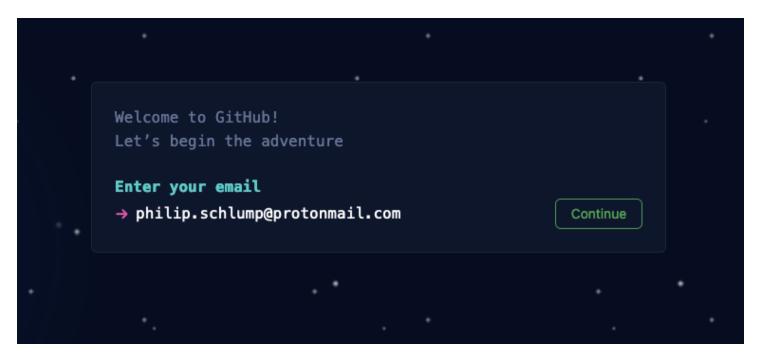
Lecture 27 - github.com with some code

Setup Github.com

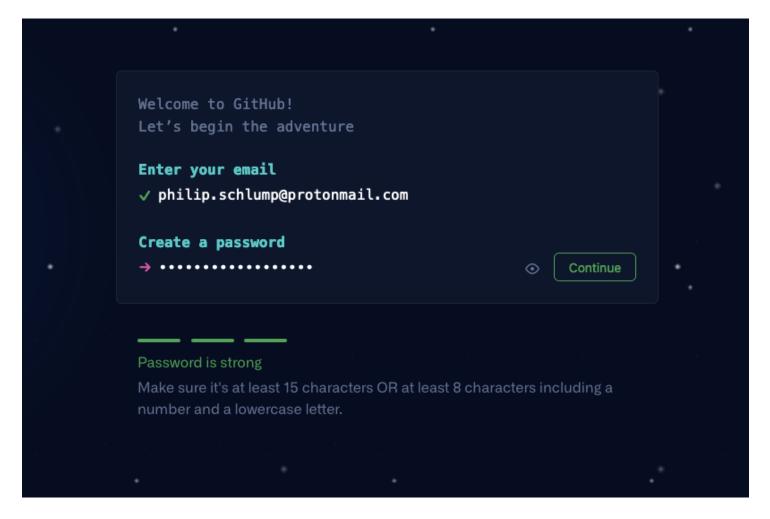
Go to https://github.com



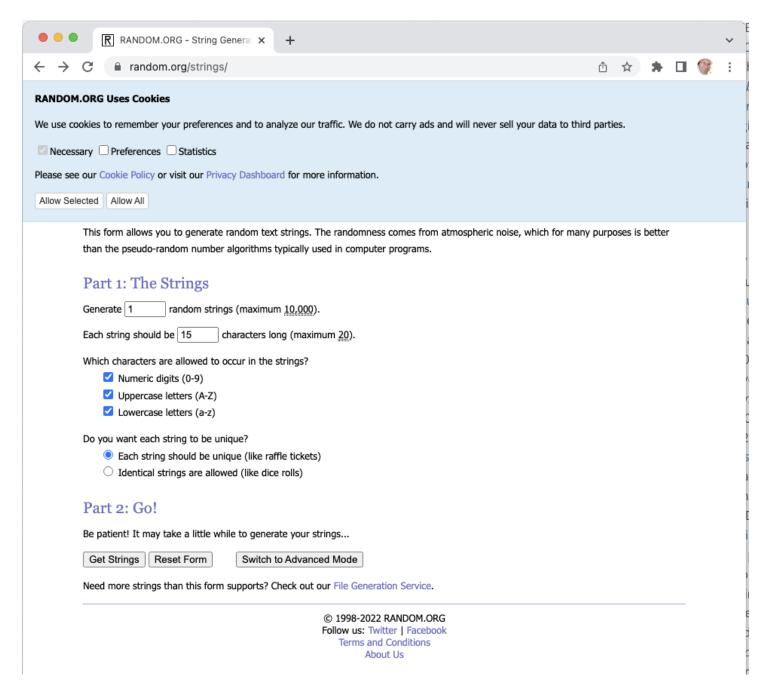
Step 000. Click on the button to create an account. The Green One that says Sign up for GitHub



Step 001. You should get a prompt that looks kind of like a terminal prompt. That is the little red arrow. Enter your email address. Click Continue on the bottom right.

