

# Math 4610 Lecture Notes

## Homework Repository Structure and Permissions \*

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## Homework Repository for Math 4610: Creating a Table of Contents .

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The first task students will need to address is how to organize homework solutions that are completed. The homework will come in the form of task sheets and upon completion of tasks, students will need to turn in their work. Students will be required to create a table of contents for the homework solutions and a structure that organizes the different solution sets. The steps that students will need to perform are the following.

1. Create a table of contents file called `hw_toc.md`. The form and contents of the file will be described in this lecture. Students will need to account for a couple of entries during the course.
2. Modify the name of the file to create a folder/directory to store solutions for the tasks completed.
3. In addition, a subfolder for each task sheet must be included.

Note that Github will not allow you the luxury of creating empty folders. This is an advantage in using “git” on a local machine. When changes are “pushed” to Github, empty folders are ignored. So, let’s get started on the formatting the homework solutions portion of the repository for the class.

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## Homework Repository for Math 4610: Get to Github.

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The first step is to login to your Github account. So, in a web browser, type in

`https://github.com/`

and log on to your account. By this point you should already have an account on Github.

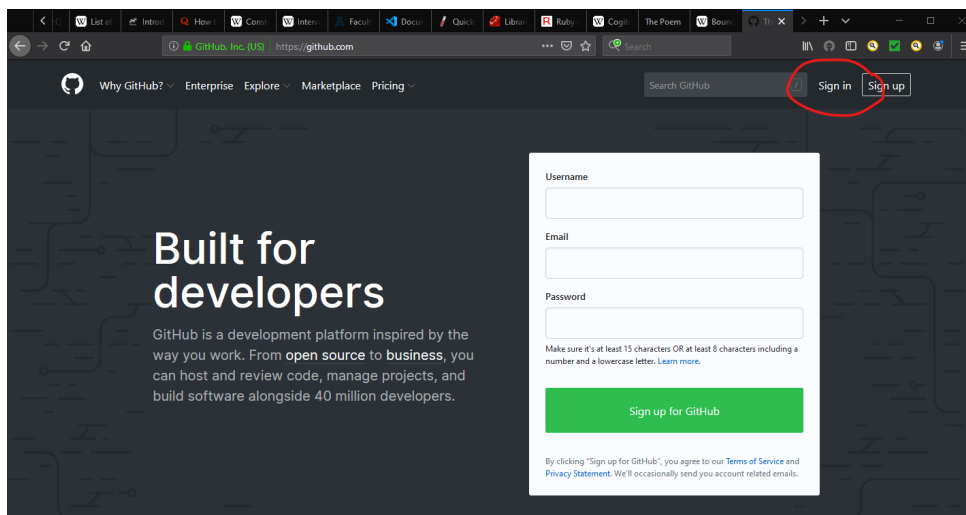


Figure 1: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box

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## Homework Repository for Math 4610: Login to Your Account.

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Use the popup to login to Github with your user name and password.

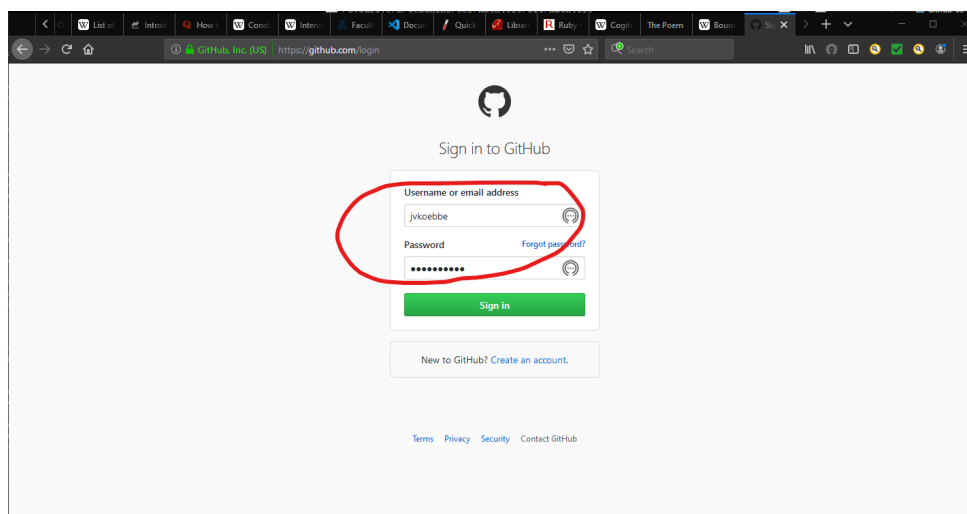


Figure 2: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box

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## Homework Repository for Math 4610: Starting Point for Working on a Repository.

