**How to use GitHub with Windows Command-Line**

Set 2E COMM2212

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# Introduction

GitHub and Git are used for version control, meaning they can be used to keep track of the changes you make to a set of files. In this tutorial, the user will use GitHub and Git version 2.10 to create a repository for a group of collaborators to access and edit. This tutorial is intended for Windows users with Git already installed, and a GitHub account. Users should also have a basic knowledge of using the Windows command prompt.

# Instructions

## Instruction 1: Creating a GitHub Repository

Some text goes here

Creating an Online Repository on GitHub

The first step in using Git for version control is to set up a repository for it on GitHub. A repository acts as the folder for a project, holding the files and every revision of the files along with the documentation of the project.

1. Using a web browser, navigate to [GitHub.com](http://www.github.com) and either log in or sign up. A GitHub account is needed to create a repository.
2. Once logged in, click on the plus button in the top right corner of the website. In the dropdown menu that appears, click “New repository”. The “Create a new repository” page should appear.

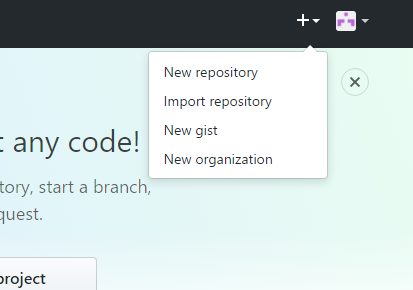
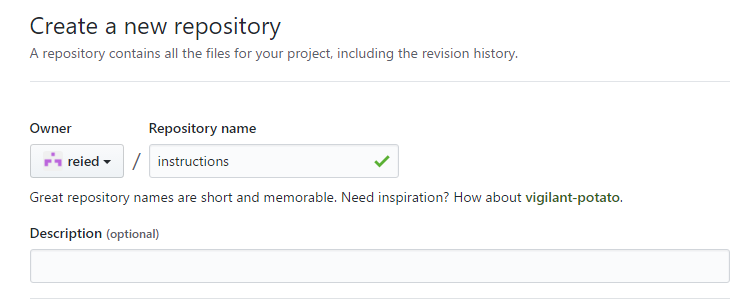
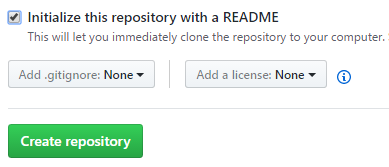


Figure The menu to create new repository.

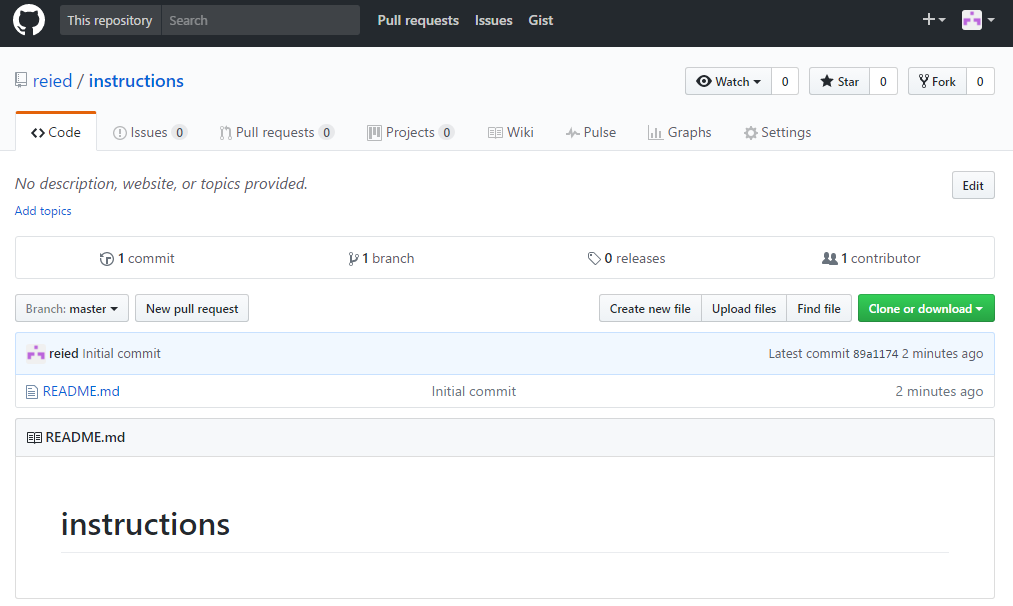
1. The repository needs to be named. For this set of instructions, the repository will be named “instructions”.



