Coding Labs ReadMe

LAUNCH CODING LAB

Once enrolled in the MindTap course, you will access your labs by clicking on one of the lab assignments within *Week/Outline* view (Figure 1).

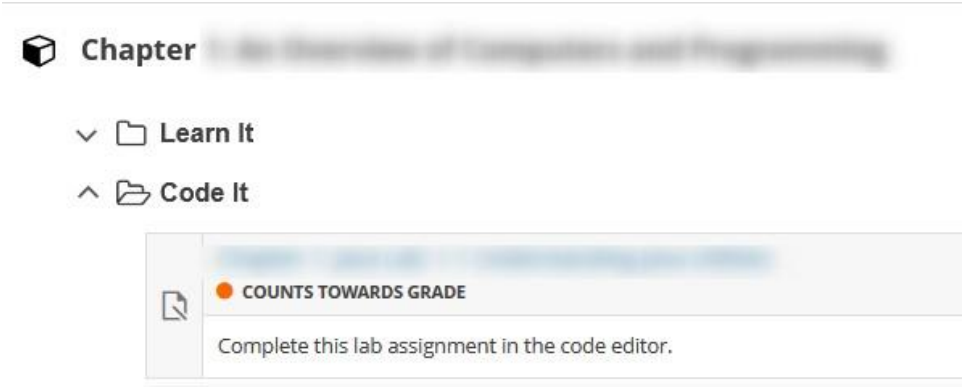


Figure 1. A coding lab in the MindTap Learning Path

By default, the labs are set to an unlimited number of tries; however, the instructor can modify this setting. Upon opening the lab, you will see which attempt you are on (Figure 2). Click **"Start Assignment Now"** to launch the lab.

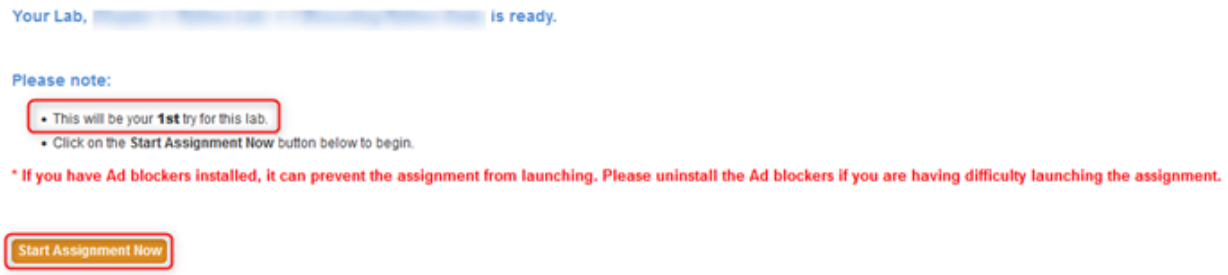


Figure 2. Transition page to start the assignment

Note: You will need to have pop-up blockers disabled for the assignment to launch correctly.

A message (Figure 3) will display after you select the "**Start Assignment Now"** button in the MindTap window.

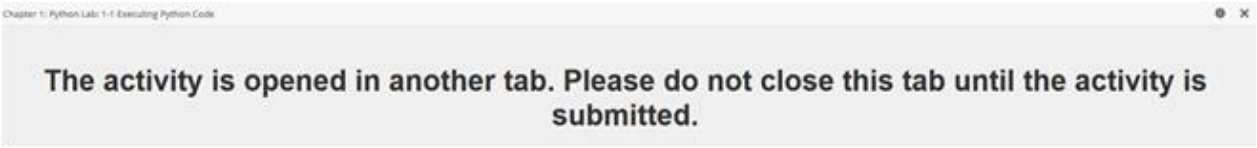


Figure 3. Message when the assignment is launched

AUTHORIZE GITHUB

When you first launch the coding lab in MindTap, you will be asked to sign in to your GitHub account (Figure 4). You can use your existing GitHub account or select "**Create an account**" to sign up for one.

Note: It is recommended that you use a permanent email address to create the GitHub account.

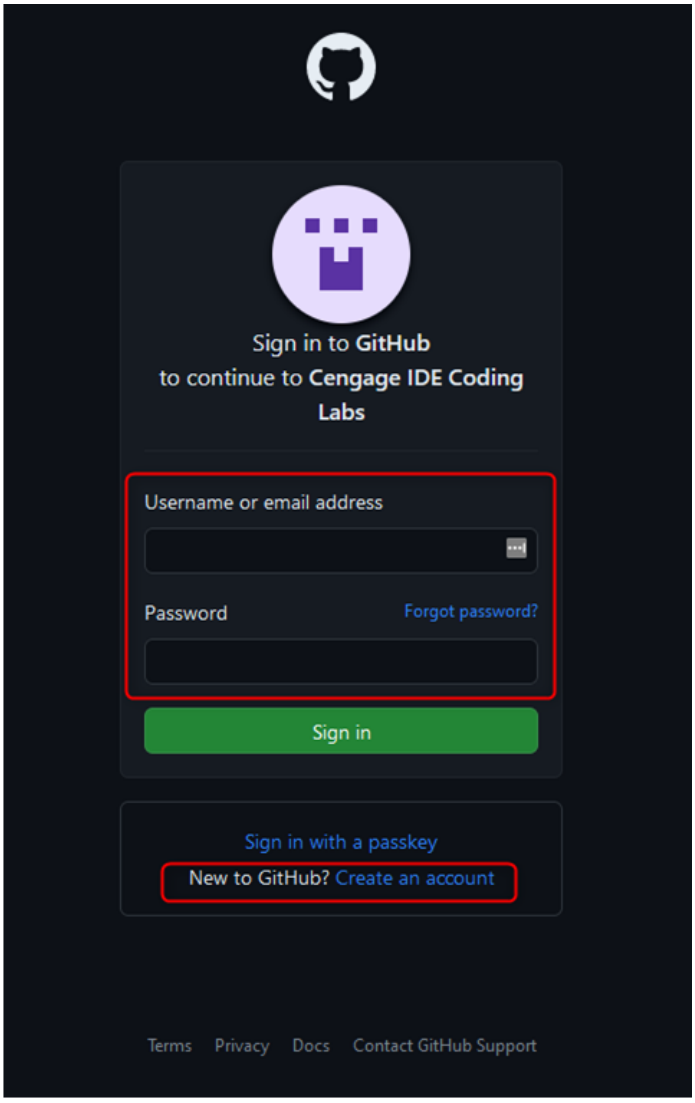


Figure 4. Sign in to GitHub screen appears when a MindTap coding lab assignment is first launched

CREATE AN ACCOUNT

You will need to follow the prompts to create and activate your GitHub account. Below are screenshots of the registration page and email notifications that you will receive.

