Workshop 2: Github + Pong Game

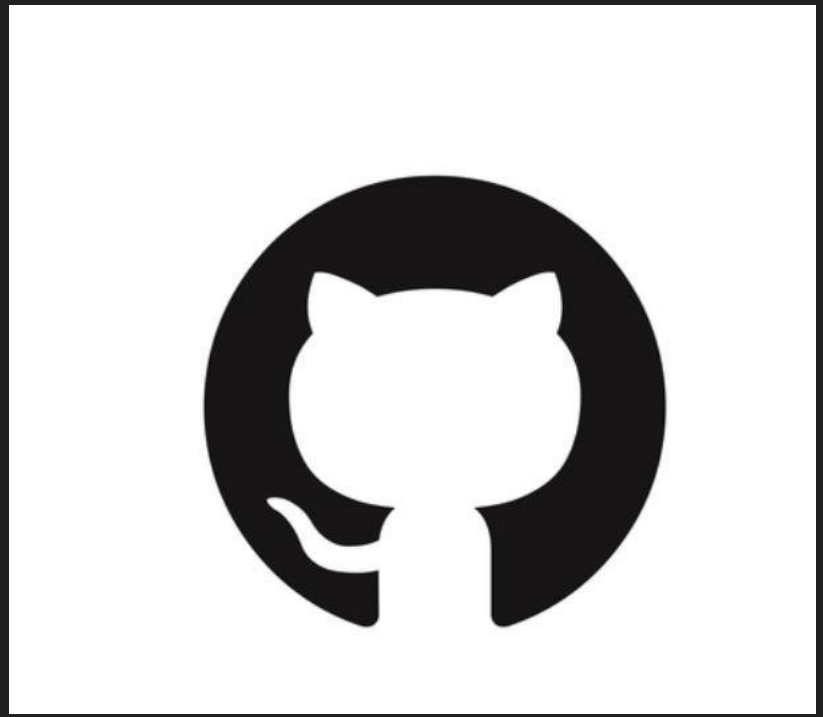
EVHS Programming Club 2019

https://discord.io/evhsprogrammingclub

https://github.com/EVHSProgrammingClub/EVHS-Programming-Club-Public

Part 1: Github

What is Github?



- Software version control
- A place to store files
- Tracks changes
- Organizations
- Organized
- Fast
- Host Websites on repo
- Command line interface
- Online website interface

https://github.com/EVHSProgrammingClub/EVHS-Programming-Club-Public

What can you do?

Add files:
git add .

Stage files:
git commit -m “message here”