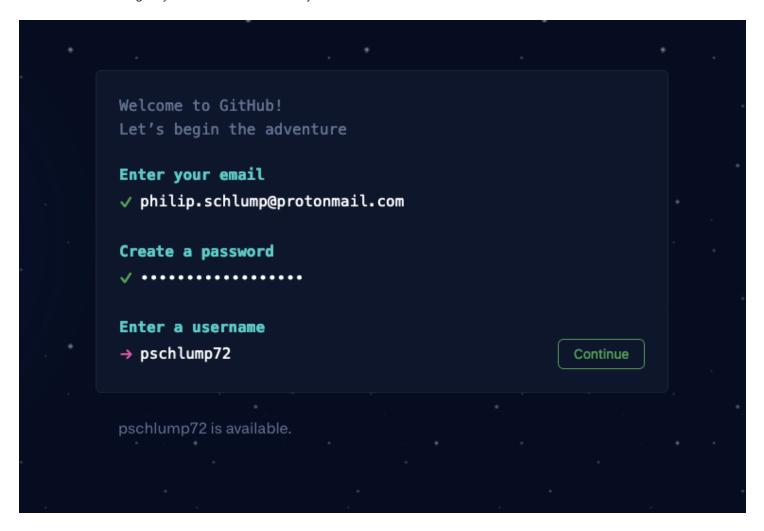


Step 002. A password. If you are using a password manager then generate a random password and use that. If not then use random.org, https://www.random.org/strings/ to generate a password. You will need to save the generated password in a file - you won't remember a random password. When you use it later use cut/paste it from the file. Make backups of the file! Print it out. Save it in your sock drawer! ALL computers eventually crash - files get deleted. Save it because if you loose it you will not get it back. Change the number, check the boxes for Numeric, Upper lower case and click the button at the bottom. It should look like:



Now you should have a password to enter like, HVo9BcyMloHD04J

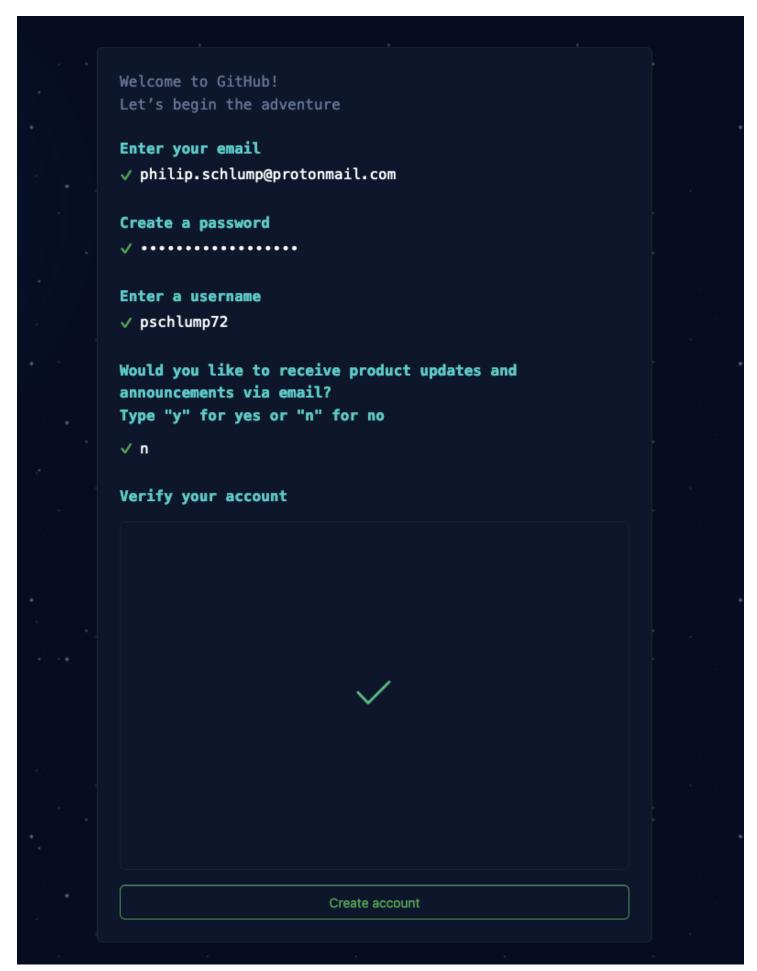
Click Continue and give yourself a username that you like.



Step 003. Solve a puzzle - so that only humans and machine learning programs in python can login.

Welcome to GitHub! Let's begin the adventure	
Enter your email ✓ philip.schlump@protonmail.com	
Create a password	
Enter a username ✓ pschlump72	
Would you like to receive product updates and announcements via email? Type "y" for yes or "n" for no	
✓ n Verify your account	
Please solve this puzzle to verify that you are human Click "Start puzzle" to continue	
Start puzzle	
S 4)	

Step 004. Get a checkbox and ... Yes click the big button at the bottom, Create account .



Step 005. Now off to your email.... Have to confirm the email.



Here's your GitHub launch code, @pschlump72!



Once completed, you can start using all of GitHub's features to explore, build, and share projects.