Fill out the Username, Email Address, and Password fields. An email address can only be tied to a single GitHub account. Select the "**Verify** " button and complete the puzzle to verify you are a real person. You will be able to select "**Create account"** once you have solved the verification puzzle. Be sure to uncheck the notification box if you do not want to receive communication from GitHub (Figure 5).

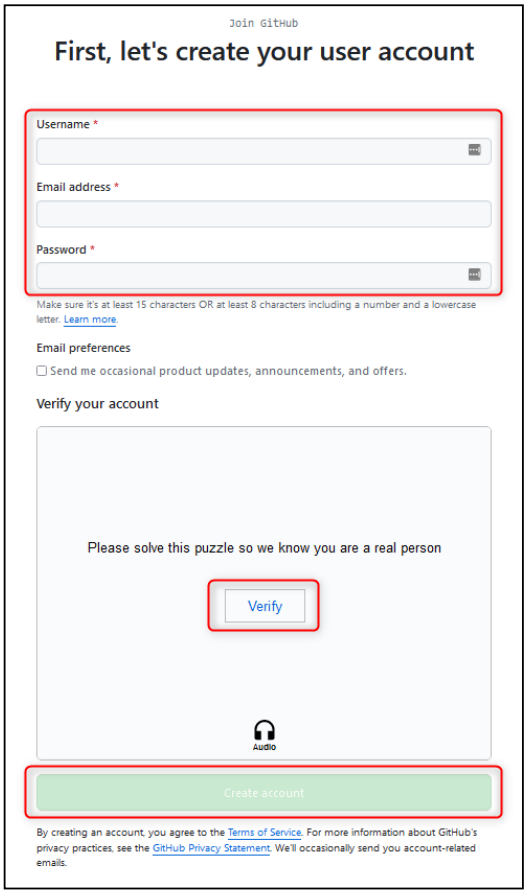


Figure 5. Create a GitHub account screen

You will then be redirected to a page asking you to input a launch code that has been sent to the email address that was provided during the account creation process (Figure 6). An example of the launch code email is shown in Figure 7.

