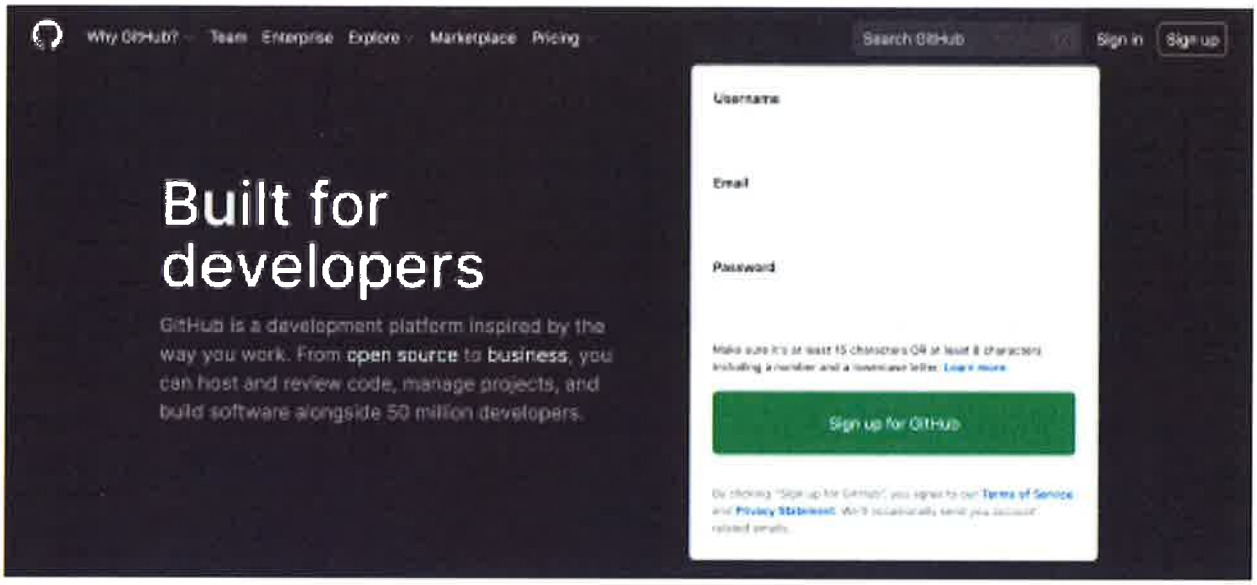
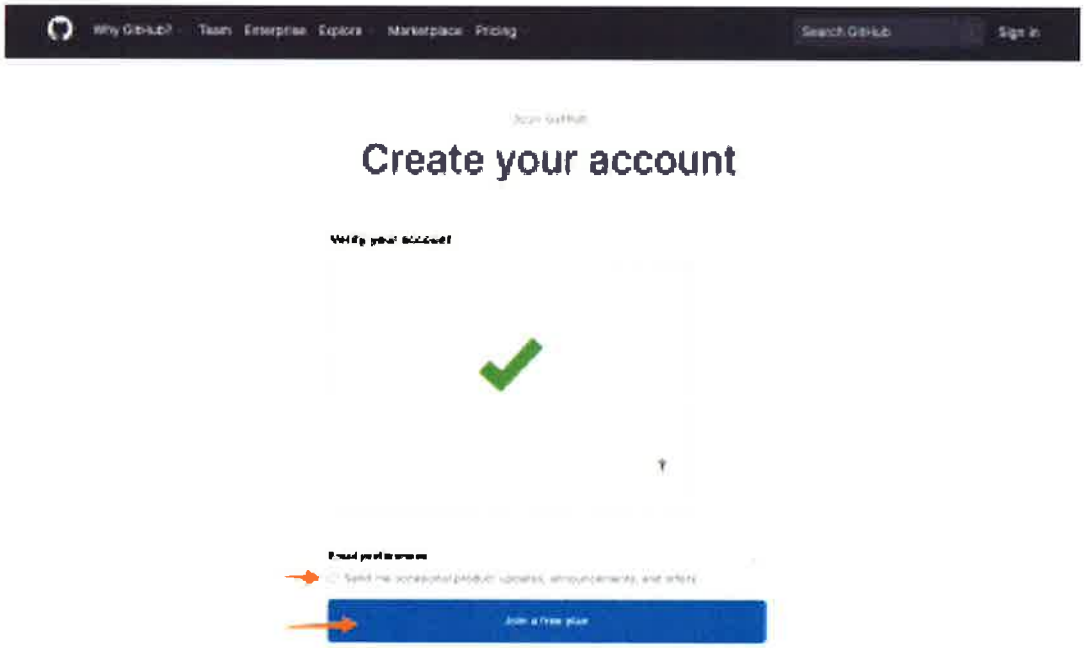
Step 1: Create a GitHub Account (it's free)