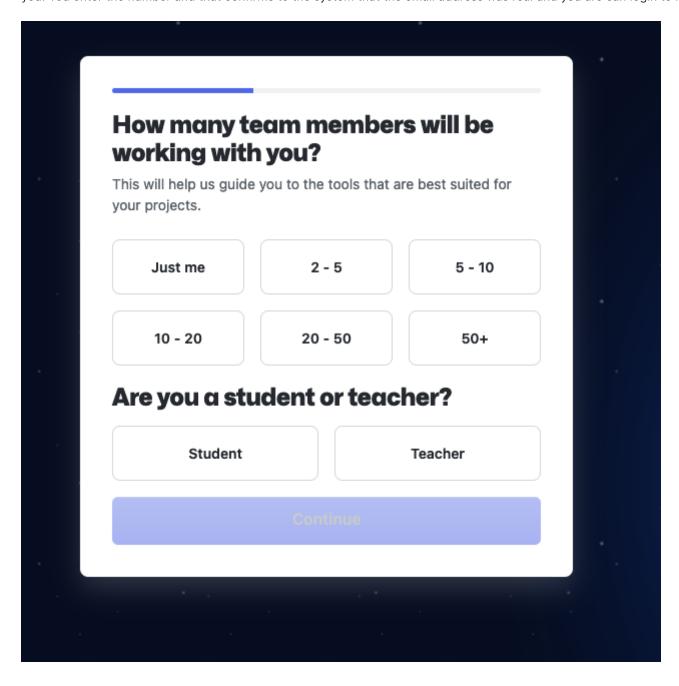
Not able to enter the code? Paste the following link into your browser: https://github.com/users/pschlump72/emails/201193274/confirm_verification/68731384?via_launch_code_email=true

Email preferences . Terms . Privacy . Sign in to GitHub

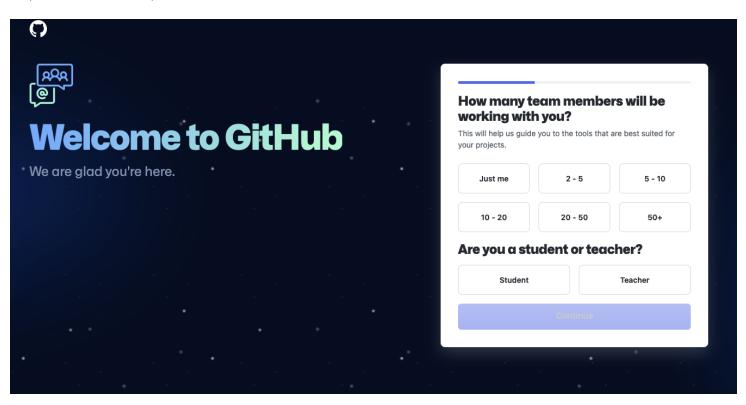
You're receiving this email because you recently created a new GitHub account. If this wasn't you, please ignore this email.

GitHub, Inc. · 88 Colin P Kelly Jr Street · San Francisco, CA 94107

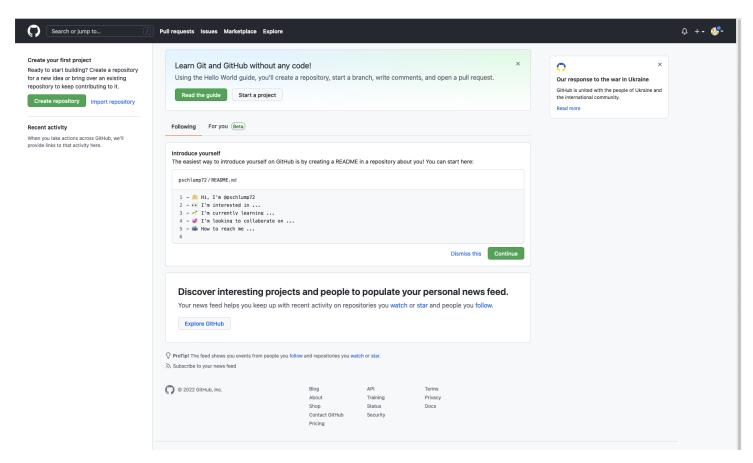
Step 006. You should get an email that looks like this. The number is a one time password. The way that these work is it generates a secret, takes the secret - then uses the secret to generate a password that lasts for a little while and sends that to you. You enter the number and that confirms to the system that the email address was real and you are can login to it.



Step 007. Answer some questions.