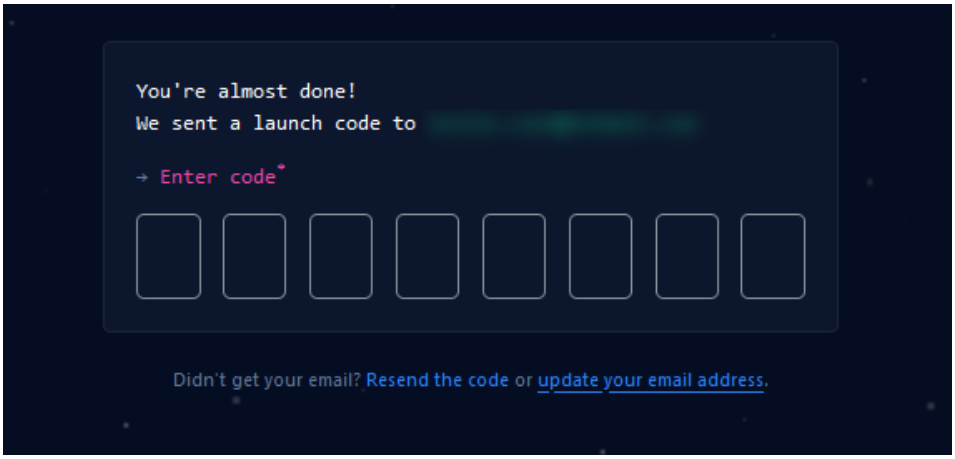


Figure 6. Input launch code screen

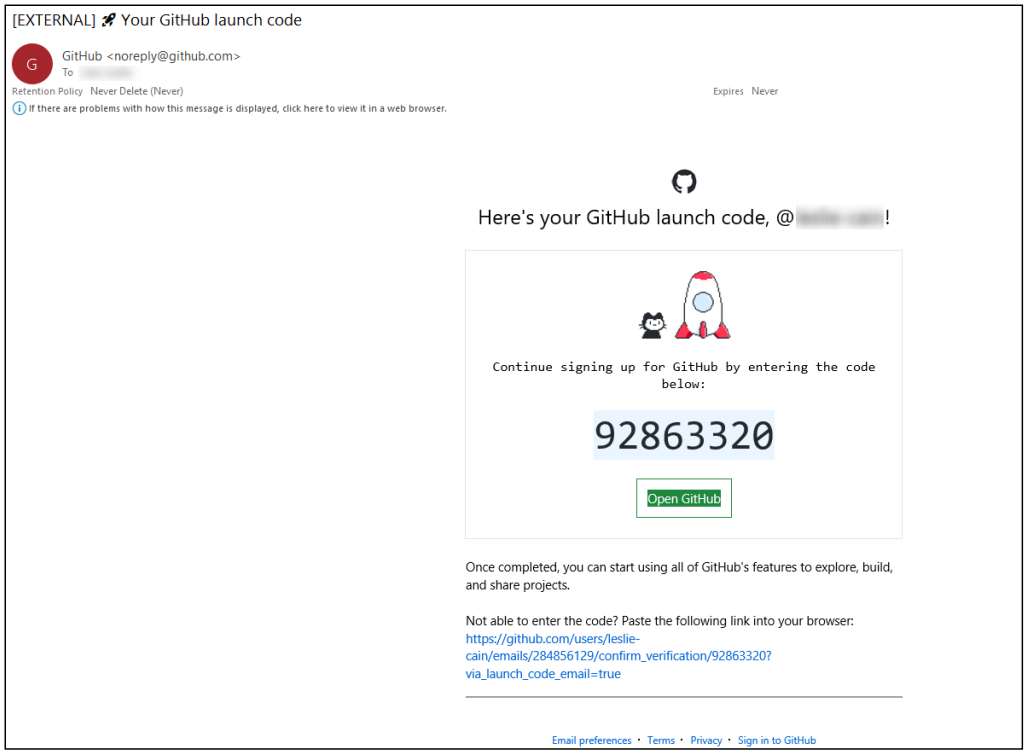


Figure 7. An example of the GitHub launch code email

Once the launch code has been entered, you will also receive a Welcome to GitHub email as seen in Figure 8. You do not need to do anything with this email.

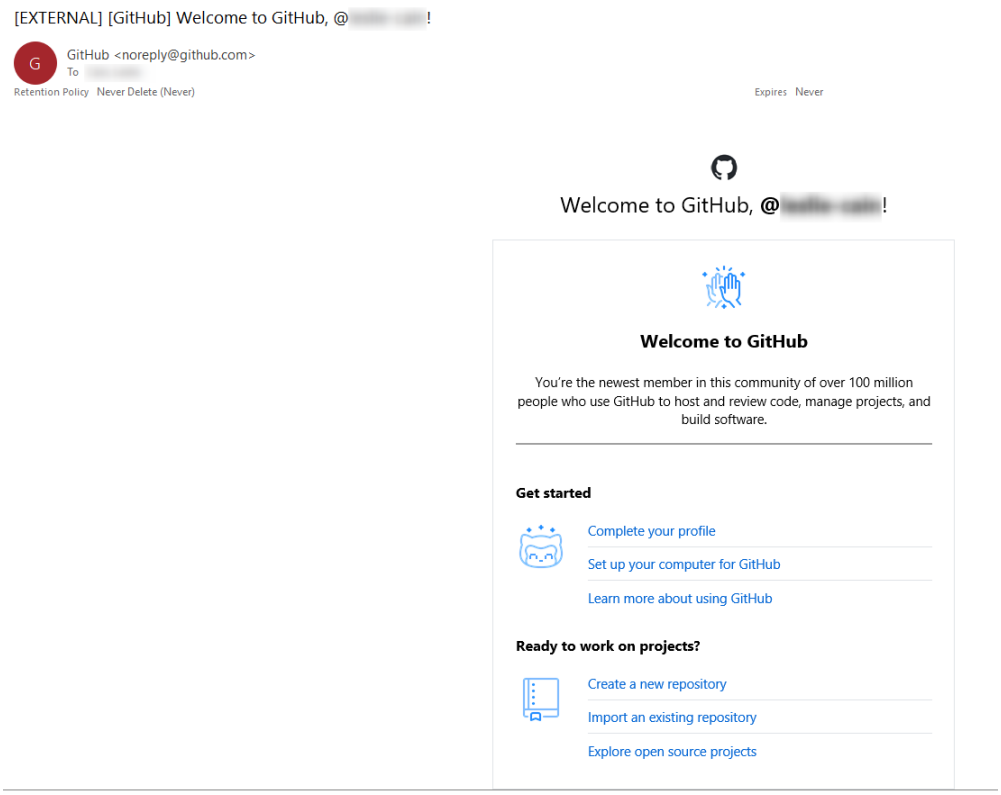


Figure 8. An example of the Welcome to GitHub email

AUTHORIZE YOUR ACCOUNT IN MINDTAP

Once you sign in, or if you already have an existing GitHub account, you will have to authorize GitHub to access your MindTap course (Figure 9). Select the green "**Authorize careerdsvrusr**" button to link your GitHub account with your MindTap course. Your account is now authorized, and you can begin your assignments. Note that you will only have to do this once when you launch the first coding lab assignment at the beginning of your semester.

Note: If you clear cache in your browser or log in using a different computer, you will have to re-authorize the GitHub account with MindTap.