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Once the following pops up, we can navigate in amongst the repositories if you have more than one. In any case, you should have a repository named

`math4610`

Click on this repository to start creating files and the like. Once the repository is created, students can click on the name to work on the repository or use files in the repository.

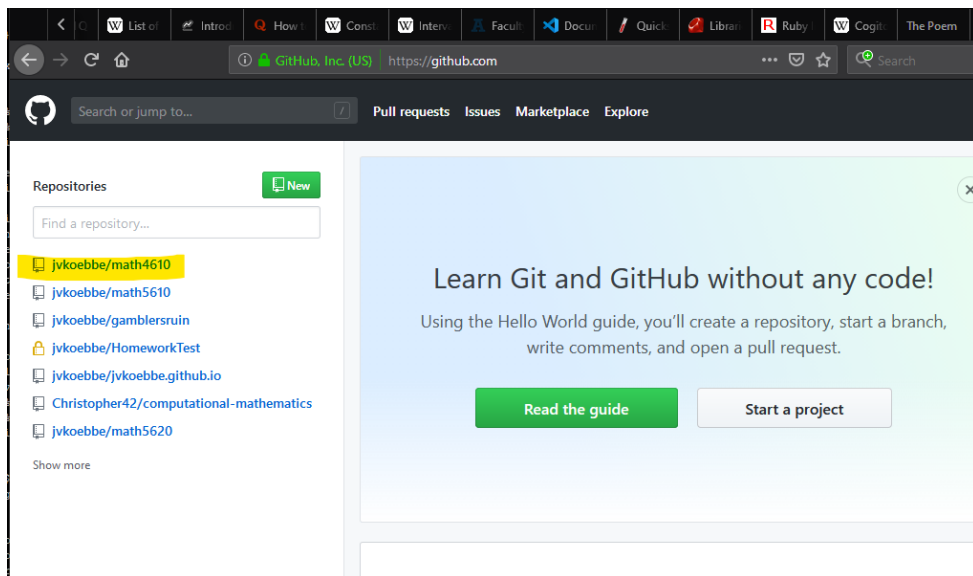


Figure 3: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box

To start putting together the repository for submitting task solutions, students can create a new file by clicking on the button as shown below. In particular, students should create the table of contents file for the task sheets.

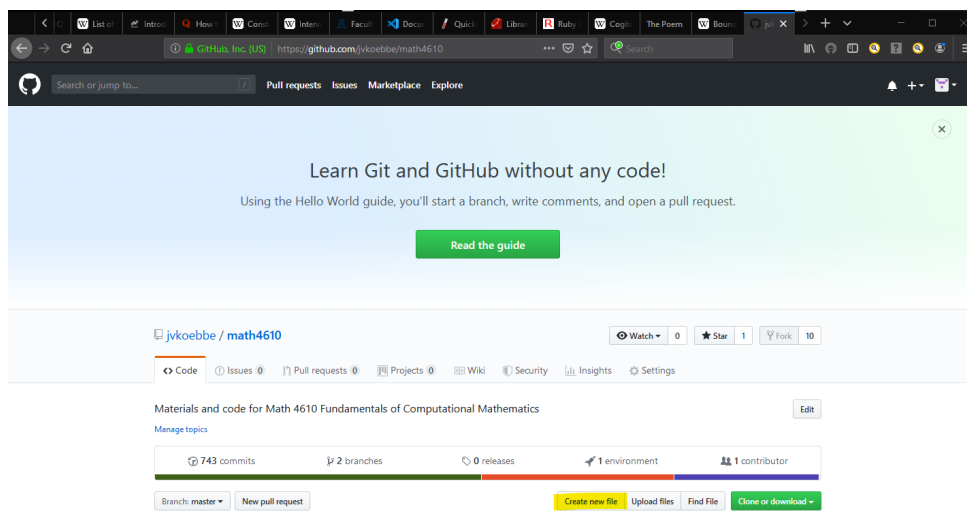


Figure 4: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box

In the following figure, two things should be noted. The first is the name of the file

`hw_toc.md`

Note that the extension, “.md” indicates to a browser tha this is a Markdown file. We will spend more time on using Markdown in this and other lectures in the course. The second piece of the puzzle is the circled region where you can type in lines that will be used in the file. All you need to do is click to the right of the numbered line and start typing.