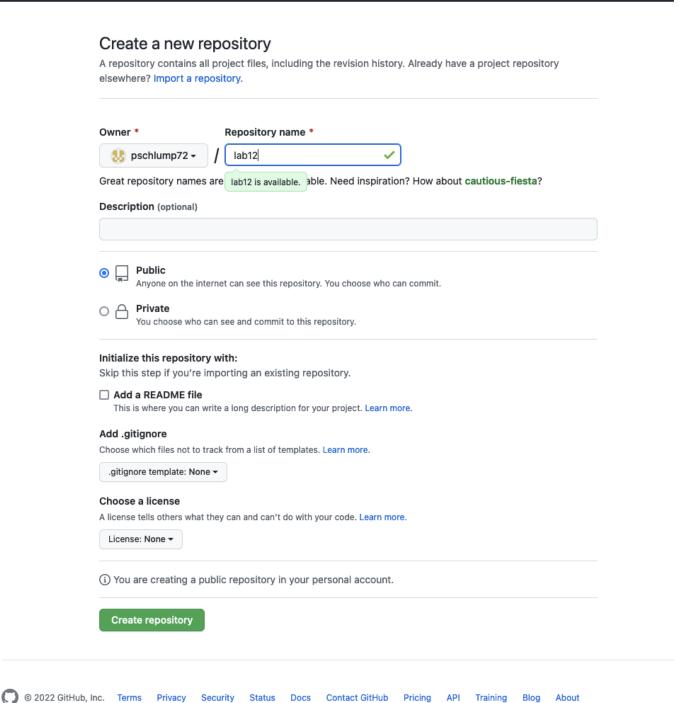


Step 008. Click on the green button on the left, Create repository .

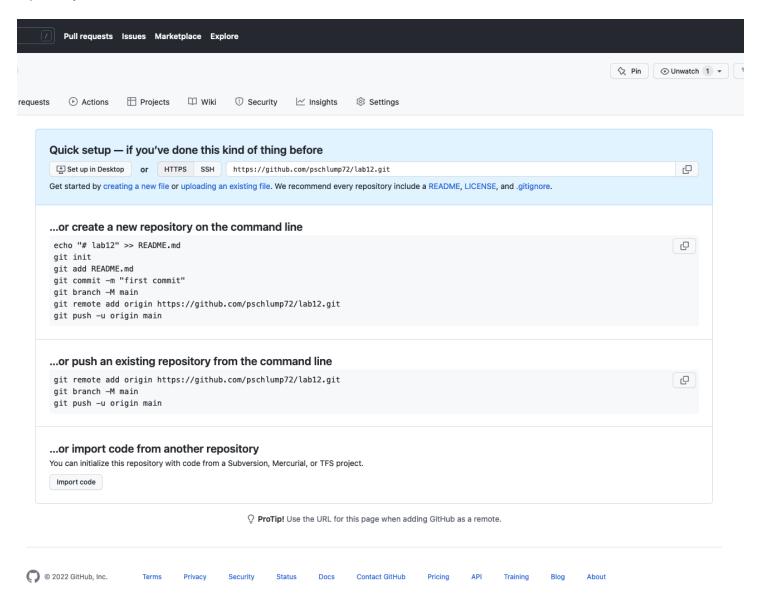


Step 009. Give it a name. You can make it public for this class. Click on the Create repository button at the bottom of the page.

Pull requests Issues Marketplace Explore



Step 010. You should get a screen that looks like this. Copy the commands in the first block that says, ... or create a new repository on the command line.



Step 011. Go and create a directory on your system. This is using PowerShell on Windows or Terminal on Mac.

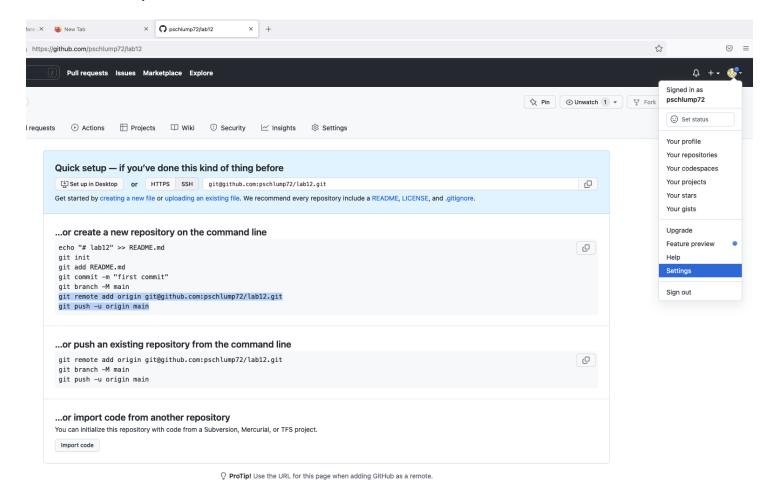


Step 012. Run the commands from Step 010. Some of you may get an error on the last command. If it prompts you for a username and the password to login this is good. If you just get an error then - Step 013 to 018 are for you. They are on how to create a personal access token to login with. Generally if you have not used github.com before you will not need to create a personal access token. If you are already a user and you are creating a new account - then you will need to configure github.com to know which account and what security to use.

You will want to configure your system to know your username and account information for github.com. To do this:

```
$ git config --global user.name "Philip Schlump"
$ git config --global user.email "philip.schlump@protonmail.com"
```

You will want to use your name and email for this.