1. Next, click on the check box reading “Initialize this repository with a README”. This will be helpful for knowing when repository is properly downloaded onto a computer. Make sure “Initialize this repository with a README” is checked before clicking the large “Create repository” button at the bottom of the screen.



1. At this point, the completed repository should be on screen.



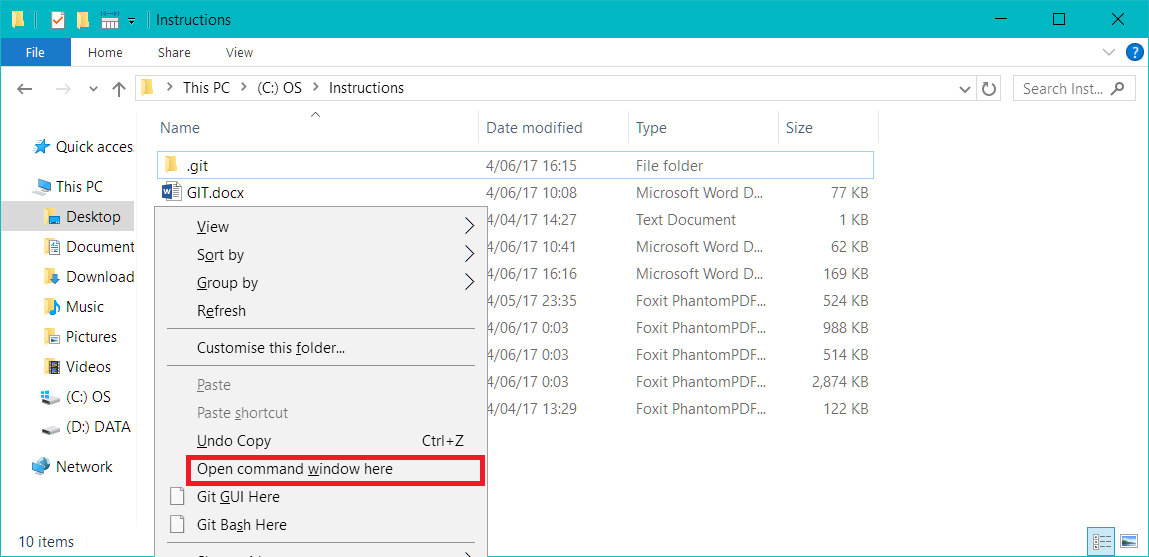
## Instruction 2: Setting up the Local Repository

Type some text here

### Opening Git from Command-Line

You will perform most of the instructions using the Windows Command-Line. The Windows Command-Line is a text-based user interface where commands are typed into a console.

1. Go to the root folder of the local computer’s repository.
2. SHIFT + RIGHT-CLICK the repository folder and click on Open-up the command-line window through pressing SHIFT + RIGHT-CLICK in the repository.



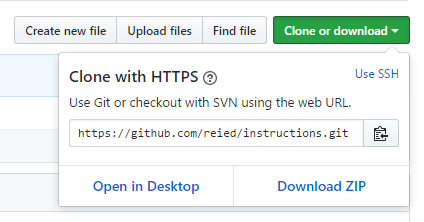
1. A console window titled Command Prompt will appear on the screen.



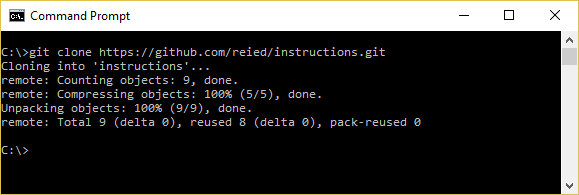
### Cloning the Online Repository to Local Repository

Some text goes here

1. On the repository page, find the green ‘Clone or download’ button and click on it. A popup window should appear below it. Copy the URL from the text box by clicking the button to the right of the text box.



1. In Windows Explorer, navigate to the folder that will contain the repository and Open command window here.
2. In the command prompt, type git clone [URL], with [URL] replaced with the URL from the GitHub repository. The GitHub repository has now been downloaded to the local computer.