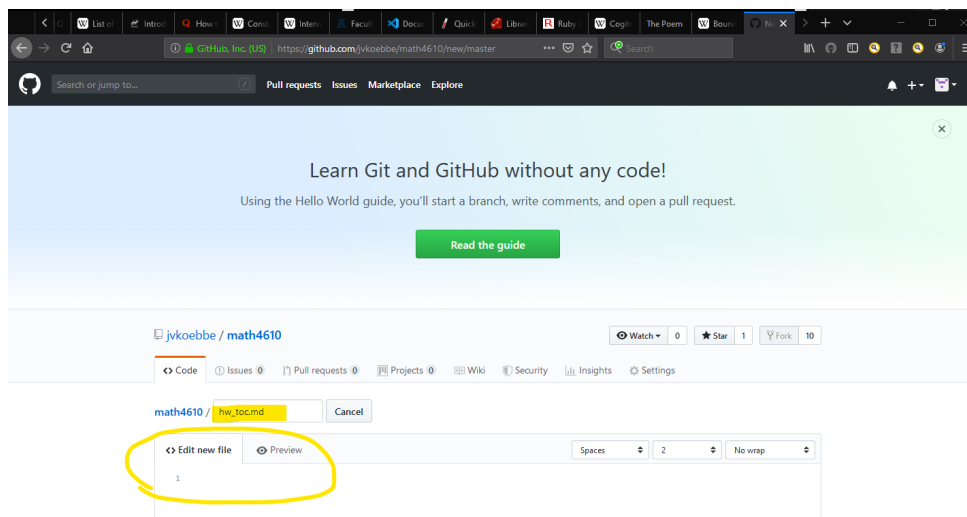


Figure 5: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box

To give an idea of how to use Markdown to set up a table of contents. Each of the lines serve a function in the table of contents.

```
# Math 4610 Homework Solutions
```

This line is a header line due to the pound sign. The second nonblank line is a header line with a smaller font size. Note that these lines are short hand in HTML for `<h1>` and `<h2>`. The next two lines provide links to other files that will contain your homework solutions. Note that the asterisk preceding the text in these lines indicates a bullet should be placed in front of the text. There are tasks in the homework that will walk you through at least some subset of Markdown syntax.

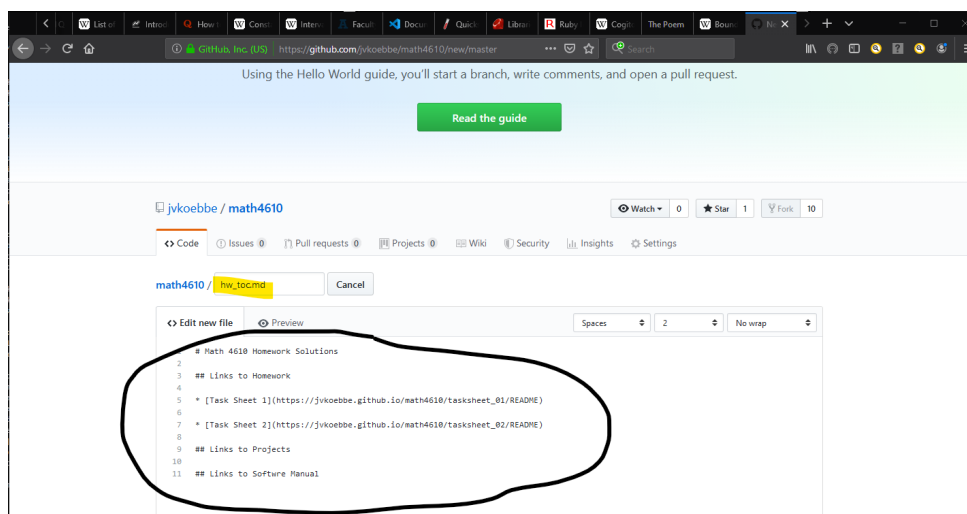


Figure 6: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box



Version Control Systems (VCS) like git do not make changes to a repository unless a commit has been made. If you scroll down to the bottom of the webpage there are a couple of boxes and buttons to consider. The textboxes allow the user to enter comments about the changes being made to the repository. It is strongly recommended that students add comments about the changes being made. Finally, there is a button that will seal the deal on the modifications. To push the changes, click on the

**Commit new file**

button. If you do not want to keep the changes, click on the

**Cancel**

If you cancel the changes, a popup will appear that will allow you to reconsider the choice. So, click on the commit button.

