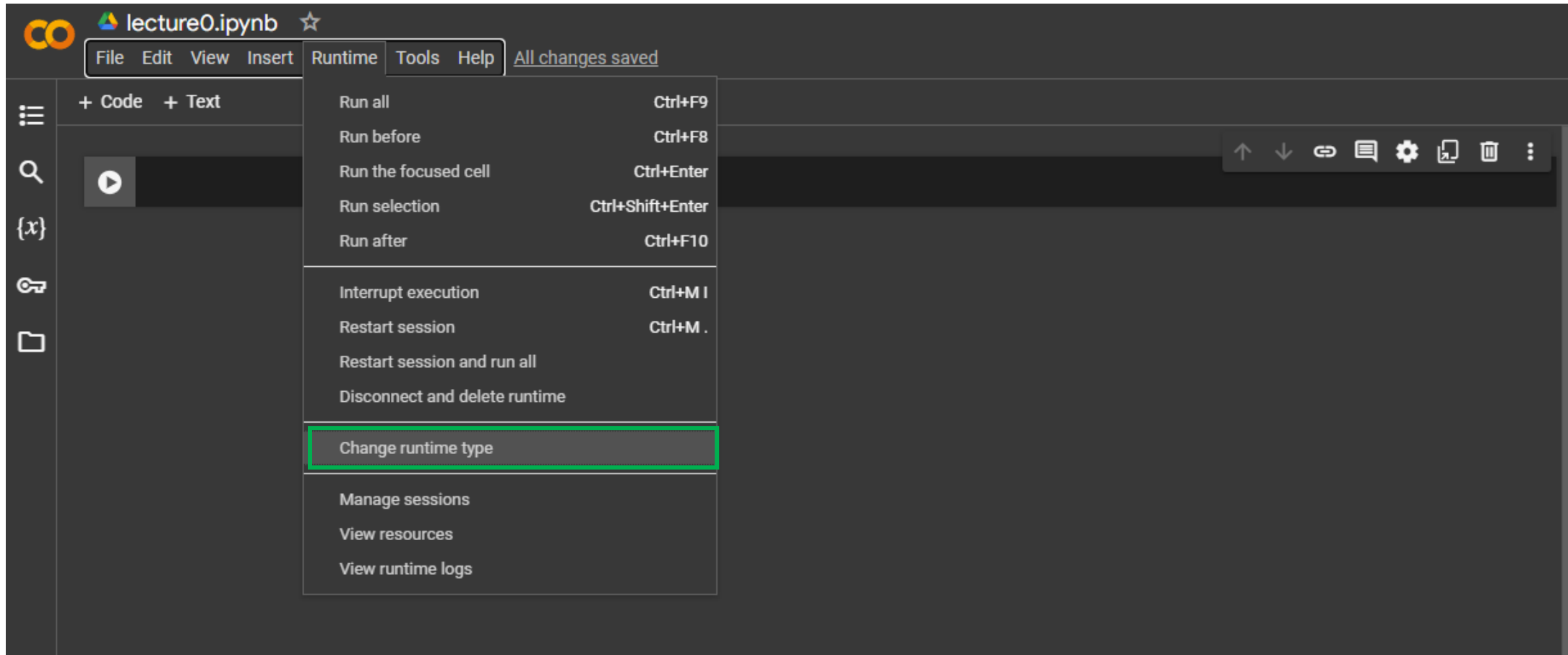
- เปลี่ยนชื่อ notebook ตามที่เราต้องการ



การใช้งาน Google Colab



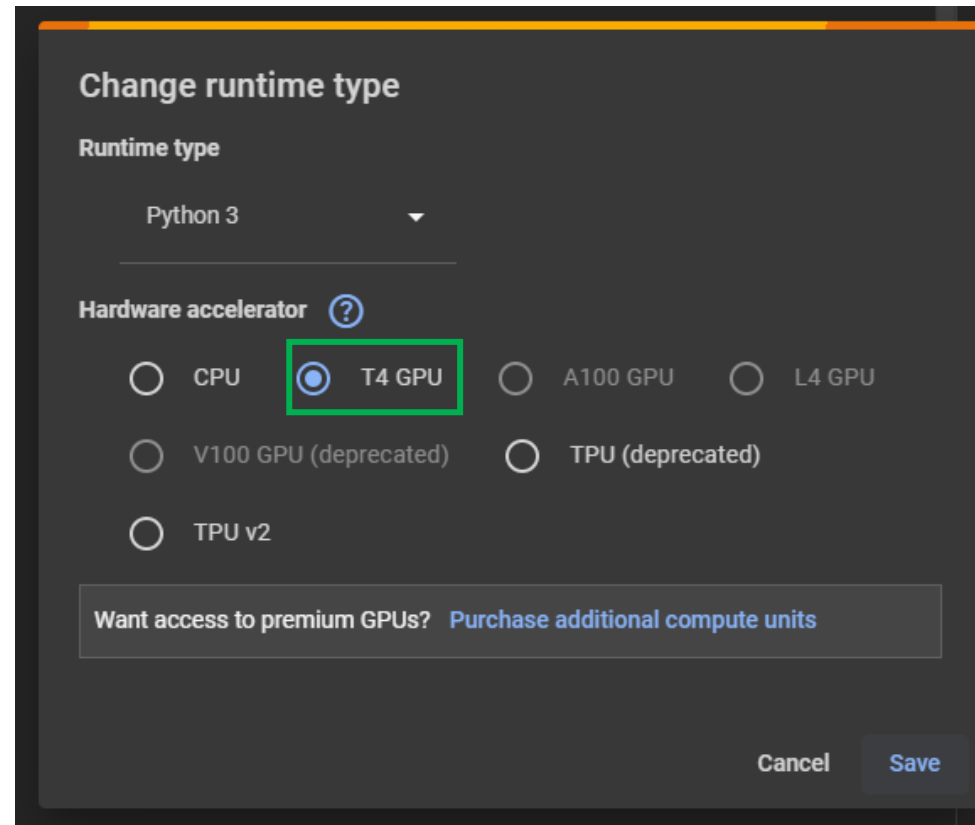