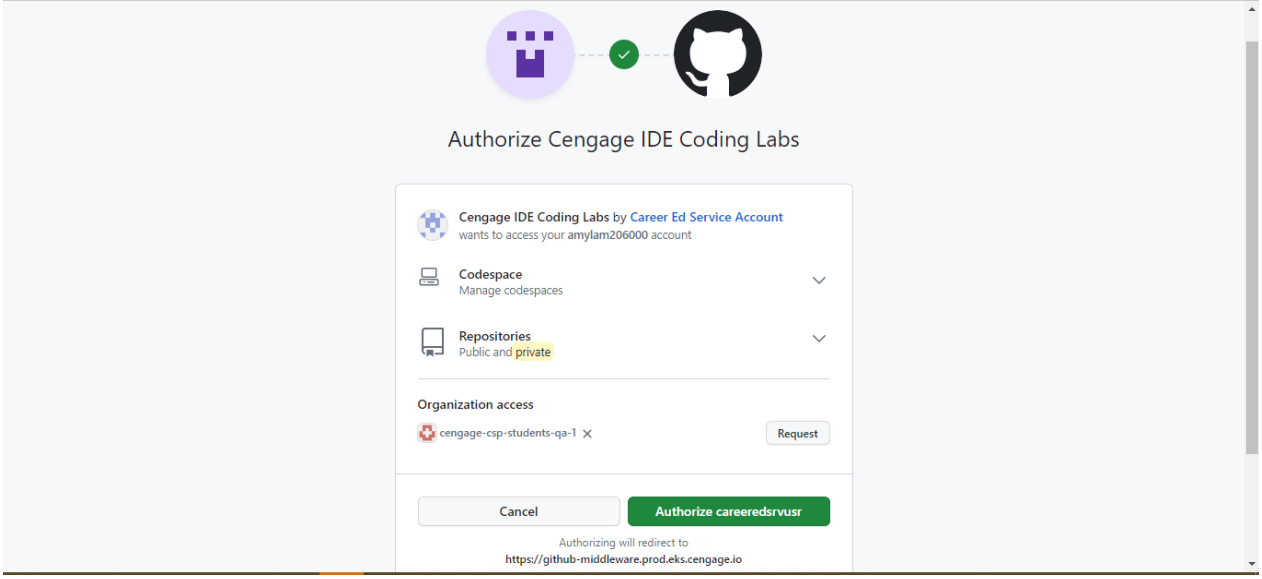


Figure 9. Authorize GitHub to access MindTap

You will also receive an email notifiying that the Cengage IDE Coding Labs application has been successfully added to your GitHub account (Figure 10). You do not need to do anything with this email.

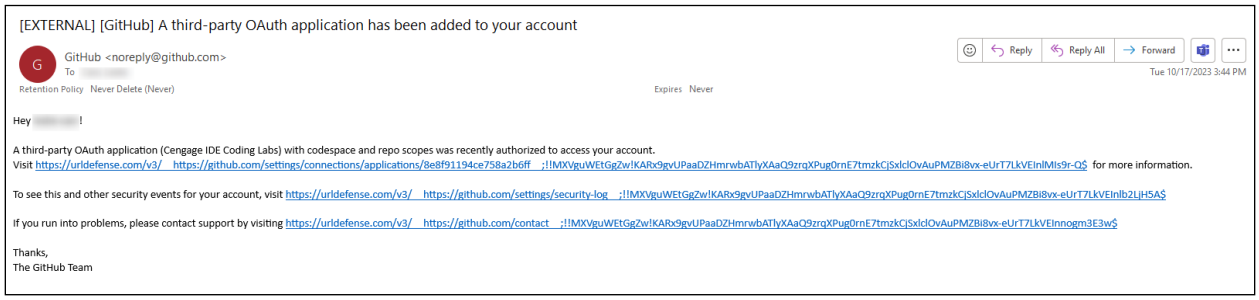


Figure 10. An example of a GitHub notification email that the Cengage IDE Coding Labs application has been successfully added to the GitHub account

Once the application has been added, you will see a redirection message (Figure 11) before the coding lab user interface loads up.

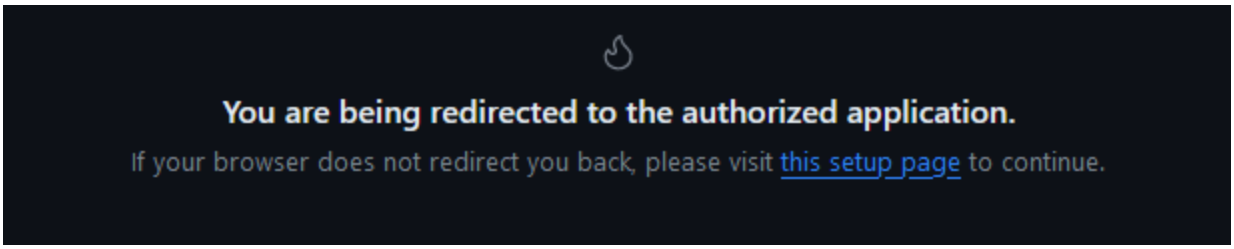


Figure 11. Message notification before coding lab loads up

CODING LAB USER INTERFACE

Once the codespace opens, you will see the following:

The Companion Tab

The Companion tab displays text, interactive tasks, and instructions to guide you through each project (Figure 12). It contains guidance for using the code editor; the required tasks for the assignment; and instructions for how to complete the assignment. It also includes an example output for the tasks.