1. To make changes to this repository, navigate the Command Prompt into the repository by typing cd [repository\_name], replacing {repository\_name] with the repository name on GitHub. The file path will now display the path of the repository.



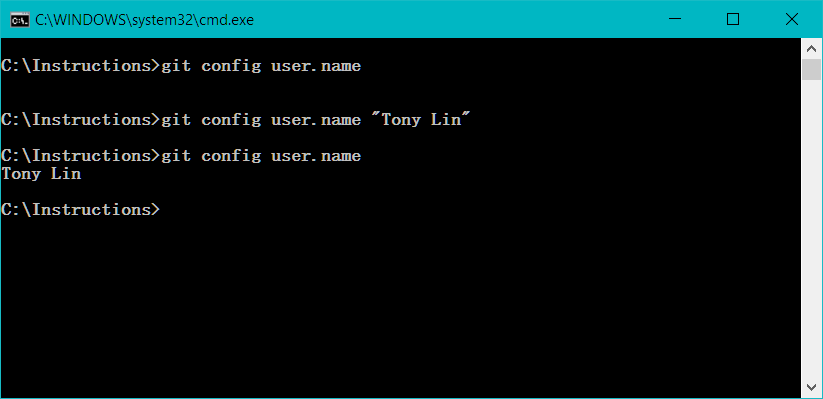
## Instruction 3: Modifying the Repository

Some text goes here.

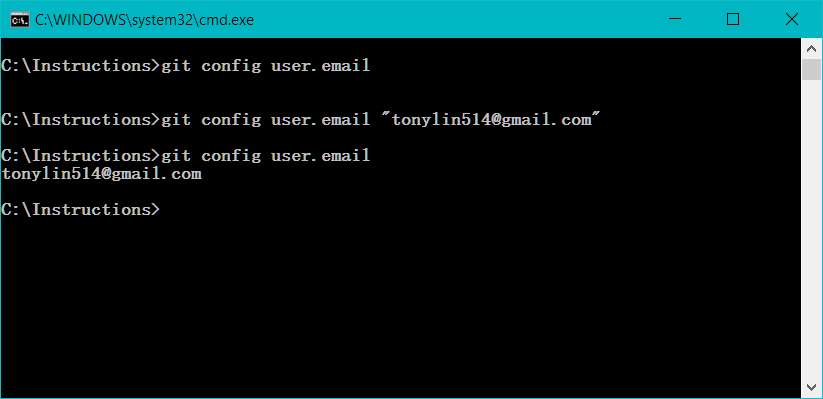
### Setting your GitHub Account to the Repository

This allows GitHub users to commit changes to the repository, and helps identified which user made a commit. Without this, you would not be able to contribute to certain repository.

1. Go to the root folder of the repository and Open command window here.
2. Type in git config user.name to see the current username set for the repository.



1. If none exist, type in git config user.name “Firstname Lastname” to set the Collaborator’s name or git config --global user.name “Firstname LastName” to set it for all and future repositories.
2. Type in git config user.email to see the current GitHub account set for the repository.

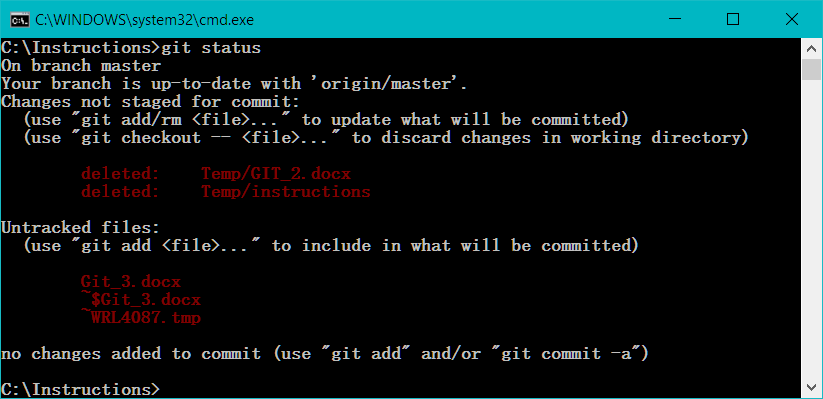


1. If none exist, type in git config user.email “email” to set the Collaborator’s GitHub account or git config --global user.email “email” to set it for all and future repositories.