You will be asked to verify your account and choose whether you want them to send you occasional emails.

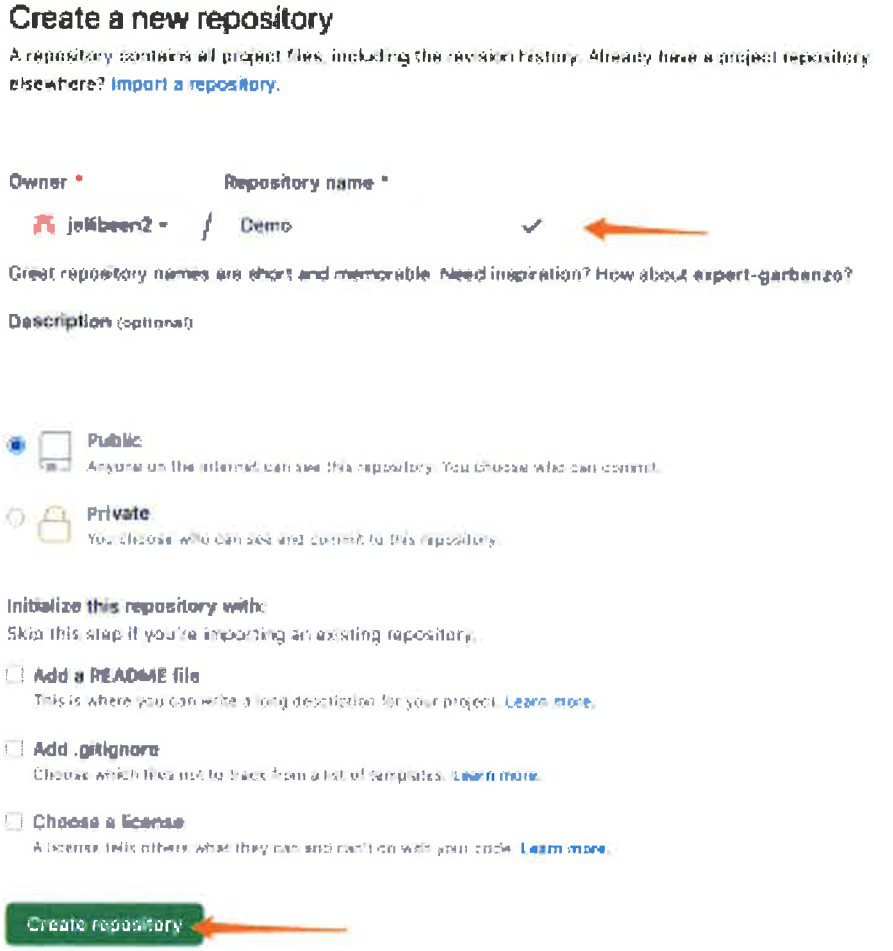


You will also be asked a few additional questions to set up your account preferences, and you will need to verify your email address.