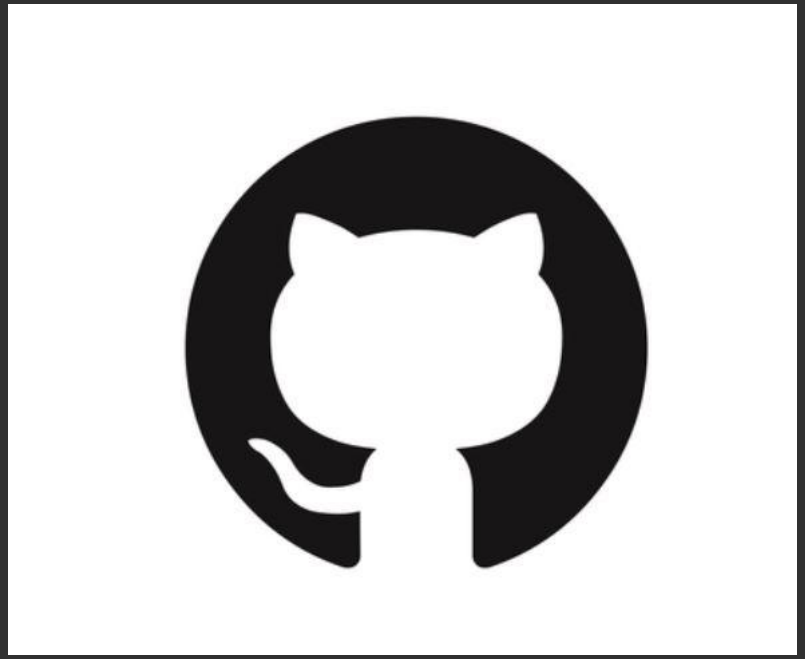
Push files:
git push

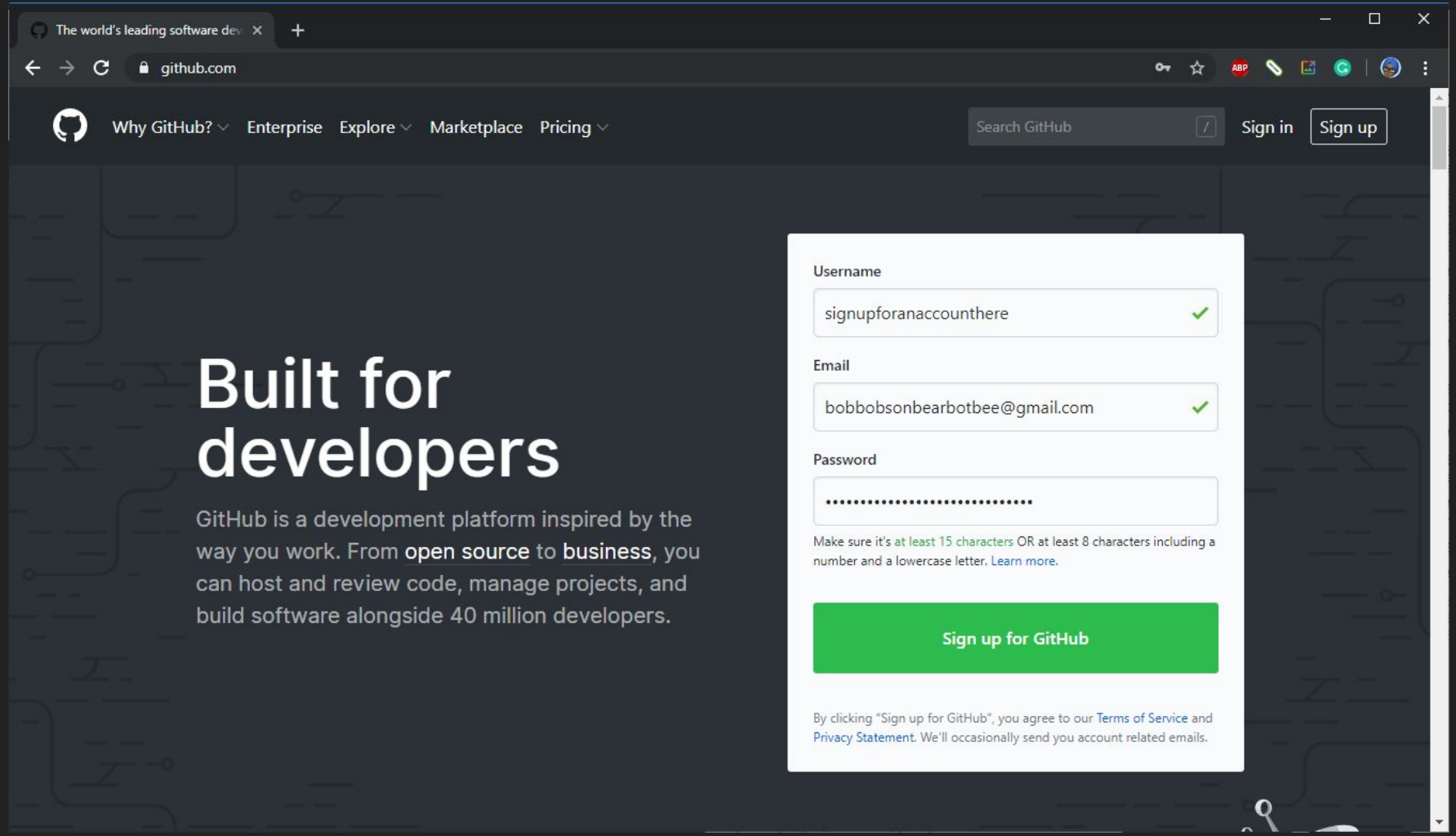
Pull files:

git pull

Gitbash

Github website




The world's leading software dev
github.com
Why GitHub?
Enterprise
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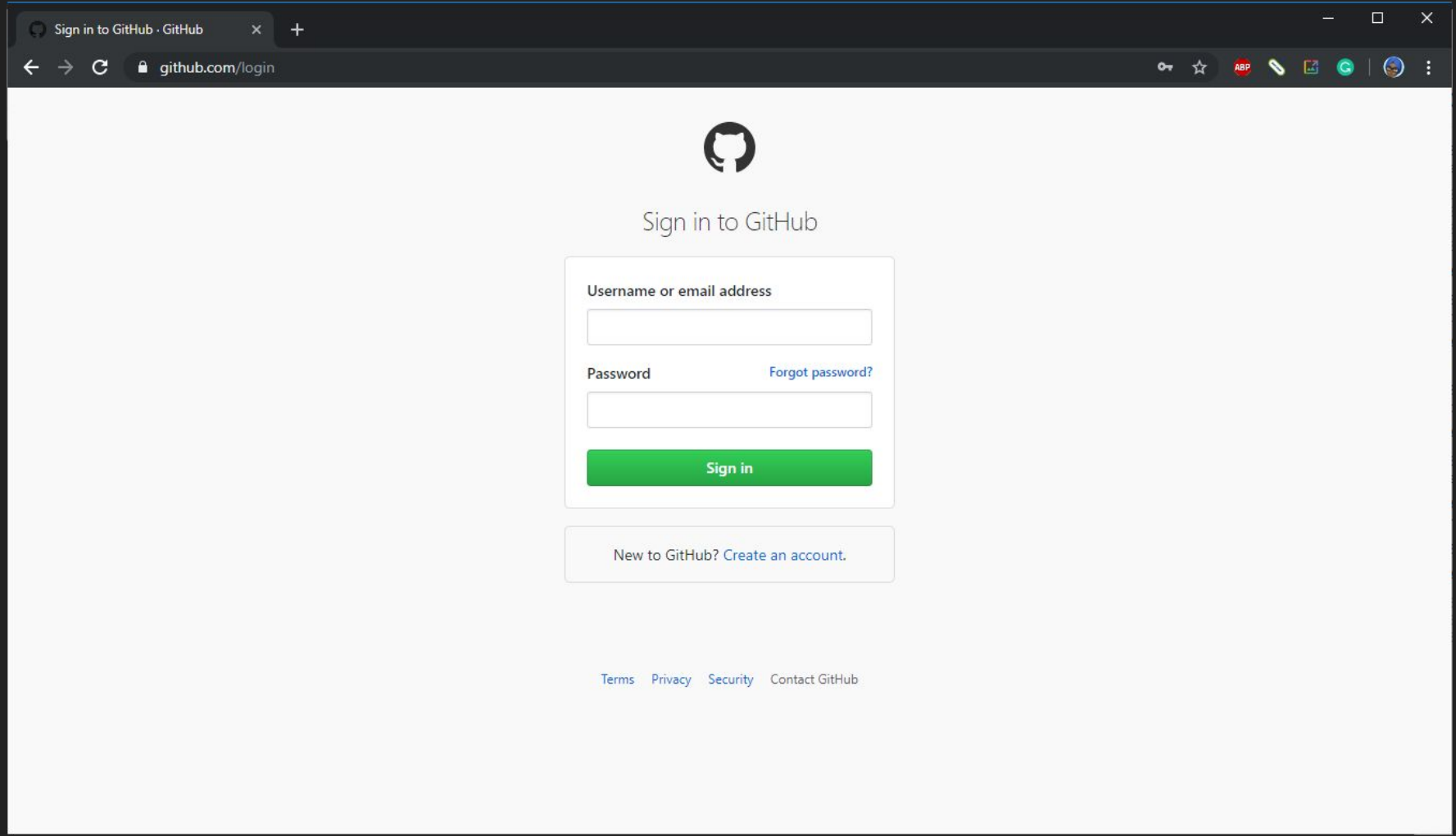
Sign up
Built for developers
GitHub is a development platform inspired by the way you work. From open source to business, you can host and review code, manage projects, and build software alongside 40 million developers.
Username
signupforanaccounthere
Email
bobbobsonbearbotbee@gmail.com
Password
Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter. Learn more.
Sign up for GitHub