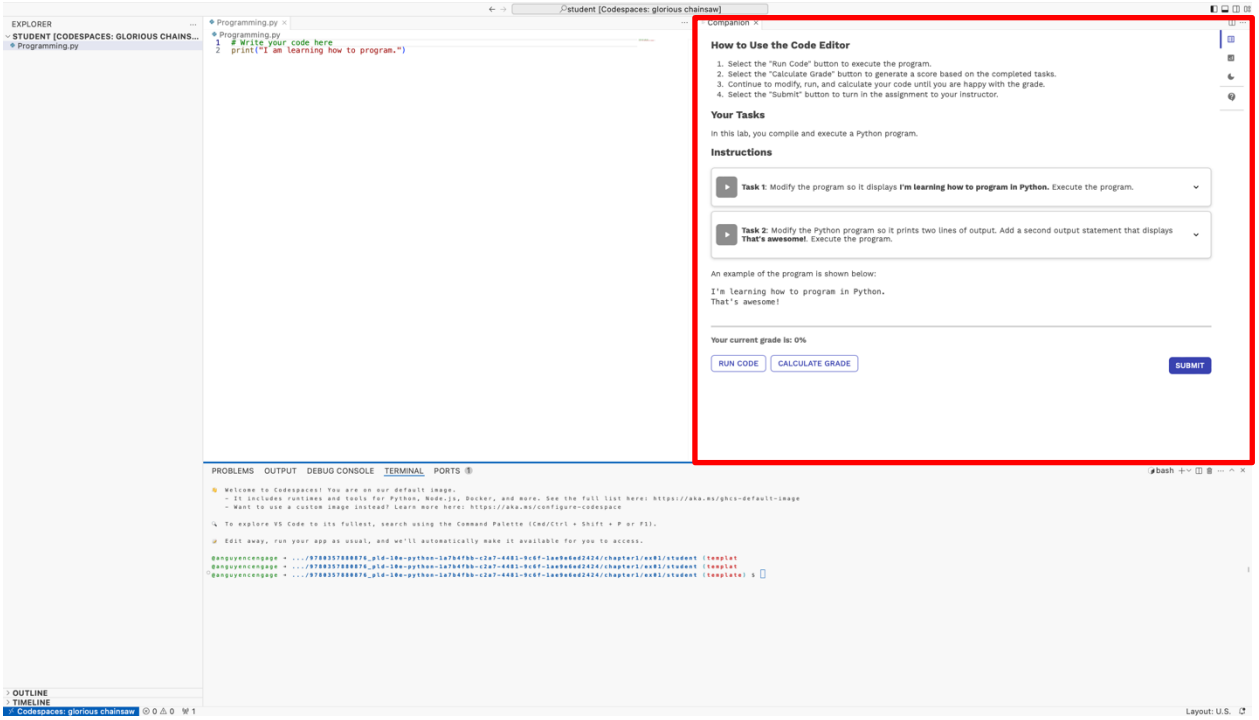


Figure 12. The Companion Tab displays text, interactive tasks, and instructions to guide you through each project

1. To run your code in the code editor, simply select the "**RUN CODE**" button in the Companion tab (Figure 13).. This will execute the code and show you the output while identifying any errors that may have occurred.

2. To check if tasks have met the requirements, select the "**CALCULATE GRADE**" button (Figure 13). If the tasks have been fulfilled, a green checkmark will appear. If the tasks have not been fulfilled, a red X will appear instead.

3. When you select "CALCULATE GRADE", the code will automatically check all the tasks within the assignments and provide you with an estimated grade.

4. Students can click the arrow on the right side of each task to get more information from the Test Feedback. In the case of an unfulfilled task, the student can click this arrow to get information on what was tested and what is missing.

5. Please note that the current grade will not update automatically when you make changes to your code. To obtain the most up-to-date grade, remember to select "CALCULATE GRADE" every time you wish to check your grade.

6. Continue to refine, run, and calculate your code until you are satisfied with the outcome. To submit the assignment, select the "**SUBMIT**" button (Figure 13).

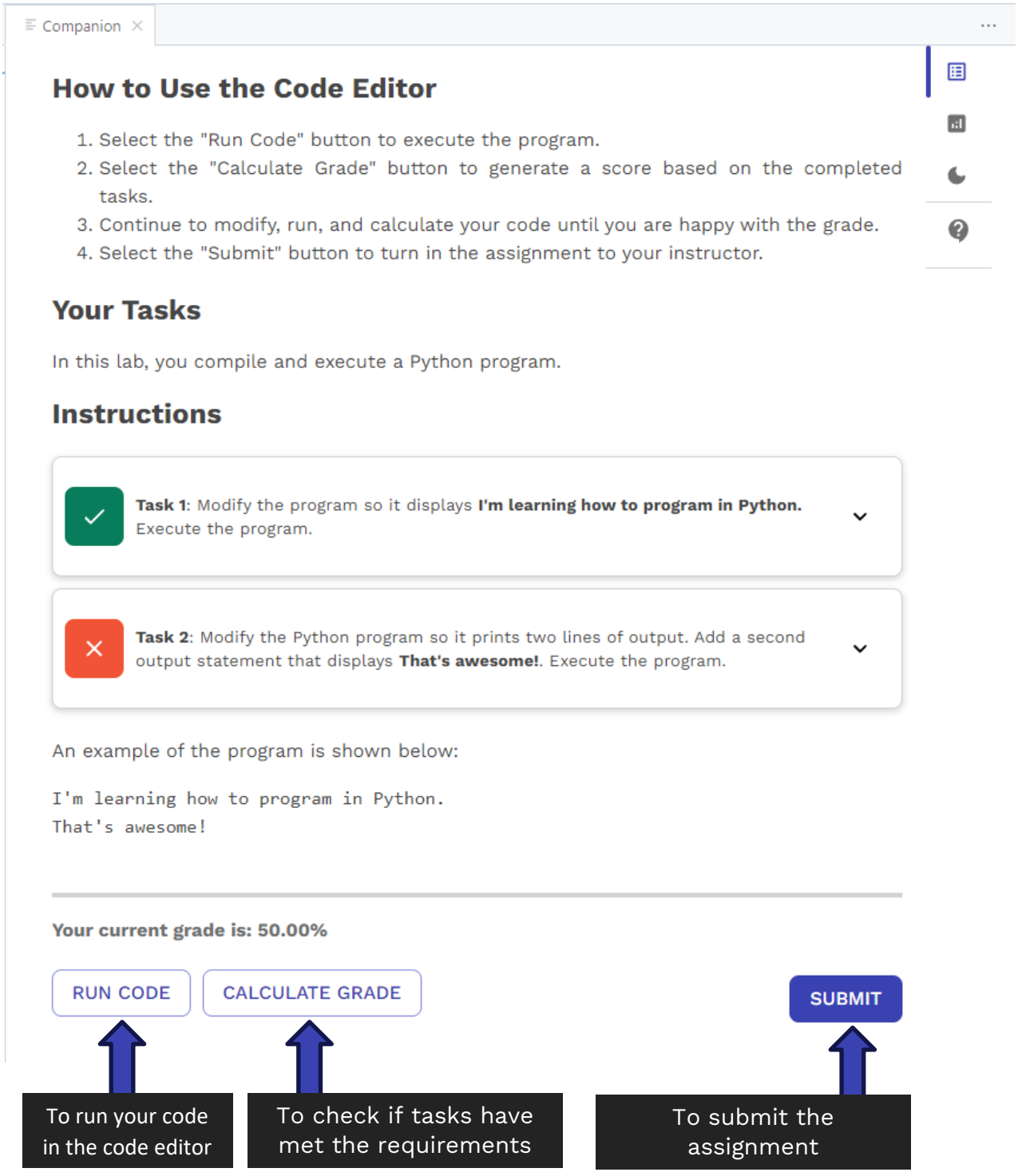


Figure 13. "RUN CODE", "CALCULATE GRADE", and "SUBMIT" button functionalities in the Companion tab

The Companion Tab: How to Install

GitHub Codespaces run on Visual Studio Code; therefore, the coding lab includes the functionalities and hotkeys that Visual Studio Code has, including the extension library. If the Cengage Companion tab does not automatically install, please follow these steps:

1. Select Extension library on the left side bar, or press **Ctrl + Shift + X** on Windows, and type in Cengage MindTap Companion. Select the Install button to install the Companion extension (Figure 14).