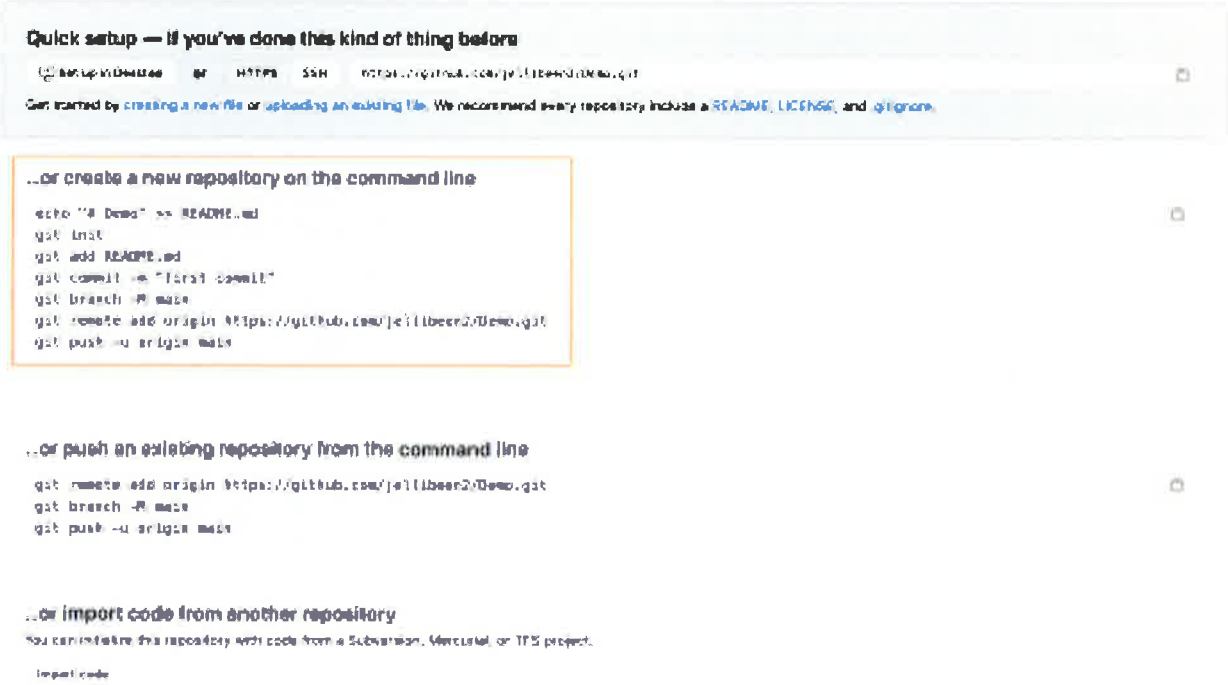
Once you have set up your account, you will be ready to create your first repository.

Step 2: Create a New Repository

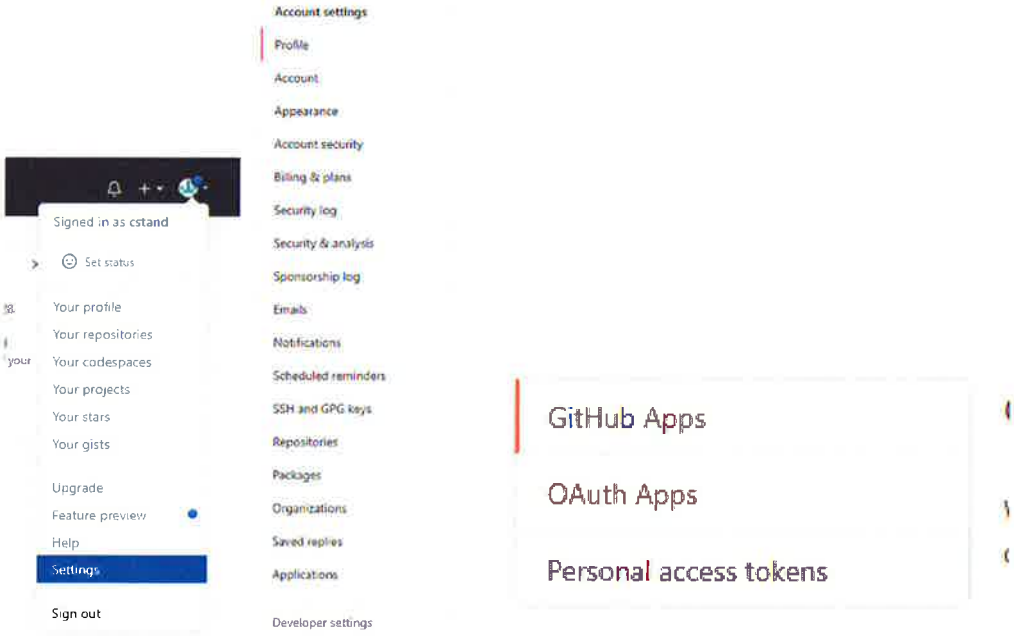
In the name field enter “Demo” and then click the “Create Repository” button at the bottom.