Step 013. Click on the little round image on the top right, there is a dropdown that should show

Your gists

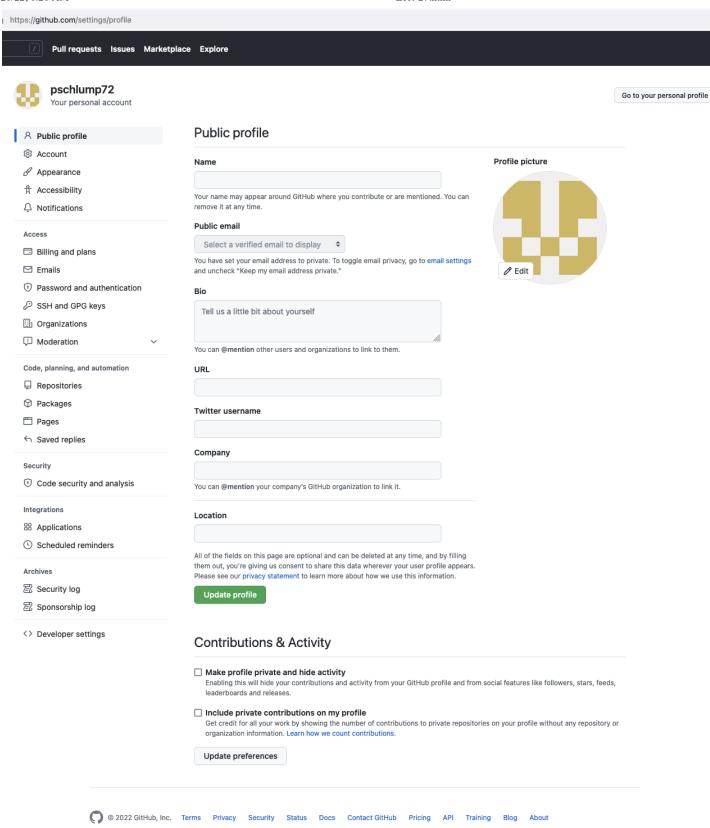
Upgrade

Feature preview

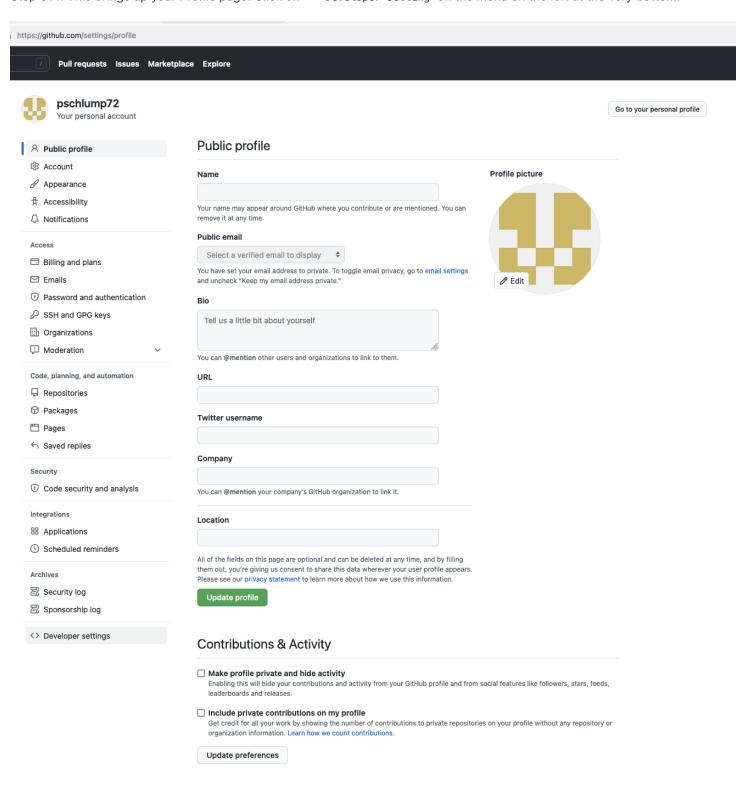
Settings

Sign Out

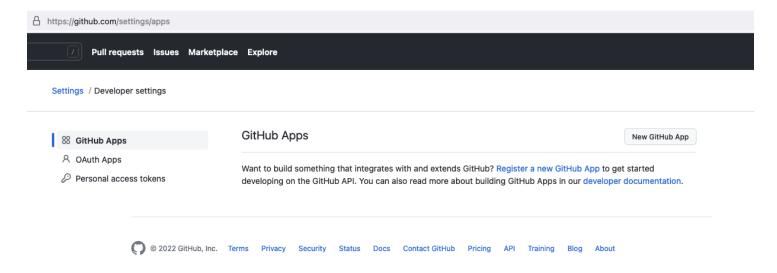
Pick on Settings. In the previous screen capture I have the drop down open.