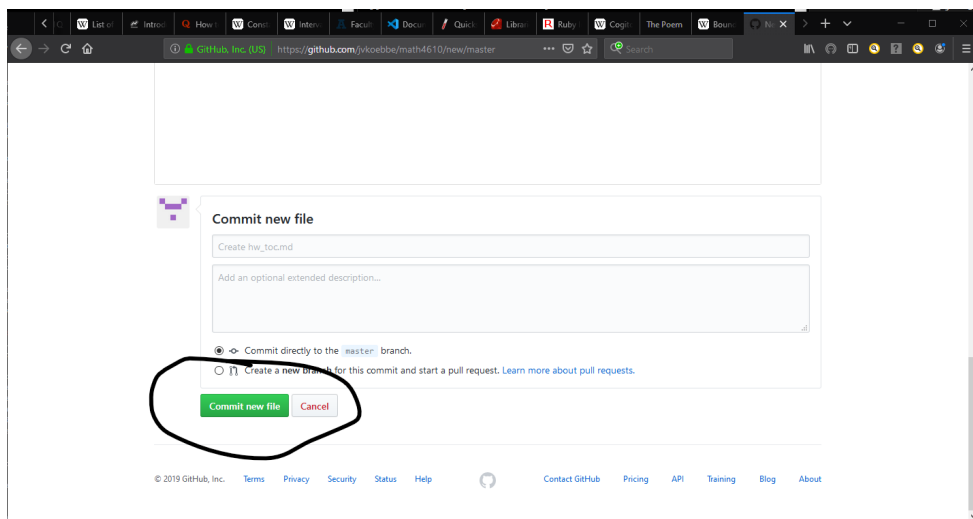


Figure 7: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box

There are a couple of ways to create folders in a repository. One way is to go back into the editor function on Github and modify the name of an existing file. For this part of the lecture, a different repository will be used. Students should use their math4610 repository to follow along with this example. To start the process, create a file

```
harmless.md
```

You can include some text and then commit the change as shown above.

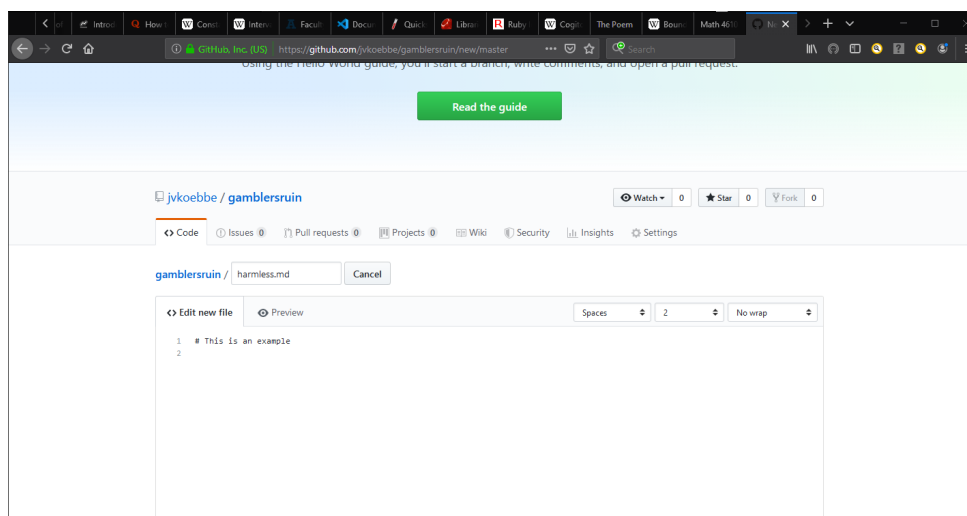


Figure 8: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box

Next, click on the repository name at the top of the webpage. Students should see the file name

`harmless.md`

in the list of files. Click on the filename in the list to show the contents of the file.