Now we will follow the option to use the Command Line. You will do this on our Virtual Machine.

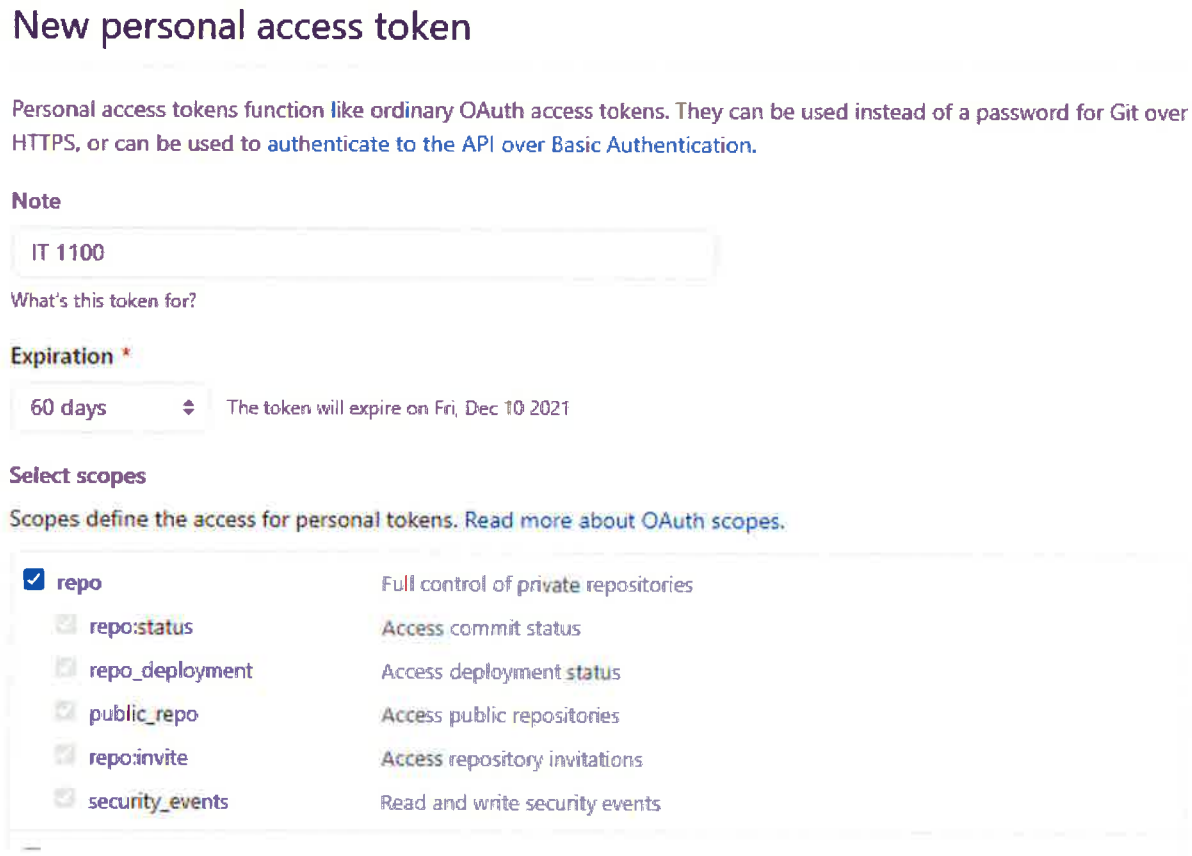


You will need to create an access token to connect to github. Click on your icon and choose settings. Near the bottom, you should click on Developer Settings. Then choose Personal access tokens.