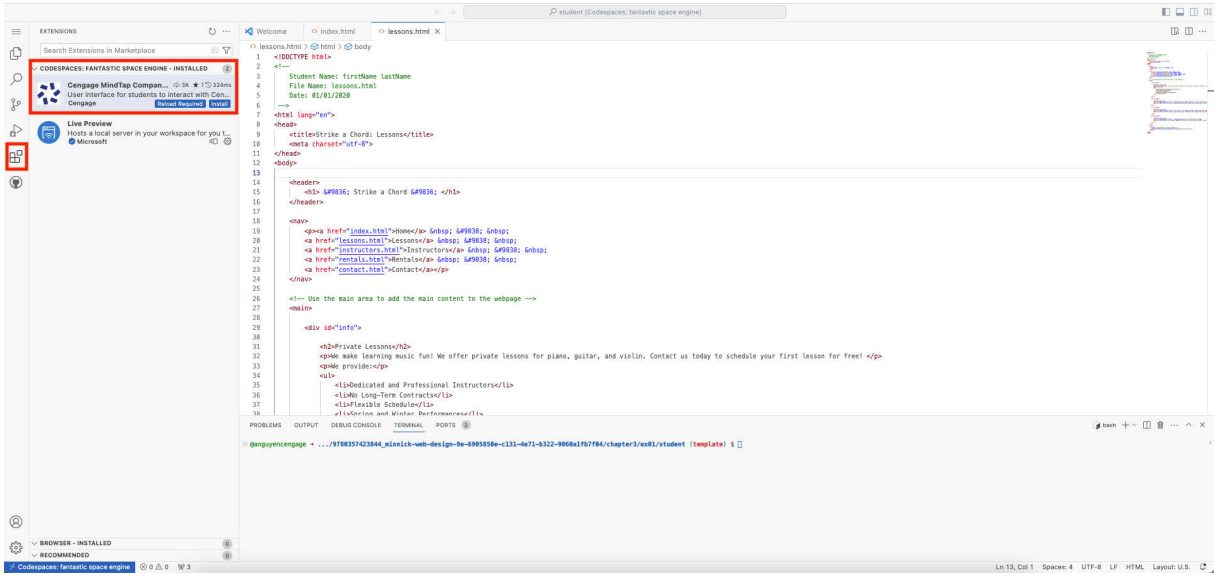


Figure 14. Steps to install the Companion extension

After finish installing, select the Explorer on the left side bar, or press **Ctrl + Shift + E** on Windows, to go back to the working files for the assignment (Figure 15).

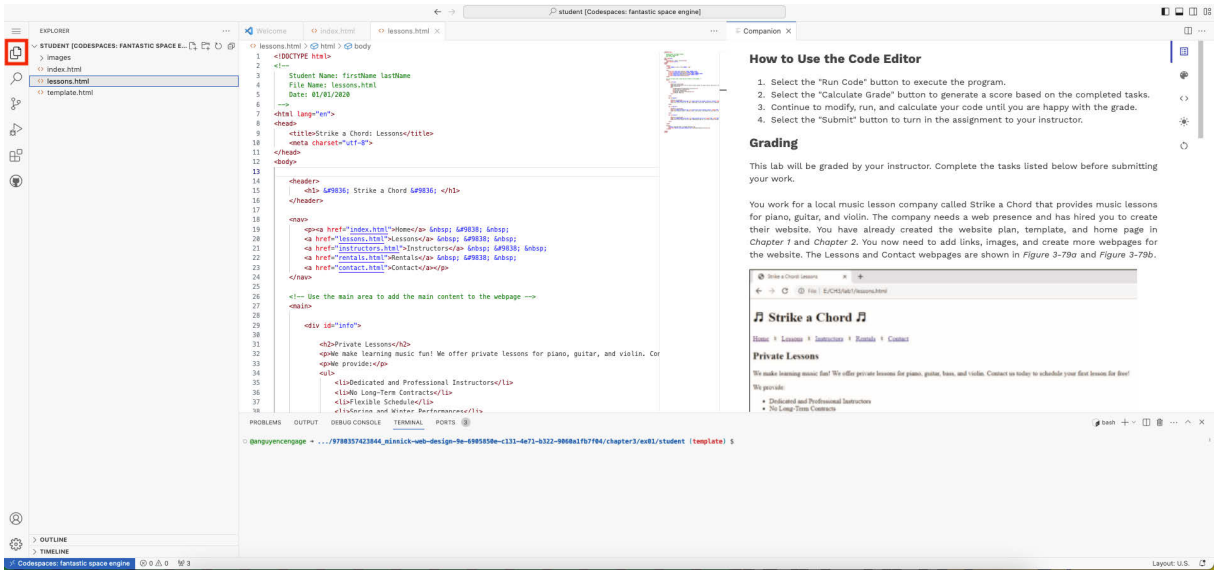


Figure 15. Steps to go back to working files for the assignment

The Code Editor

1. The code editor is highlighted in Figure 16. The code editor allows you to edit the files in your project.

2. The code editor will enhance your coding experience with syntax highlighting and bracket auto-completion and will allow you to easily indent or outdent your code.