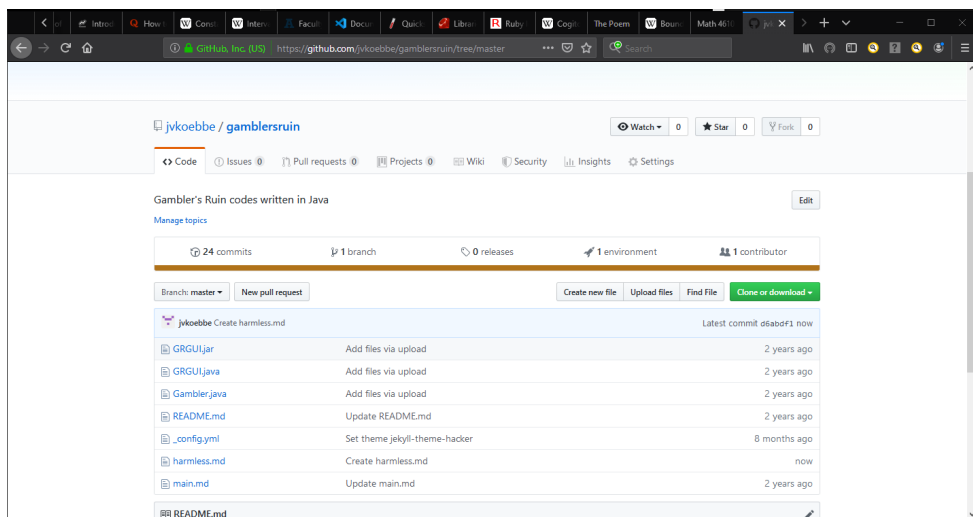


Figure 9: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box

Once the file contents are displayed, we can edit the

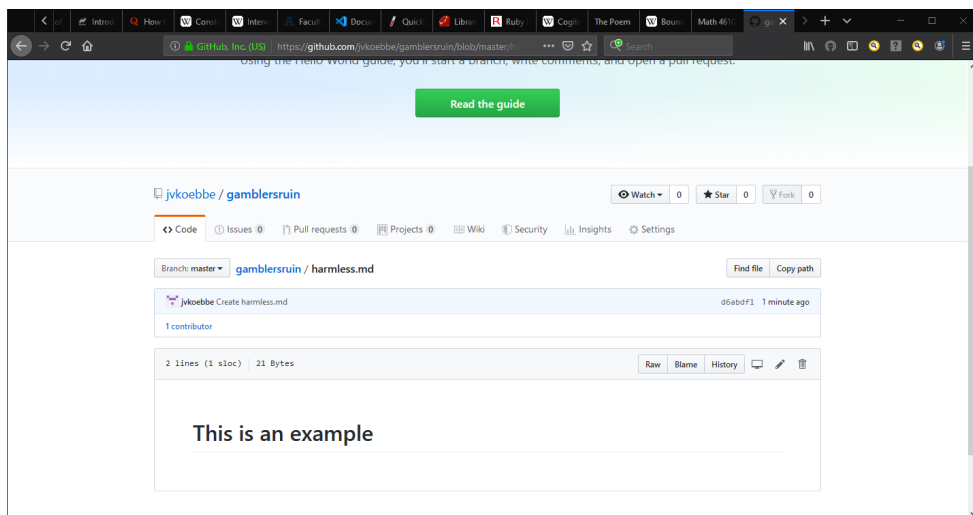


Figure 10: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box

button that will create a new file.