You need to create a token. This is only done once so you should copy your token and save it somewhere. (Note: if you forget your token, you can generate a new one. Also, connecting to Github won't be on the test)

The following screenshot shows the settings you can use to generate your token. Give your token a name (I chose it 1100). You will only need the token for 60 days. Make sure to select repo. Then at the bottom click to generate your new token. Make sure to save it somewhere.



Do the following instructions on your CLI

You will need to install git on your CLI. Remember to update first.

```
sudo apt update
sudo apt install git
```

Create a new directory in your home folder on your CLI Virtual Machine called Demo and then move into your Demo directory.

...or create a new repository on the command line

```
echo "# Demo" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/jellibeen2/Demo.git
git push -u origin main
```

```
$ mkdir Demo
$ cd Demo
$
```

Once inside the Demo directory, run each command found in the GitHub instructions, one line at a time, until you reach the `git commit -m "first commit"` command.

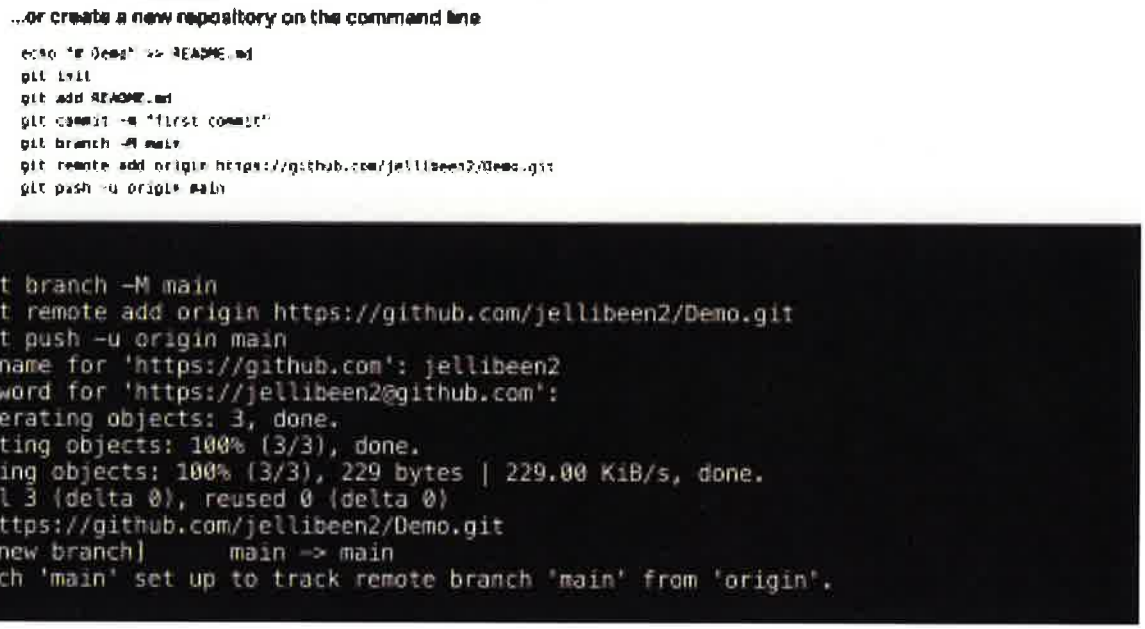
```
$ mkdir Demo
$ cd Demo
$ echo "# Demo" >> README.md
$ git init
Initialized empty Git repository in /Users/deptadmin/Demo/.git/
$ git add README.md
$ git commit -m "first commit"
[master (root-commit) eaae78e] first commit
 Committer: [redacted]>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

 1 file changed, 1 insertion(+)
 create mode 100644 README.md
$
```