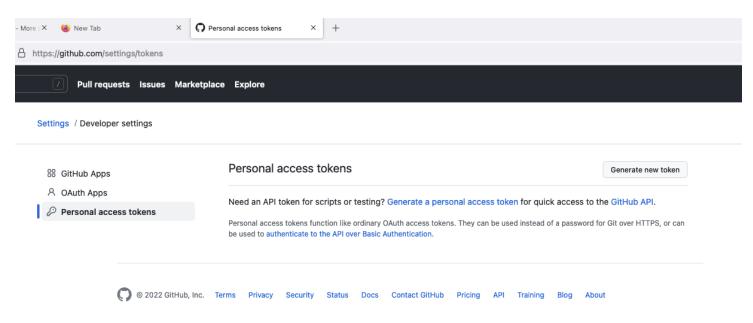
Step 014. This brings up your Profile page. Click on \Leftrightarrow Developer setting on the menu on the left at the very bottom.



Step 015. You should get a menu with 3 items, "Github Apps", "OAuth Apps", "Personal Access Tokens" on the left. You want the last one, "Personal access tokens" click on that.



Step 016. You should see this page - click on the white button on the right, Generate new token .



Step 017. You should see a form that has a huge number of checkboxes - and a "Note" field. Fill in the note with a title for this token and pick an expiration date. I usually make my tokens last for a year. I check all the boxes that are not indented as shown.

New personal access token

Personal access tokens function like ordinary OAuth access tokens. They can be used instead of a password for Git over HTTPS, or can be used to authenticate to the API over Basic Authentication.

Note

DemoToken
What's this token for?

Expiration *

No expiration

The token will never expire!

GitHub strongly recommends that you set an expiration date for your token to help keep your information secure.

Learn more

Select scopes

Scopes define the access for personal tokens. Read more about OAuth scopes.

✓ repo	Full control of private repositories
✓ repo:status	Access commit status
repo_deployment	Access deployment status
public_repo	Access public repositories
repo:invite	Access repository invitations
security_events	Read and write security events
workflow	Update GitHub Action workflows
write:packages	Upload packages to GitHub Package Registry
read:packages	Download packages from GitHub Package Registry
delete:packages	Delete packages from GitHub Package Registry
✓ admin:org	Full control of orgs and teams, read and write org projects
write:org	Read and write org and team membership, read and write org projects
read:org	Read org and team membership, read org projects
admin:public_key	Full control of user public keys
write:public_key	Write user public keys
read:public_key	Read user public keys
✓ admin:repo_hook	Full control of repository hooks
write:repo_hook	Write repository hooks
read:repo_hook	Read repository hooks
✓ admin-org hook	Full control of organization books