- เปลี่ยน runtime type ให้เป็น GPU



การใช้งาน Google Colab




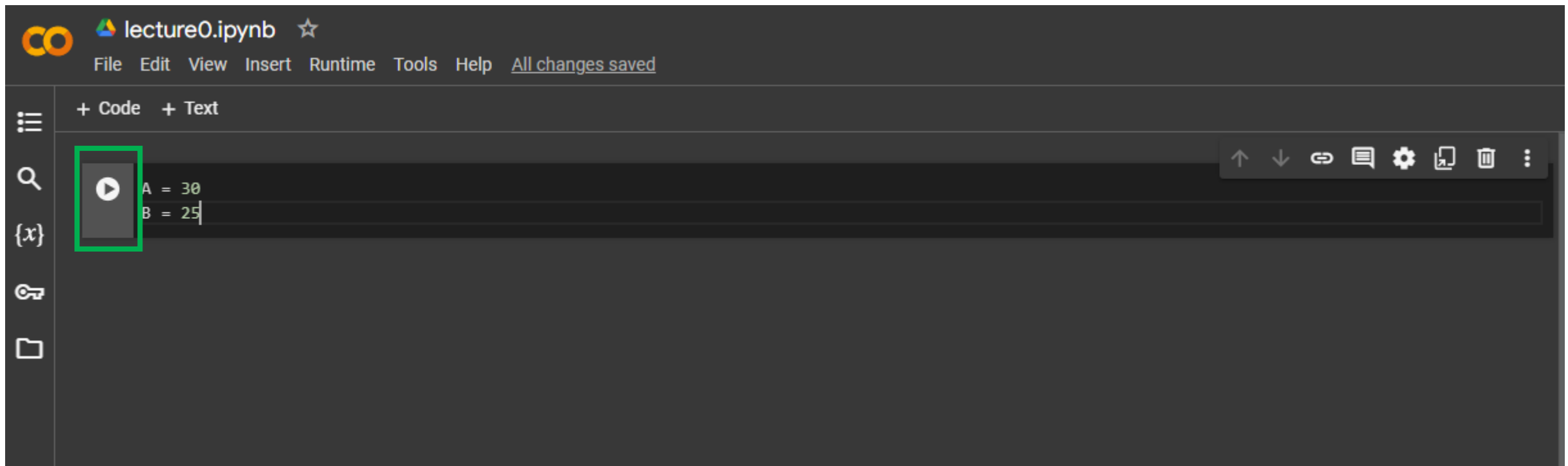
- เลือก GPU จะมีข้อความขึ้นถามถึงการ reset runtime ให้กด OK และกด Save