By clicking "Sign up for GitHub", you agree to our Terms of Service and Privacy Statement. We'll occasionally send you account related emails.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Username or email address
Password
Forgot password?
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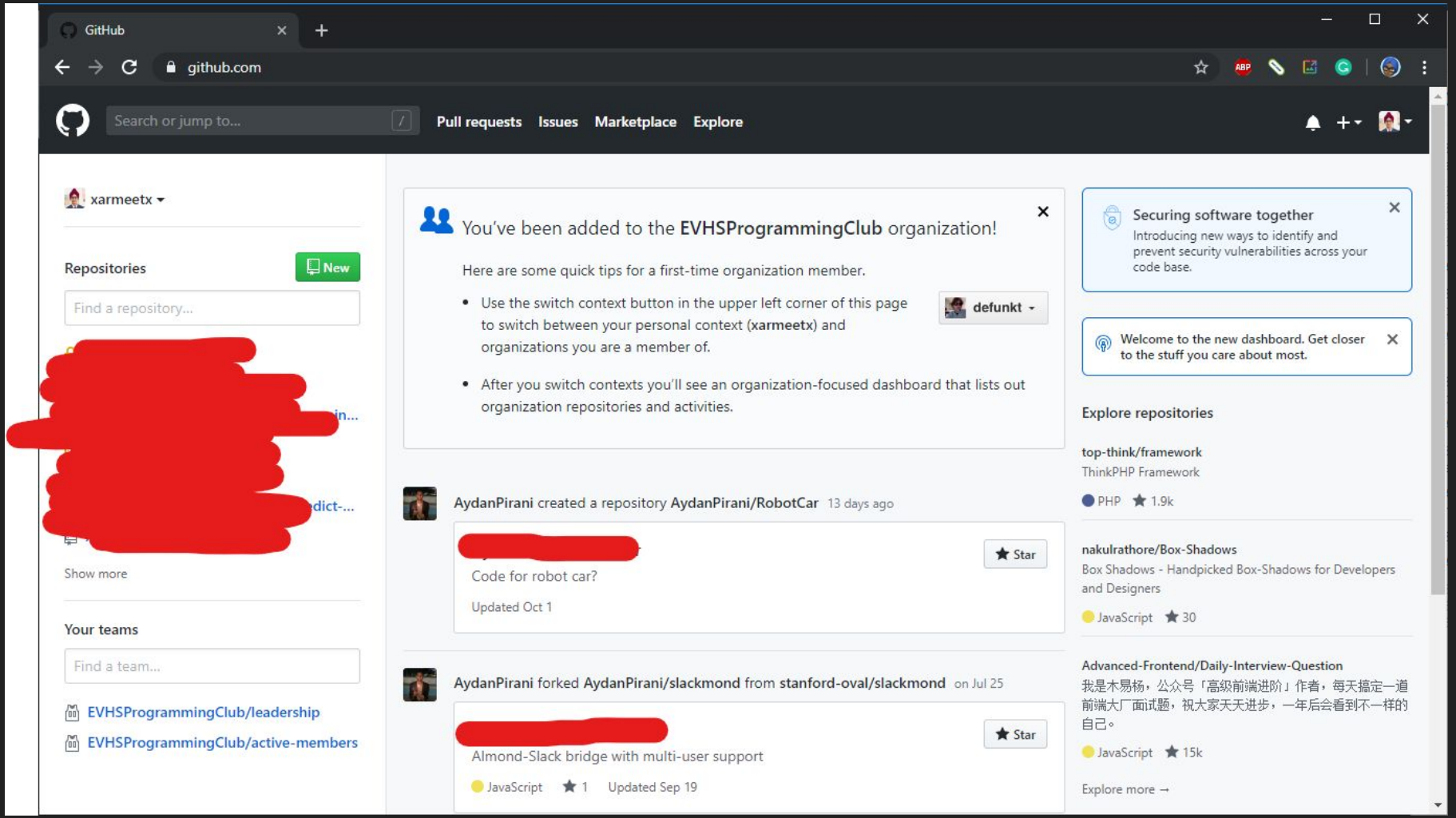
GitHub
github.com
Search or jump to...
Pull requests
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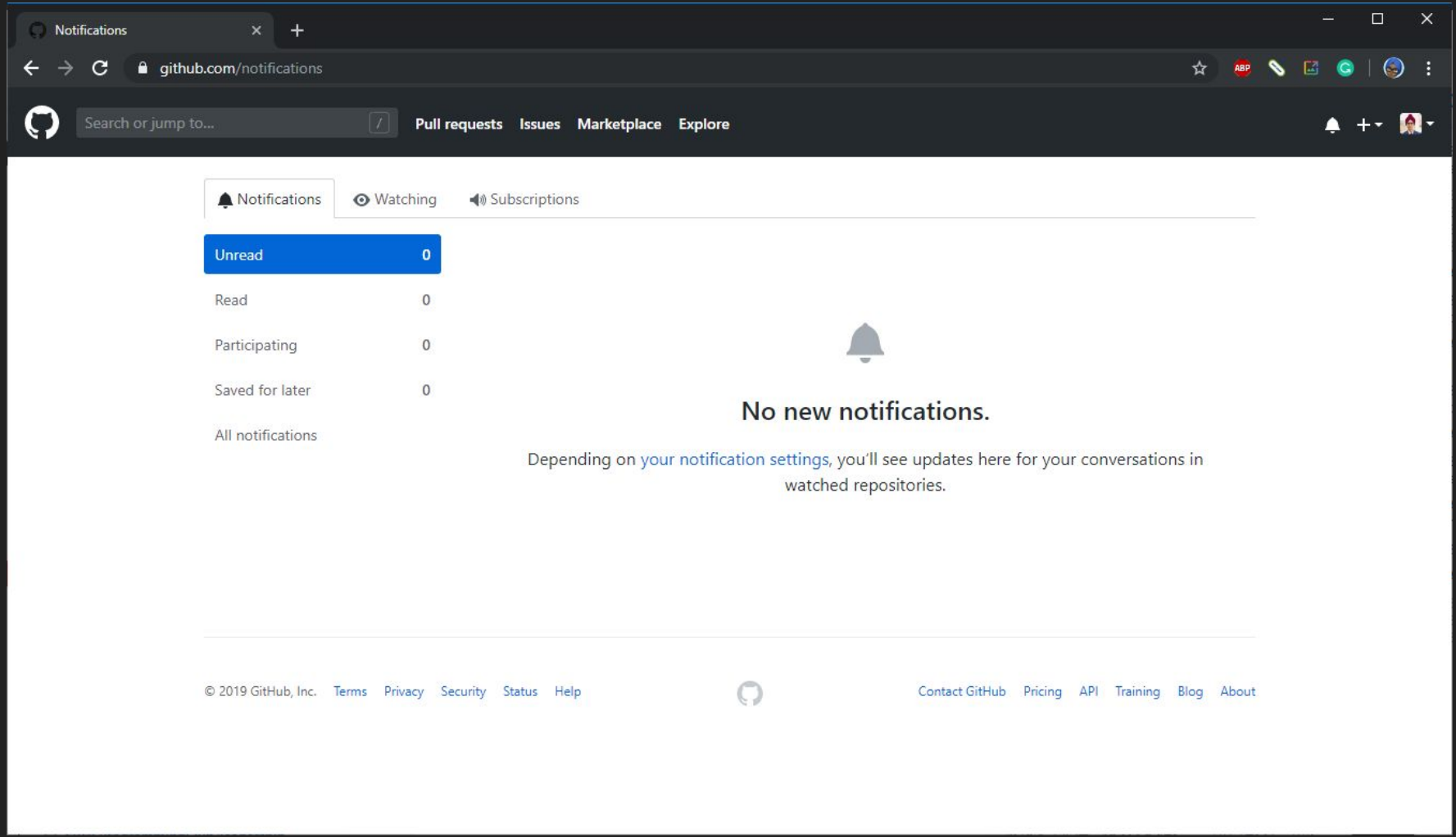
xarmeetx
Repositories
New
Find a repository...
Show more
Your teams
Find a team...
EVHSProgrammingClub/leadership
EVHSProgrammingClub/active-members
You've been added to the EVHSProgrammingClub organization!
Here are some quick tips for a first-time organization member.
Use the switch context button in the upper left corner of this page to switch between your personal context (xarmeetx) and organizations you are a member of.
defunkt
After you switch contexts you'll see an organization-focused dashboard that lists out organization repositories and activities.
AydanPirani created a repository AydanPirani/RobotCar 13 days ago
Code for robot car?
Updated Oct 1
Star
AydanPirani forked AydanPirani/slackmond from stanford-oval/slackmond on Jul 25
Almond-Slack bridge with multi-user support
JavaScript
1
Updated Sep 19
Star
Securing software together
Introducing new ways to identify and prevent security vulnerabilities across your code base.
Welcome to the new dashboard. Get closer to the stuff you care about most.
Explore repositories
top-think/framework
ThinkPHP Framework
PHP
1.9k
nakulrathore/Box-Shadows
Box Shadows - Handpicked Box-Shadows for Developers and Designers
JavaScript
30
Advanced-Frontend/Daily-Interview-Question
我是木易杨，公众号「高级前端进阶」作者，每天搞定一道前端大厂面试题，祝大家天天进步，一年后会看到不一样的自己。
JavaScript
15k
Explore more →