✓ gist Create gists ✓ notifications Access notifications ✓ user Update ALL user data ☑ read:user Read ALL user profile data ☑ user:email Access user email addresses (read-only) ☑ user:follow Follow and unfollow users ✓ delete_repo Delete repositories ✓ write:discussion Read and write team discussions ☑ read:discussion Read team discussions ✓ admin:enterprise Full control of enterprises ☑ manage_runners:enterprise Manage enterprise runners and runner-groups ☑ manage_billing:enterprise Read and write enterprise billing data ☑ read:enterprise Read enterprise profile data ✓ admin:gpg_key Full control of public user GPG keys (Developer Preview) ☑ write:gng_key Write public user GPG keys	adminiorg_nook	Full control of organization mooks
✓ user Update ALL user data ✓ read:user Read ALL user profile data ✓ user:email Access user email addresses (read-only) ✓ user:follow Follow and unfollow users ✓ delete_repo Delete repositories ✓ write:discussion Read and write team discussions ✓ read:discussion Read team discussions ✓ admin:enterprise Full control of enterprises ✓ manage_runners:enterprise Manage enterprise runners and runner-groups ✓ manage_billing:enterprise Read and write enterprise billing data ✓ read:enterprise Read enterprise profile data	✓ gist	Create gists
✓ read:user Read ALL user profile data ✓ user:email Access user email addresses (read-only) ✓ user:follow Follow and unfollow users ✓ delete_repo Delete repositories ✓ write:discussion Read and write team discussions ✓ read:discussion Read team discussions ✓ admin:enterprise Full control of enterprises ✓ manage_runners:enterprise Manage enterprise runners and runner-groups ✓ manage_billing:enterprise Read and write enterprise billing data ✓ read:enterprise Read enterprise profile data	✓ notifications	Access notifications
✓ user:email Access user email addresses (read-only) ✓ user:follow Follow and unfollow users ✓ delete_repo Delete repositories ✓ write:discussion Read and write team discussions ✓ read:discussion Read team discussions ✓ admin:enterprise Full control of enterprises ✓ manage_runners:enterprise Manage enterprise runners and runner-groups ✓ manage_billing:enterprise Read and write enterprise billing data ✓ read:enterprise Read enterprise profile data ✓ admin:gpg_key Full control of public user GPG keys (Developer Preview)	✓ user	Update ALL user data
✓ user:follow Follow and unfollow users ✓ delete_repo Delete repositories ✓ write:discussion Read and write team discussions ✓ read:discussion Read team discussions ✓ admin:enterprise Full control of enterprises ✓ manage_runners:enterprise Manage enterprise runners and runner-groups ✓ manage_billing:enterprise Read and write enterprise billing data ✓ read:enterprise Read enterprise profile data ✓ admin:gpg_key Full control of public user GPG keys (Developer Preview)	✓ read:user	Read ALL user profile data
✓ delete_repo Delete repositories ✓ write:discussion Read and write team discussions ✓ read:discussion Read team discussions ✓ admin:enterprise Full control of enterprises ✓ manage_runners:enterprise Manage enterprise runners and runner-groups ✓ manage_billing:enterprise Read and write enterprise billing data ✓ read:enterprise Read enterprise profile data ✓ admin:gpg_key Full control of public user GPG keys (Developer Preview)	✓ user:email	Access user email addresses (read-only)
✓ write:discussion Read and write team discussions ✓ read:discussion Read team discussions ✓ admin:enterprise Full control of enterprises ✓ manage_runners:enterprise Manage enterprise runners and runner-groups ✓ manage_billing:enterprise Read and write enterprise billing data ✓ read:enterprise Read enterprise profile data ✓ admin:gpg_key Full control of public user GPG keys (Developer Preview)	user:follow	Follow and unfollow users
✓ read:discussion Read team discussions ✓ admin:enterprise Full control of enterprises ✓ manage_runners:enterprise Manage enterprise runners and runner-groups ✓ manage_billing:enterprise Read and write enterprise billing data ✓ read:enterprise Read enterprise profile data ✓ admin:gpg_key Full control of public user GPG keys (Developer Preview)	delete_repo	Delete repositories
✓ admin:enterprise Full control of enterprises ✓ manage_runners:enterprise Manage enterprise runners and runner-groups ✓ manage_billing:enterprise Read and write enterprise billing data ✓ read:enterprise Read enterprise profile data ✓ admin:gpg_key Full control of public user GPG keys (Developer Preview)	write:discussion	Read and write team discussions
 ✓ manage_runners:enterprise ✓ manage_billing:enterprise ✓ read:enterprise ✓ admin:gpg_key Manage enterprise runners and runner-groups Read and write enterprise billing data ✓ read:enterprise Full control of public user GPG keys (Developer Preview) 	read:discussion	Read team discussions
 ✓ manage_billing:enterprise ✓ read:enterprise ✓ Read and write enterprise billing data ✓ read:enterprise ✓ admin:gpg_key Full control of public user GPG keys (Developer Preview) 	✓ admin:enterprise	Full control of enterprises
 ✓ read:enterprise ✓ admin:gpg_key Full control of public user GPG keys (Developer Preview) 	manage_runners:enterprise	Manage enterprise runners and runner-groups
✓ admin:gpg_key Full control of public user GPG keys (Developer Preview)	manage_billing:enterprise	Read and write enterprise billing data
	read:enterprise	Read enterprise profile data
write and key Write public user GPG keys	✓ admin:gpg_key	Full control of public user GPG keys (Developer Preview)
white public data of o keys	write:gpg_key	Write public user GPG keys
✓ read:gpg_key Read public user GPG keys	read:gpg_key	Read public user GPG keys

Generate token

Cancel

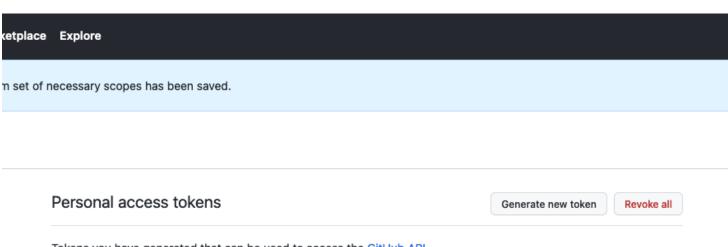
Step 018. You get a token in the light green box. Copy the token. Github will not have a copy of the token and it can not show it to you again. If you loose it you will need to create a new token. (This is not the token that I use - I deleted this one and created a different one for this demo) Put the token in a file that is *not* in your repository. Usually it is a good idea to put the token with it's expiration date into the same file that you saved your random login password in.

To use the token you have to save it in the configuration for this repository. I did the following

- \$ git remote remove origin
- \$ git remote add origin https://ghp_B6900zDLykPMv3VlJYbF3Mz2jBPSoa4gwhHY@github.com/pschlump72/Lab12
- \$ git push -u origin main

The command with the token is git remote add origin https://[token]@github.com/[user]/[repository] with the appropriate stuff substituted in.