การใช้งาน Google Colab





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



การใช้งาน Google Colab



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



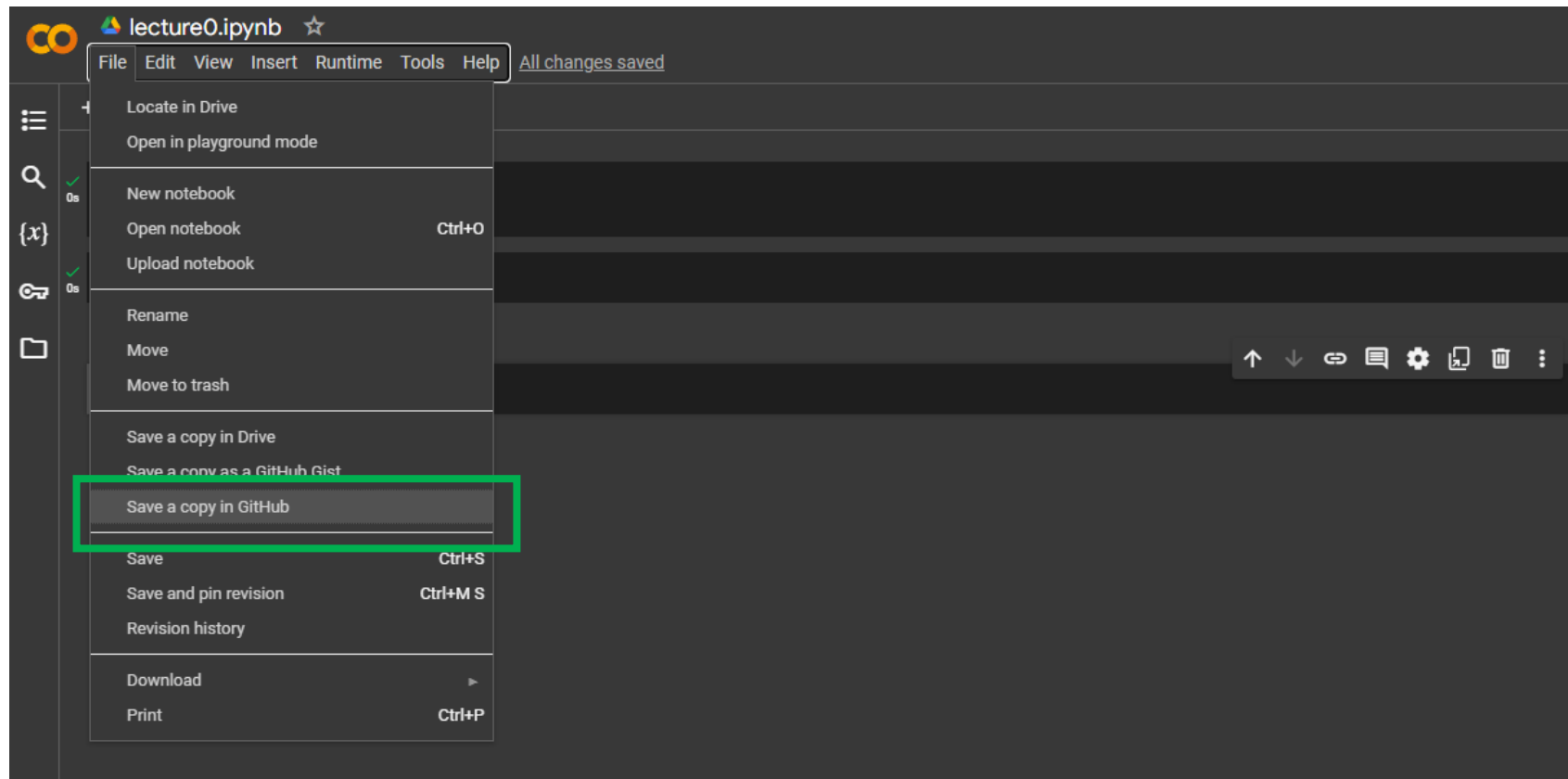
The screenshot shows the Google Colab interface for a file named 'lecture0.ipynb'. The top menu bar includes 'File', 'Edit', 'View', 'Insert', 'Runtime', 'Tools', and 'Help', with a status message 'All changes saved'. Below the menu, there are buttons for '+ Code' and '+ Text'. The main area displays two code cells, both of which have been executed successfully, indicated by green checkmarks and '0s' runtime time. The first cell contains the code 'A = 30' and 'B = 25'. The second cell contains the code 'A + B' and the output '55'. A green rectangular box highlights these two code cells. At the bottom left, there is a 'Run' button (a play icon) and a text input field. At the bottom right, there is a toolbar with icons for undo, redo, link, comment, settings, copy, paste, and delete.

```
[1] A = 30  
    B = 25  
  
[2] A + B  
    55
```