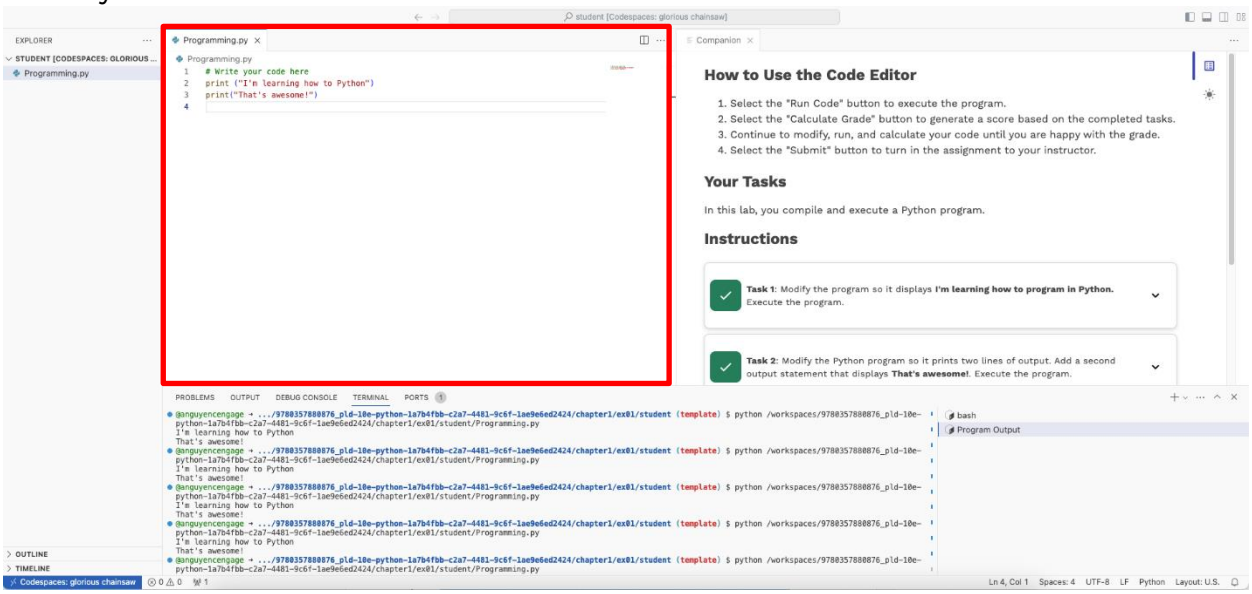


Figure 16. The code editor

3. To reposition or resize an editor, simply drag and drop the tab to the desired location (Figure 17). You can open as many editors as you like side by side vertically and horizontally. If you already have one editor open, there are multiple ways of opening another editor to the side of the existing one:

   - **Alt**-select or single select a file in the Explorer.
   - **Ctrl+** to split the active editor into two.
   - Open to the side (**Ctrl+Enter**) command from the file's content menu in the Explorer.
   - Click the "**Split Editor**" button in the upper right of an editor.
   - Drag and drop a file to any side of the editor's region.

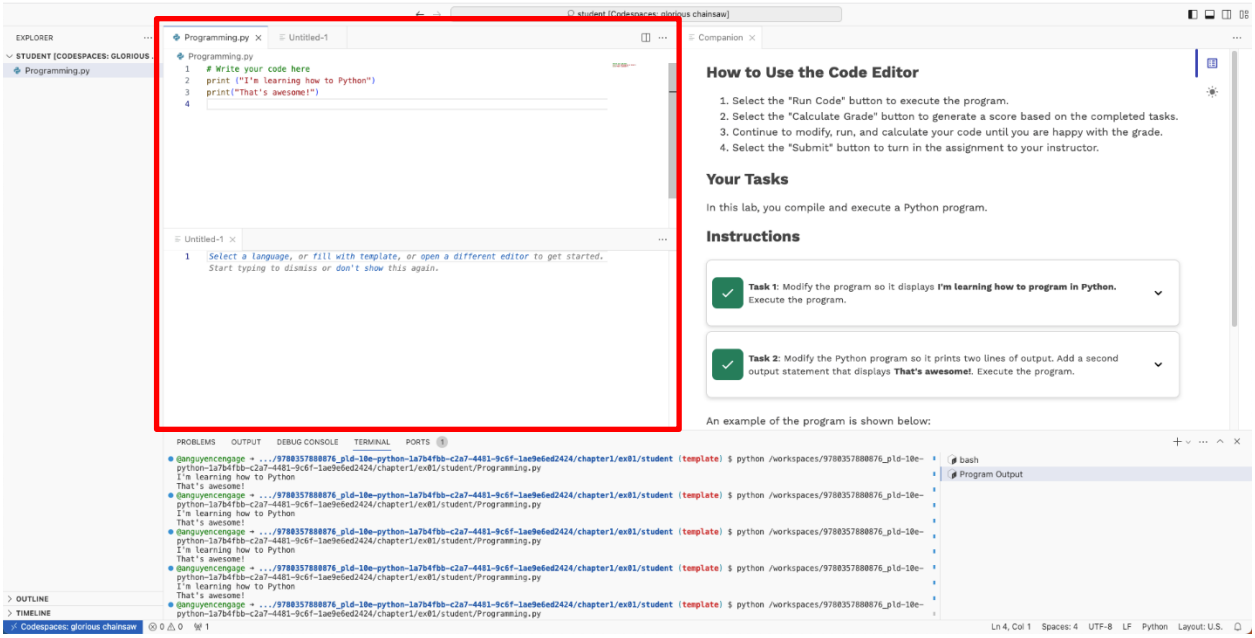


Figure 17. Opening multiple code editors in the same codespace

The Live Terminal

1. The live terminal is a real coding environment that allows you to build and run your program (Figure 18). To execute your code, simply select the "**RUN CODE**" button located in the Companion tab.

2. The terminal will display the results of your code execution and enable you to interact with any input prompts as needed. Select "Program Output" to see the execution of your code.

3. If you do not see the terminal, use the keyboard shortcut **Ctrl+`** (or **Command +`** for macOS) to launch or re-launch the terminal.