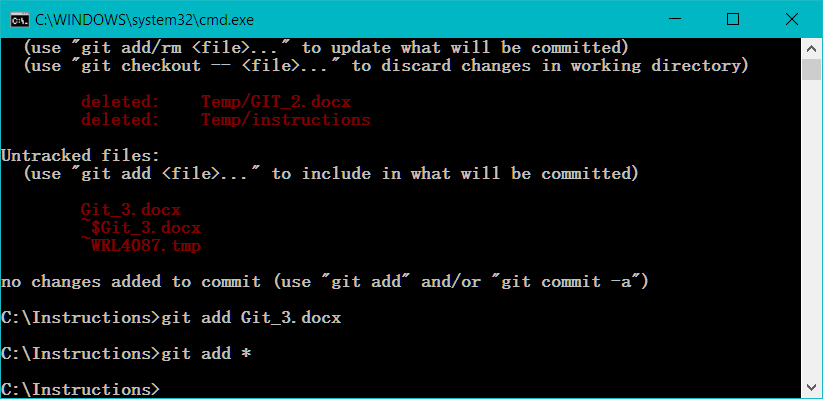
### Adding, Updating, and Removing Files from Repository

You can modify your master repository on GitHub through synchronizing your local computer’s repository. This will change the online master repository’s files by adding, removing, or replacing the files.

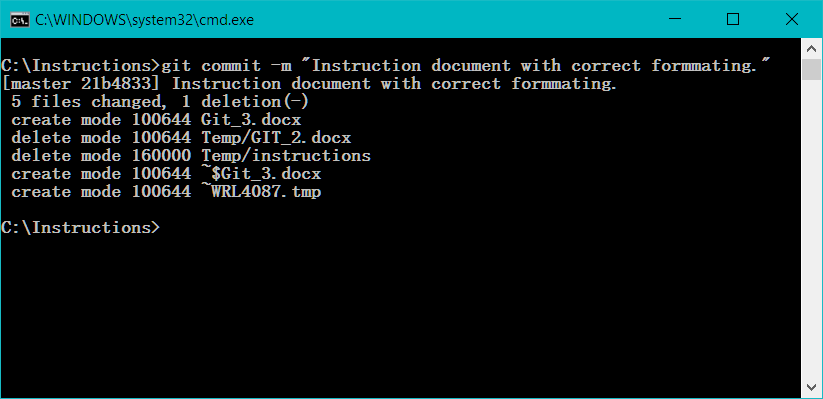
1. Add, remove, or update files in the repository.
2. Go to the root folder of the repository and Open command window here.
3. Type in git status to see the modified files in your repository.



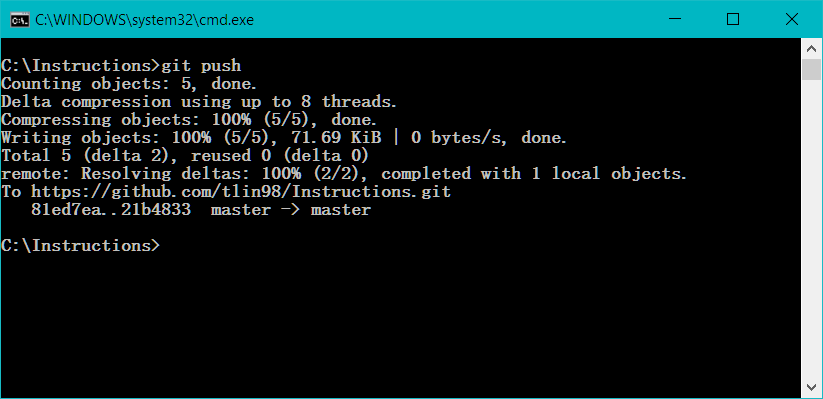
1. Type in git add [FILENAME] to add changed files to be placed on a stage. Type git add \* to add all modified files.



1. Type in git commit -m “[comments]” to “set” the files on the stage and to add a comment about these changed files.



1. Type in git push and wait a few seconds for files to upload to online repository.



### Update from the Online Repository

When there are many collaborators part of a repository, it is important to update the local repository first to have all the files updated, follow by pushing your modified files to the online repository.