การ Commit Google Colab ส่งไป GitHub



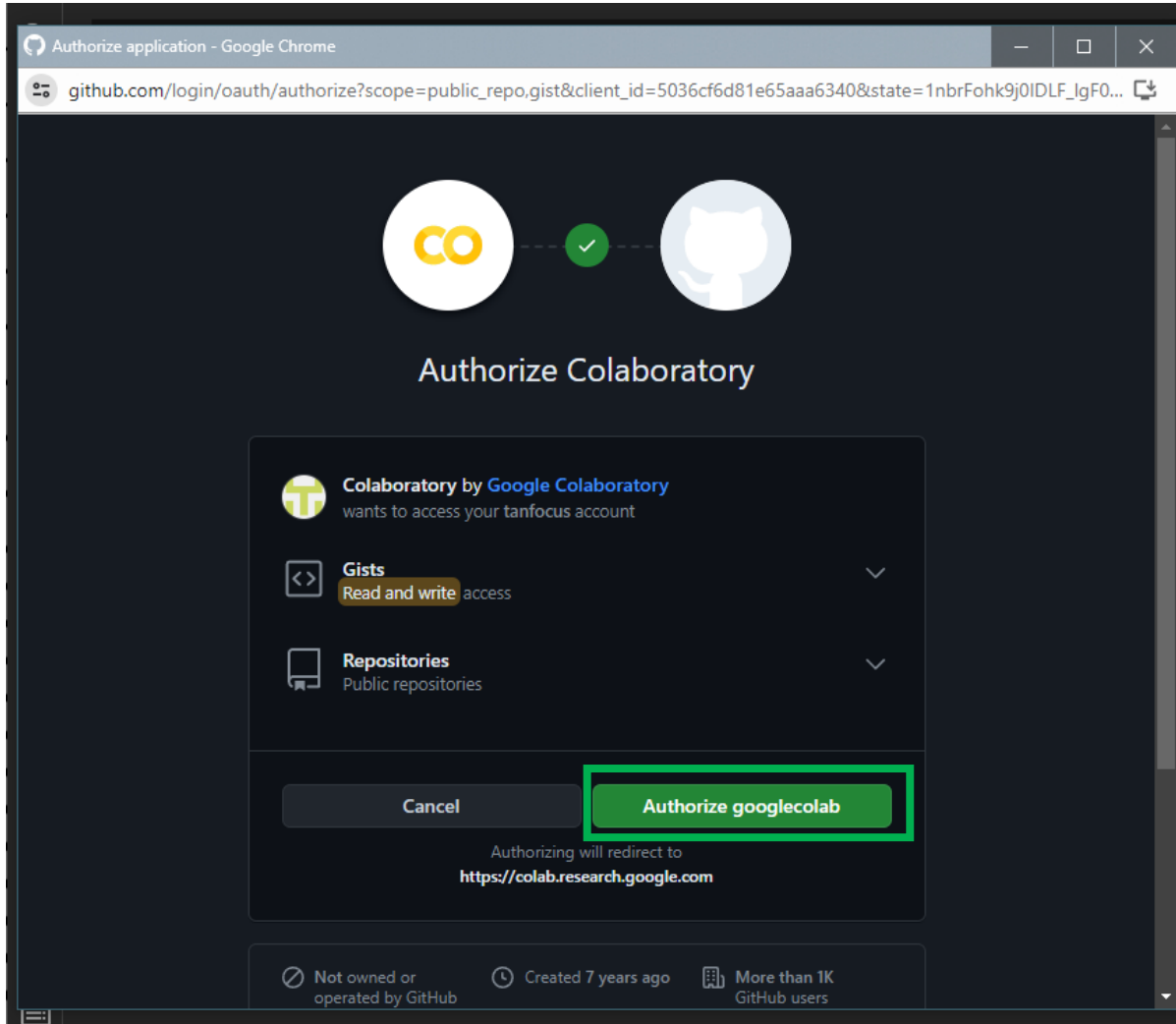
- กด File > Save a copy in GitHub



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

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', the course description 'KKU Basic Programming for Data Science and Data Visualization ชื่อ-นามสกุล รหัสนักศึกษา', and a grading scale 'GradingA top 10-15 B+ ถึง F ตามเกณฑ์'. The grading criteria are listed as: Homework (เดี่ยว,กลุ่ม-ส่ม) 25%, Quiz (เดี่ยว) 10%* Project (กลุ่ม-เลือกเอง) 30%, Mid-term Exam (เดี่ยว) 15%, Final Exam (กลุ่ม-ส่ม) 20%, and Attendance. A link for 'Basic writing and formatting syntax' is also present. The right sidebar shows repository statistics: 0 stars, 1 watching, 0 forks, and 0 releases/packages.

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

Releases

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

Packages

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

Languages

Jupyter Notebook 100.0%