4. You can resize each terminal by dragging its edges and change its position to the left or right by dragging the terminal to the desired location. This gives you the flexibility to customize the layout of your workspace.

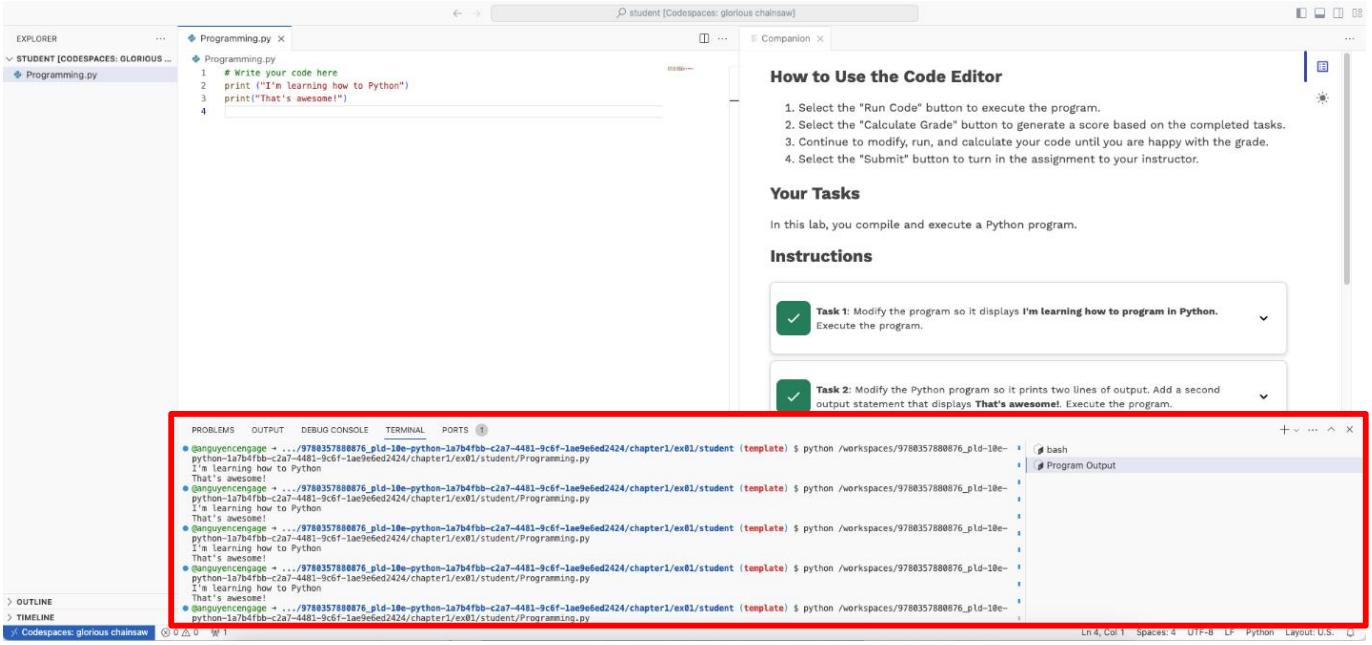
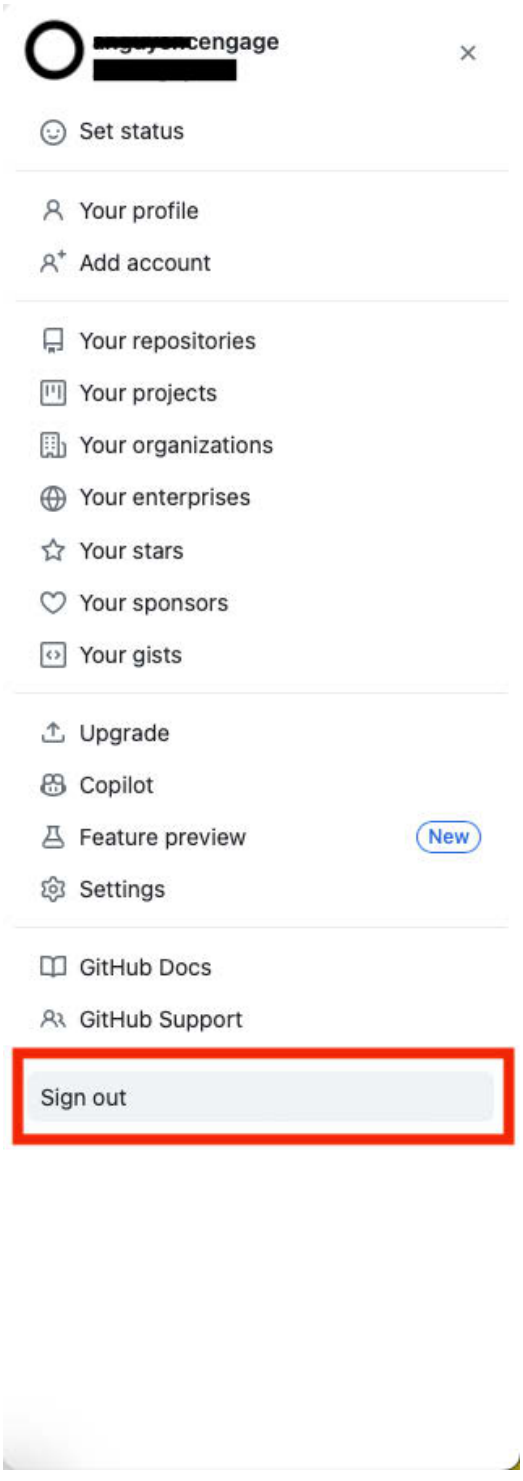


Figure 18. View the live terminal

UNAUTHORIZE GITHUB



To unauthorize GitHub, go to www.github.com.

Click to your profile located on the top right (Figure 19). Select **'Sign out'**.

Figure 19. Unauthorize GitHub