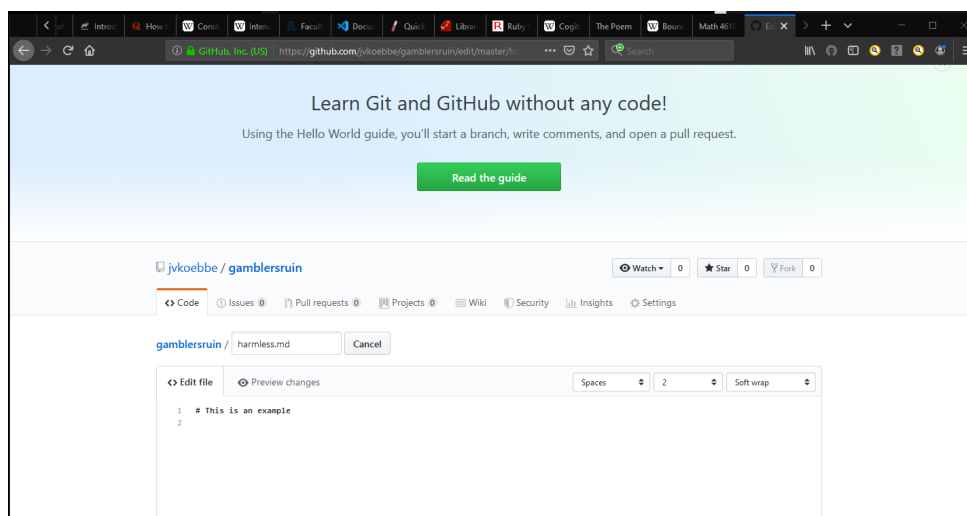


Figure 11: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box

button that will create a new file.

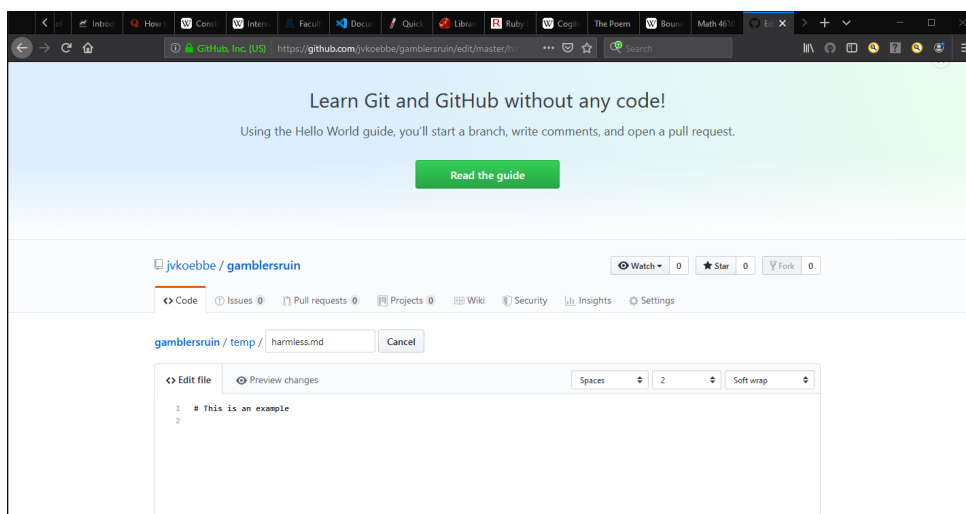


Figure 12: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box

button that will create a new file.

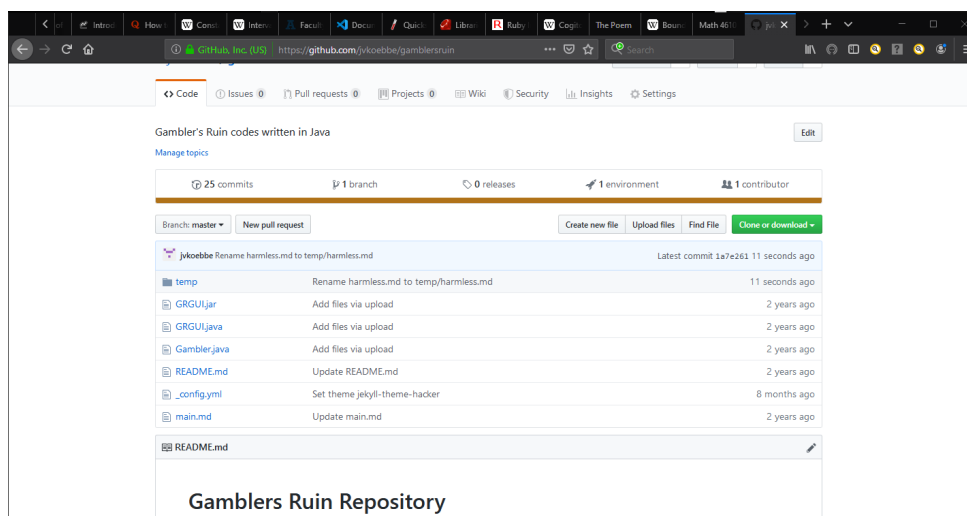


Figure 13: Screenshot taken using **Snip & Sketch**. This is an app on my Windows 10 box