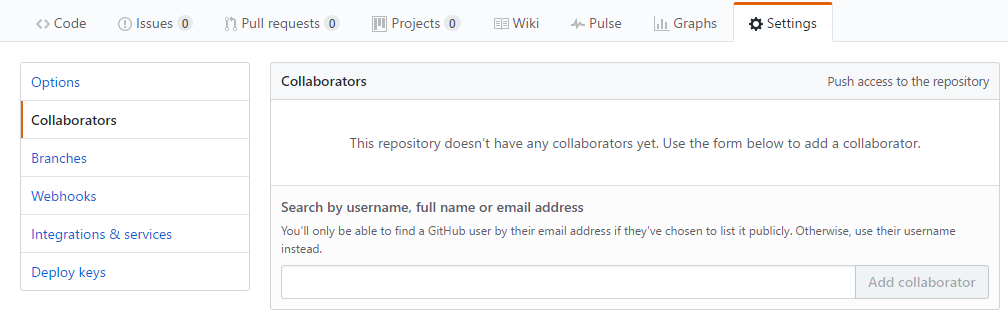
1. Type git status to check to see if you have any files modified.
2. Type git pull to download files from the online repository and merge with your local repository. Note, it is best to commit your files first before performing git pull in case the files being merged caused problems.

## Instruction 4: Including Collaborators to the Repository

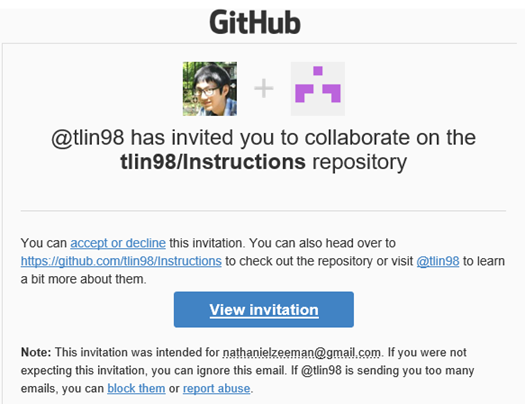
A repository can have other collaborators making changes. This instruction will go over adding and allowing collaborators to make changes to the online repository.

### Inviting Collaborators

1. Navigate to the collaborators panel of the GitHub repository by clicking the ‘Settings’ tab at the top of the page, then clicking on the ‘collaborators’ tab to the left side of the screen.
2. On this screen, type in the GitHub username of the person that will edit the repository, and select them from the dropdown box that appears beneath the search box before clicking the ‘Add collaborator’ button.



1. The person who was invited to the repository should receive an email which will allow them to accept the invitation and become a collaborator in the repository.



1. The collaborator should now be authorized to make changes to the repository. However, the collaborator now will need to set up their own local repository. To do this, the collaborator will need to install Git and follow [Instruction 2: Creating the local repository](#_Instruction_2:_Creating) and [Instruction 3: Modifying the Repository](#_Instruction_3:_Modifying) in this instruction manual.

# Glossary

GitHub

Repository

Version Control

Collaborator

Root

Add

Push

Pull

Commit

Stage

Origin

Clone

# Troubleshooting Guide

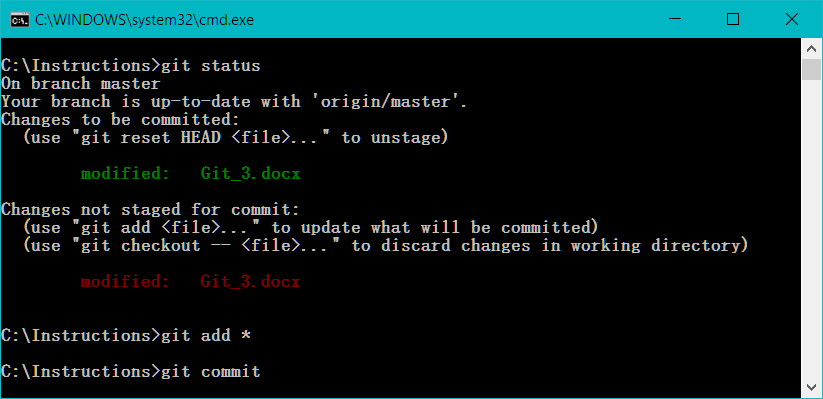
## I Made a Commit but was Directed to a Colourful Message Editor.