This is saved in a configuration file in .git/config . You can edit the file and see what is in it. Careful to not change it!



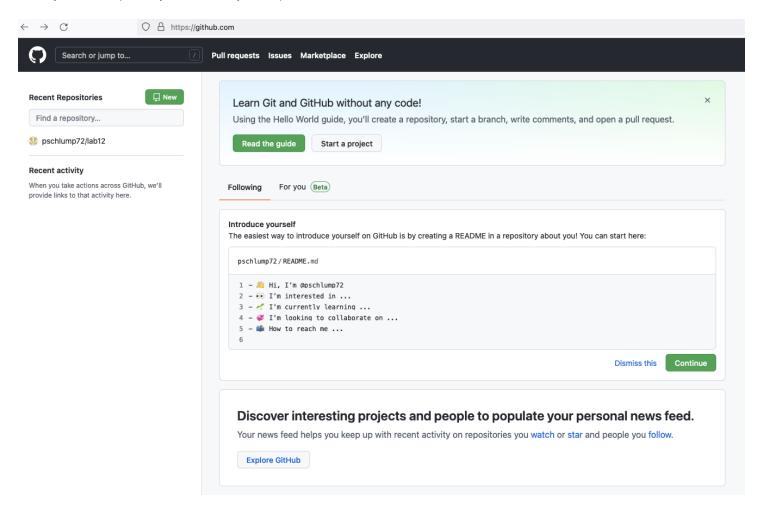
Tokens you have generated that can be used to access the GitHub API.

Make sure to copy your personal access token now. You won't be able to see it again!

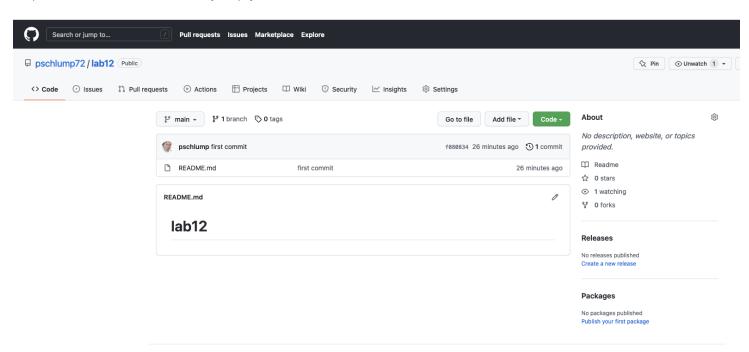
✓ ghp_WZXr7PtjKtUjHWUv9PWM30FrD5ex0o0uSVp4 ☐ Delete

Personal access tokens function like ordinary OAuth access tokens. They can be used instead of a password for Git over HTTPS, or can be used to authenticate to the API over Basic Authentication.

Step 019. Now click on the "octa-cat" on the top left side to get back to the main github.com page. On the left you should see a list of your new repository - I named my Lab12, click on that.



Step 020. You should see the nearly empty readme.md file.



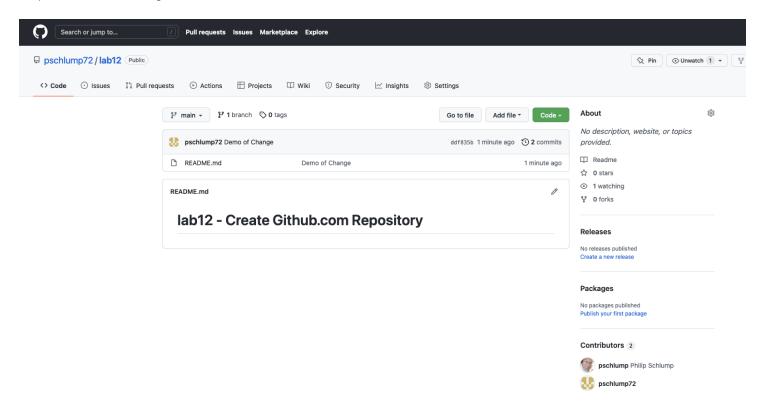
Step 021. Go and edit the file.

lab12 - Create Github.com Repository

Step 022. Add the modifications

```
(base) philip@victoria Lab12 %
(base) philip@victoria Lab12 % git add -A README.md
(base) philip@victoria Lab12 % git commit -m "Demo of Change"
[main ddf835b] Demo of Change
1 file changed, 2 insertions(+), 1 deletion(-)
(base) philip@victoria Lab12 % git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Writing objects: 100% (3/3), 296 bytes | 296.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote: This repository moved. Please use the new location:
remote: https://github.com/pschlump72/lab12.git
To https://github.com/pschlump72/Lab12
    f080834..ddf835b main -> main
(base) philip@victoria Lab12 %
```

Step 023. Save them to github.com



Yea! You are now a git user that can modify stuff and share it and save it.

Create our Python Project Code

Modify It

Checkin the result

Capture Screen - to turn in for Lab