If you do not see this message, and instead get a message notifying you that your name and email address are not set, you will need to set them using the following two commands:

```
git config --global user.email "youremail@here"
 git config --global user.name "your github username"
```

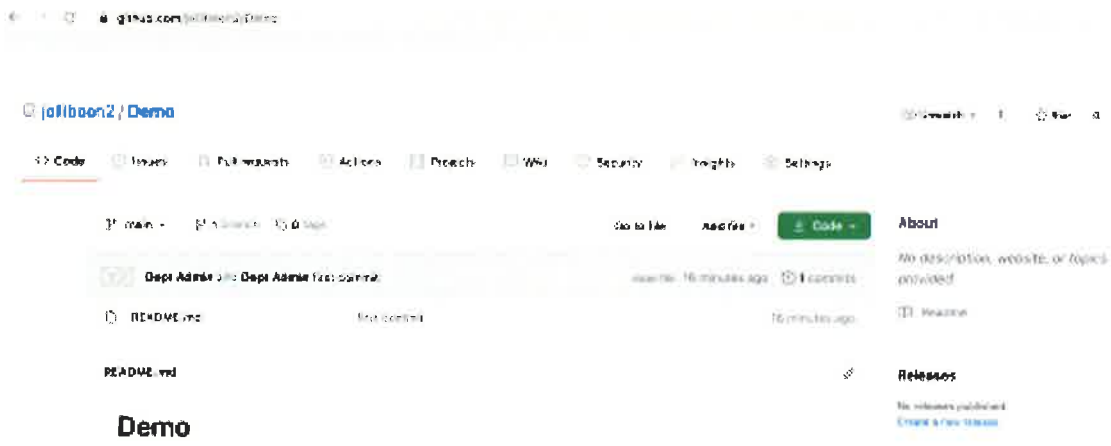
Then continue running the remaining 3 commands.

You will replace jellibeen2 with your username on github.



Once you have finished running all the commands listed in the GitHub instructions, you should be able to refresh the page and view your new repository.

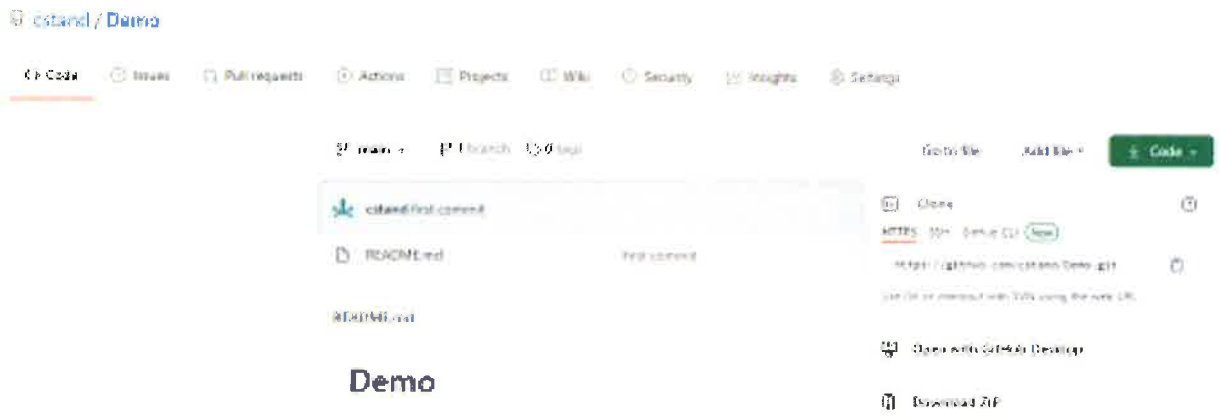
SCREENSHOT #1



PART II – Cloning

Step 1: Remove your Demo directory on your CLI. You may have to enter 'yes' a few times in order to remove it.