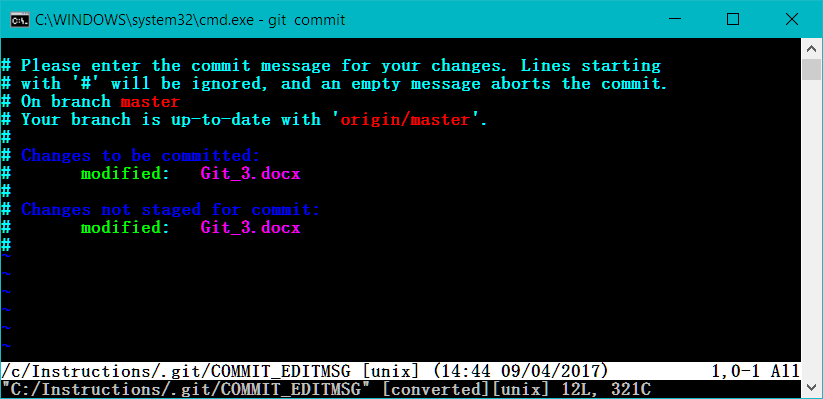
The easiest explanation of how you got here was that in the inputted command, git commit was missing

-m. Git has a built-in VIM text editor. VIM is an advance text editor commonly found on Linux-based operating systems.

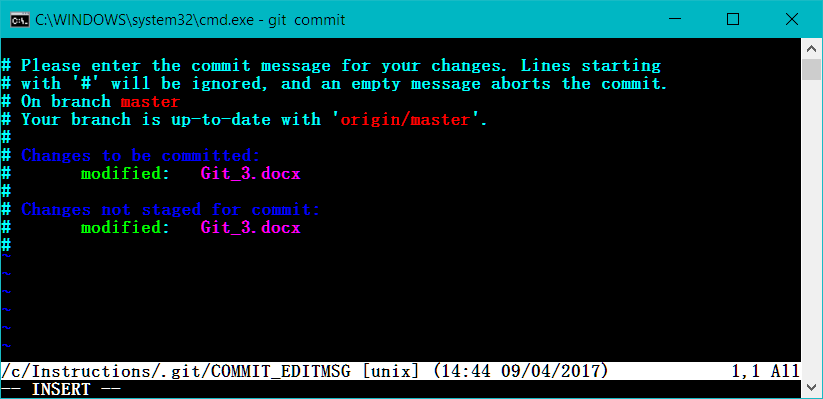
### Exiting the Vim Text Editor

Because we do not want to use the VIM Text editor, it is best to undo the steps and return to the console to create a simple commit message.