Step 2: Go to your Demo repository on github and click on the green download Code button.



Step 3: Copy the URL to the clipboard and then paste it into the following command (cstand should be your personal username):

```
git clone https://github.com/cstand/Demo.git
```

```
carol@carol-f20-GUI:~$ git clone https://github.com/cstand/Demo.git
Cloning into 'Demo'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 3 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), done.
carol@carol-f20-GUI:~$
```

Step 4: We are going to modify the files and then resubmit them to git hub. Do the following commands on your CLI.

```
cd ~/Demo
ls
cat README.md
echo “Added another line to README.md” >> README.md
cat README.md
git status
```

```
carol@carol-f20-GUI:~$ cd ~/Demo
carol@carol-f20-GUI:~/Demo$ ls
README.md
carol@carol-f20-GUI:~/Demo$ cat README.md
# Demo
carol@carol-f20-GUI:~/Demo$ echo "Added another line to README.md" >> README.md
carol@carol-f20-GUI:~/Demo$ cat README.md
# Demo
Added another line to README.md
carol@carol-f20-GUI:~/Demo$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   README.md

no changes added to commit (use "git add" and/or "git commit -a")
carol@carol-f20-GUI:~/Demo$
```

Step 5: Learn some terminology. Important terms will be underlined and highlighted in Yellow. Look in the above image for the following text.

Changes not staged for commit:

This tells you that the file listed in red has been changed but has not been staged. You stage a file by adding it using git add.

Before we stage it, lets see what has changed. We do this with the git diff command. git diff

```
carol@carol-f20-GUI:~/Demo$ git diff
diff --git a/README.md b/README.md
index 0805455..3bd615d 100644
--- a/README.md
+++ b/README.md
@@ -1 +1,2 @@
 # Demo
+Added another line to README.md
carol@carol-f20-GUI:~/Demo$
```

This reports that you added a newline to README.md since the last time this was synced up to github. Now we wand to stage the updated README.md file using git add. git add README.md

Step 6: Check the status of your repository using git status.
git status

```
carol@carol-f20-GUI:~/Demo$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   README.md

carol@carol-f20-GUI:~/Demo$
```

Look in the screenshot for the following words: Changes to be committed

We first stage and then commit. We will do that using the following commit command:
git commit -m "Updated Readme file"
The words in the quotes describe what changes were made between the last commit and this commit. You can word it however you would like.

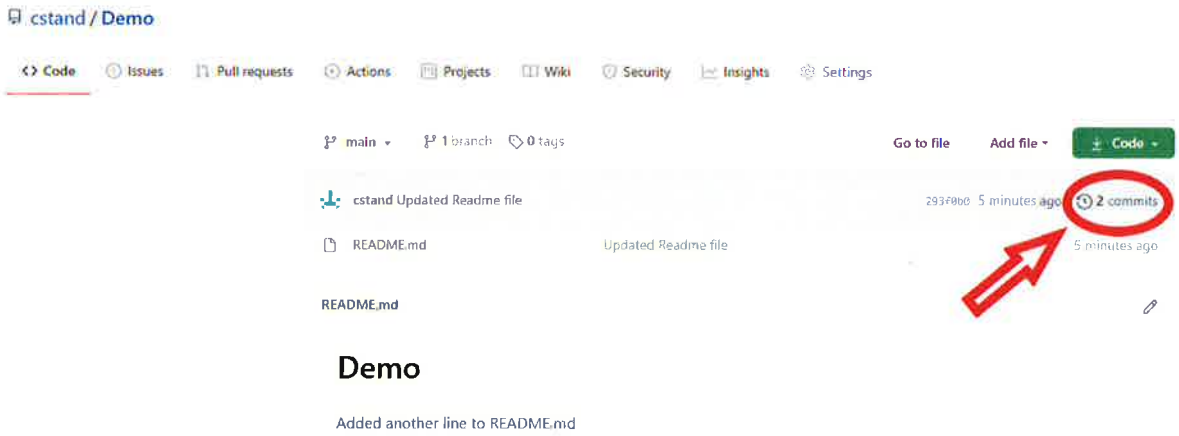
```
carol@carol-f20-GUI:~/Demo$ git commit -m "Updated Readme file"
[main 293f0b0] Updated Readme file
 1 file changed, 1 insertion(+)
carol@carol-f20-GUI:~/Demo$
```

Step 7: Finally, we need to send these changes to github. We do this with a push command.
git push -u origin main

You should see the following in your CLI.

```
carol@carol-f20-GUI:~/Demo$ git push -u origin main
Username for 'https://github.com': cstand
Password for 'https://cstand@github.com':
Counting objects: 3, done.
Writing objects: 100% (3/3), 284 bytes | 284.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/cstand/Demo.git
   b74bbbc..293f0b0  main -> main
Branch 'main' set up to track remote branch 'main' from 'origin'.
carol@carol-f20-GUI:~/Demo$
```

Refresh your github page to see the changes reflected there.

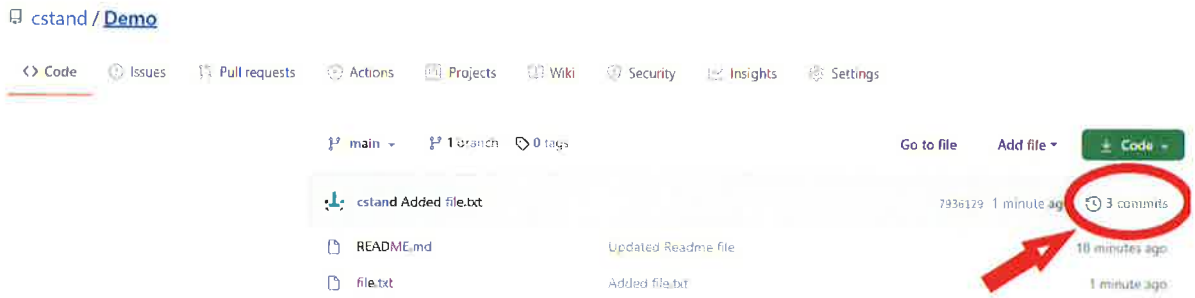


Notice that it shows 2 commits.

Step 8: Add a new file to Git. Do the following in your CLI.

echo "This is a new file" >> file.txt
cat file.txt
git status

Now repeat the steps we did on steps 5-7: stage, commit, and then push. Your github account should then be:



Notice that there are now 3 commits.

Step 9: Delete a file. Suppose that file.txt has an error so we want to delete it. Delete it on your CLI and then check your git status.

```
carol@carol-f20-GUI:~/Demo$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes not staged for commit:
  (use "git add/rm <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        deleted:    file.txt

no changes added to commit (use "git add" and/or "git commit -a")
carol@carol-f20-GUI:~/Demo$
```

This looks similar to the one when we added file.txt. We will need to go through the same commands to stage, commit, and push as we did when we added the file.

```
carol@carol-f20-GUI:~/Demo$ git add file.txt
carol@carol-f20-GUI:~/Demo$ git commit -m "Removed file.txt"
[main bf4a43a] Removed file.txt
 1 file changed, 1 deletion(-)
 delete mode 100644 file.txt
carol@carol-f20-GUI:~/Demo$ git push -u origin main
Username for 'https://github.com': cstand
Password for 'https://cstand@github.com':
Counting objects: 2, done.
Delta compression using up to 2 threads.
Compressing objects: 100% (1/1), done.
Writing objects: 100% (2/2), 237 bytes | 237.00 KiB/s, done.
Total 2 (delta 0), reused 0 (delta 0)
To https://github.com/cstand/Demo.git
   7936129..bf4a43a  main -> main
Branch 'main' set up to track remote branch 'main' from 'origin'.
carol@carol-f20-GUI:~/Demo$
```

Now check your github and take a screenshot. Make sure you show the whole git hub screen. It should have 4 commits.

SCREENSHOT #2