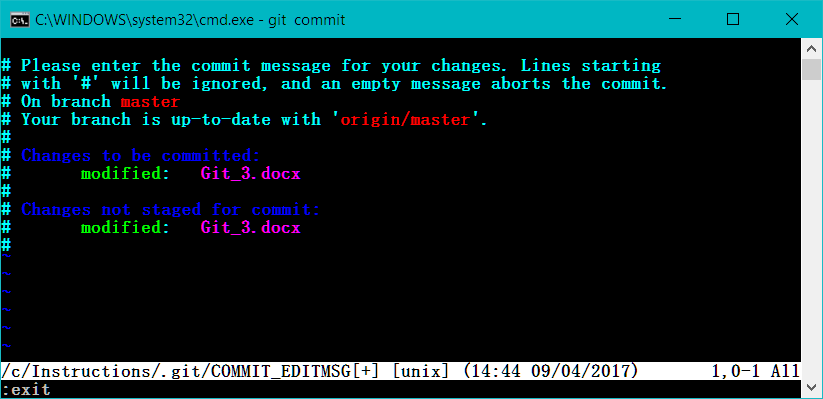


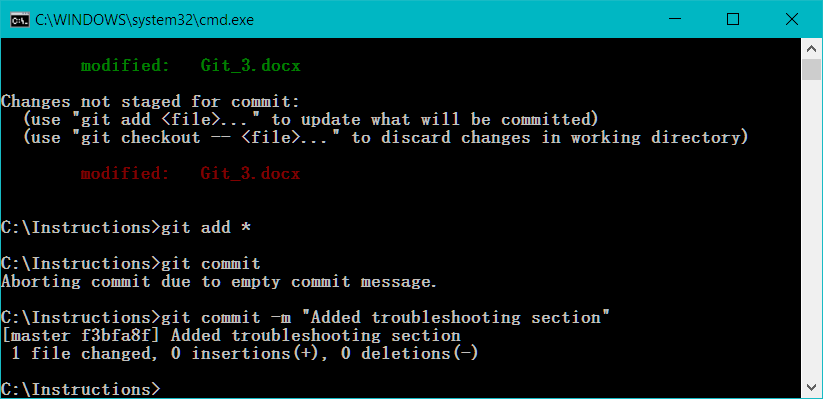


1. Press an alphabet key to start the VIM text editor. A -- INSERT -- will appear at the bottom of the console.



1. Press ESC to escape from the INSERT Mode then type :exit and press enter to leave. It should say “Aborting commit due to empty commit message.” In the console.





1. Type git commit -m “[comments]” to redo your commit.

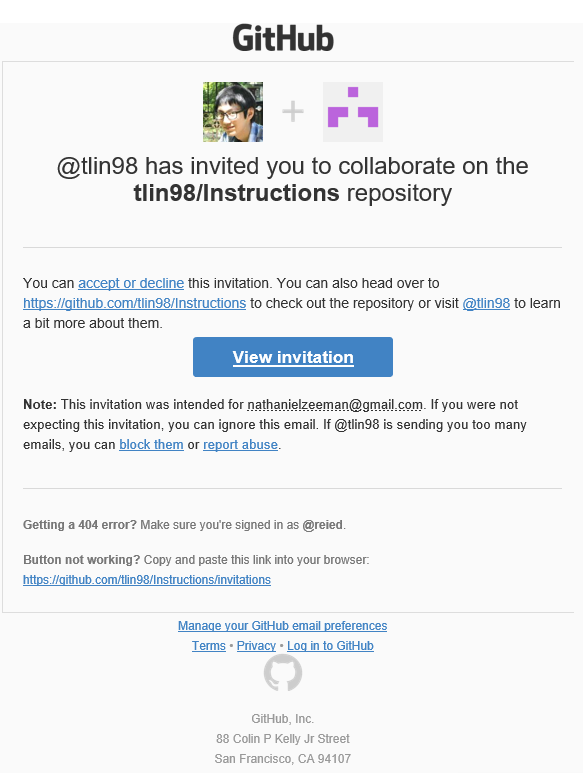
## I Cannot Push my Files to the Online Repository

Usually users can’t push their files to the online repository because

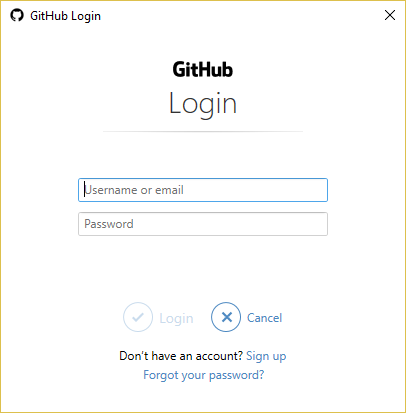
1. The repository’s owner didn’t add the GitHub user to the Collaborator list.
2. The GitHub user forgot to set their GitHub email to their local repository.
3. Your files are not up to date with the latest files on the online repository.
4. No files were added to the stage.
5. No files were committed in the stage.

### Checking the Repository

1. Ask the repository owner to add your GitHub account to their collaborator’s list. You should have received an email for the invite.



1. Go to [Setting your GitHub account to the Repository](#_Setting_your_GitHub) to ensure the GitHub account being used to commit and push files is the accepted account.
2. Go to [Update from the Online Repository](#_Update_from_the) to update your local files. You may have to create a new commit if files were modified.
3. Go to [Adding, Updating, and Removing Files from Repository](#_Adding,_Updating,_and) to push your files again.
4. Upon typing git push in step 6 of [Adding, Updating, and Removing Files from Repository](#_Adding,_Updating,_and), you may be prompted with a GitHub Login Window. Enter your username and password for your GitHub account to proceed and push the files.



1. If you incorrectly typed your email or password, you will be taken back to the console and required to input your GitHub username and password. You cannot enter your GitHub email here. Your files will be uploaded after a successful login.