Notifications
github.com/notifications
Search or jump to...
Pull requests
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Notifications
Watching
Subscriptions
Unread 0
Read 0
Participating 0
Saved for later 0
All notifications
No new notifications.
Depending on your notification settings, you'll see updates here for your conversations in watched repositories.
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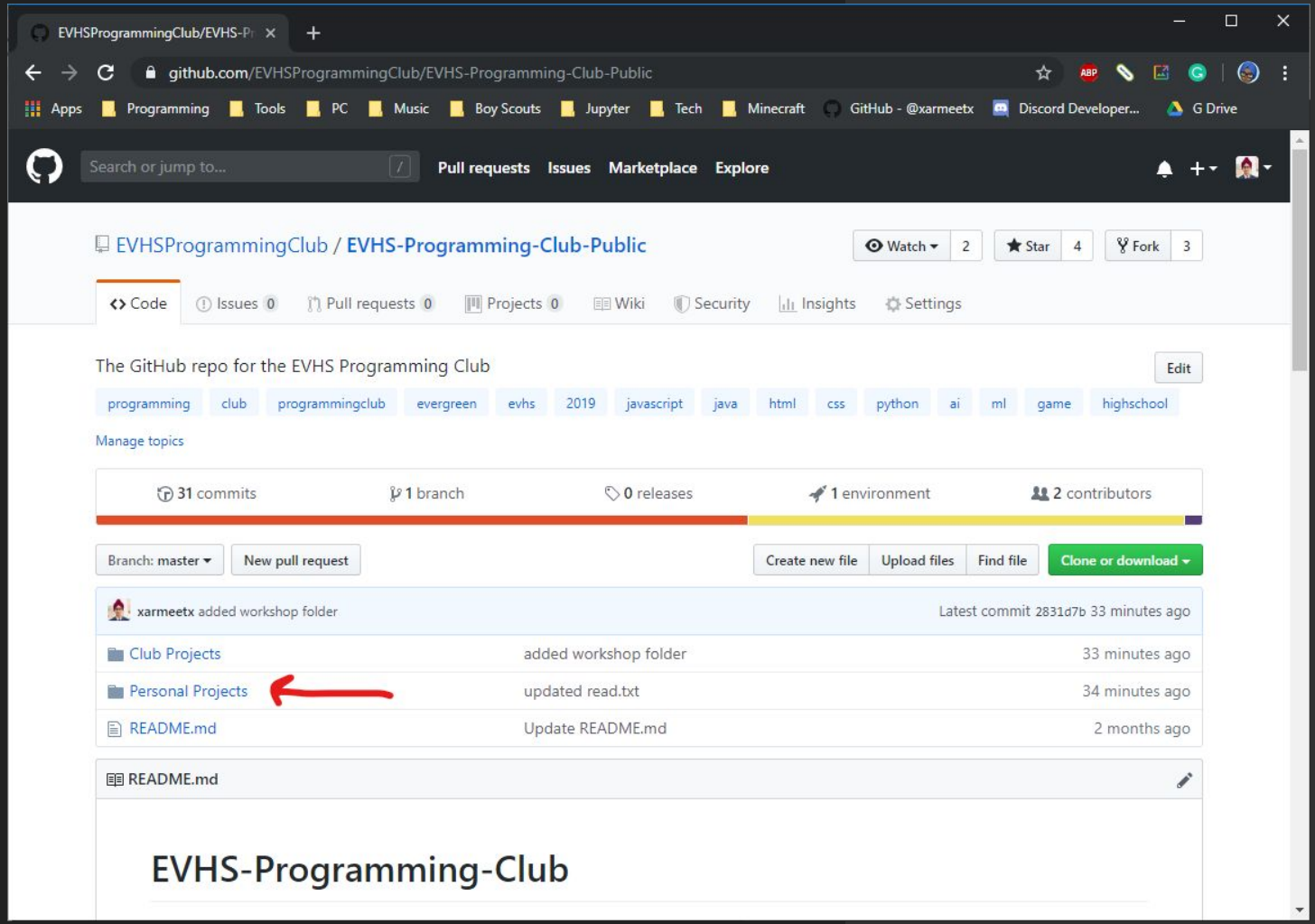
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github.com/EVHSProgrammingClub/EVHS-Programming-Club-Public
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evergreen
evhs
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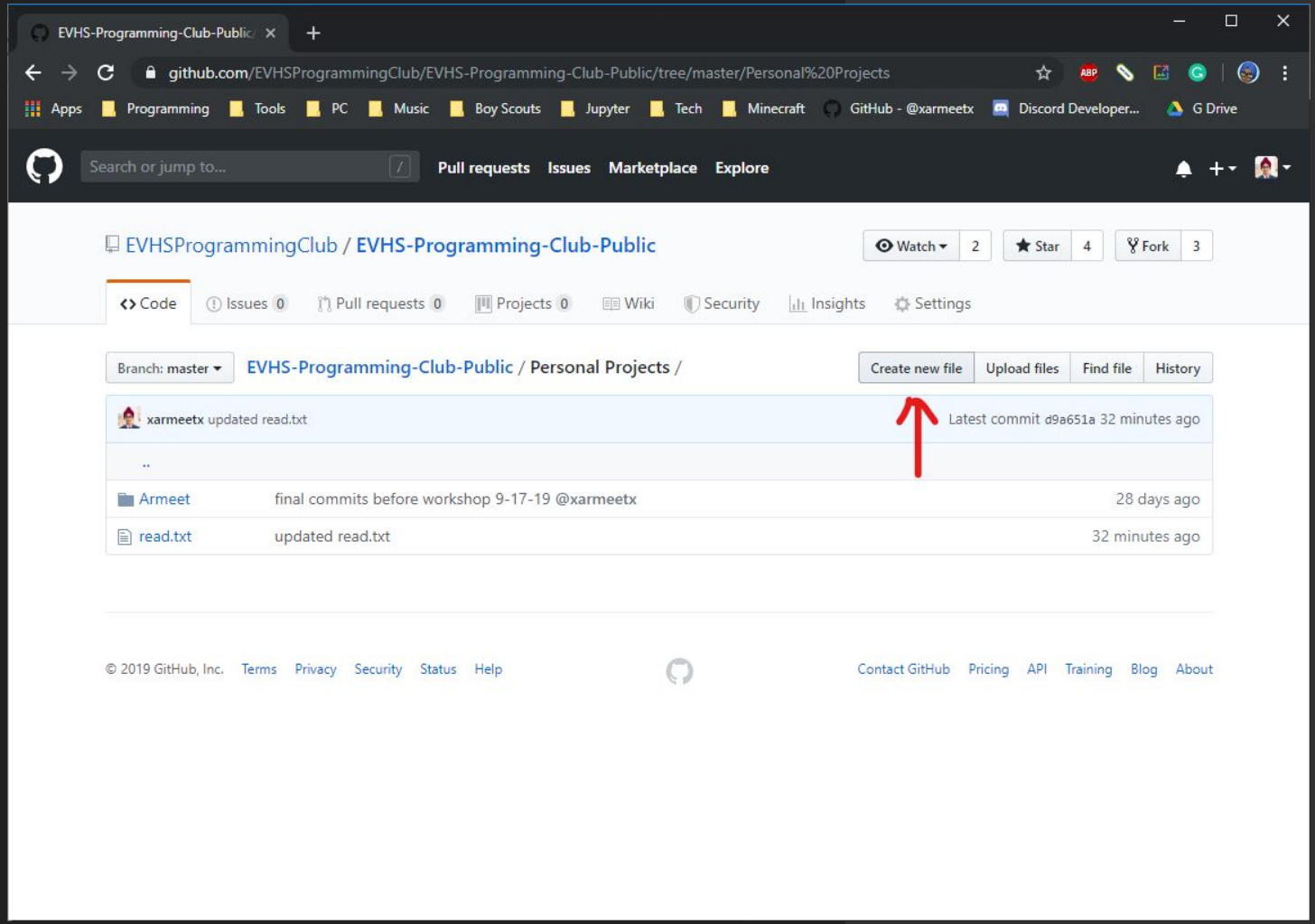
java
html
css
python
ai
ml
game
highschool
Manage topics
31 commits
1 branch
0 releases
1 environment
2 contributors
Branch: master
New pull request
Create new file
Upload files
Find file
Clone or download
xarmeetx added workshop folder
Latest commit 2831d7b 33 minutes ago
Club Projects
added workshop folder
33 minutes ago
Personal Projects
updated read.txt
34 minutes ago
README.md
Update README.md
2 months ago
README.md
EVHS-Programming-Club


EVHS-Programming-Club-Public
github.com/EVHSProgrammingClub/EVHS-Programming-Club-Public/tree/master/Personal%20Projects
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EVHS-Programming-Club-Public / Personal Projects /
Create new file
Upload files
Find file
History
xarmeetx updated read.txt
Latest commit d9a651a 32 minutes ago
..
Armeet
final commits before workshop 9-17-19 @xarmeetx
28 days ago
read.txt
updated read.txt
32 minutes ago
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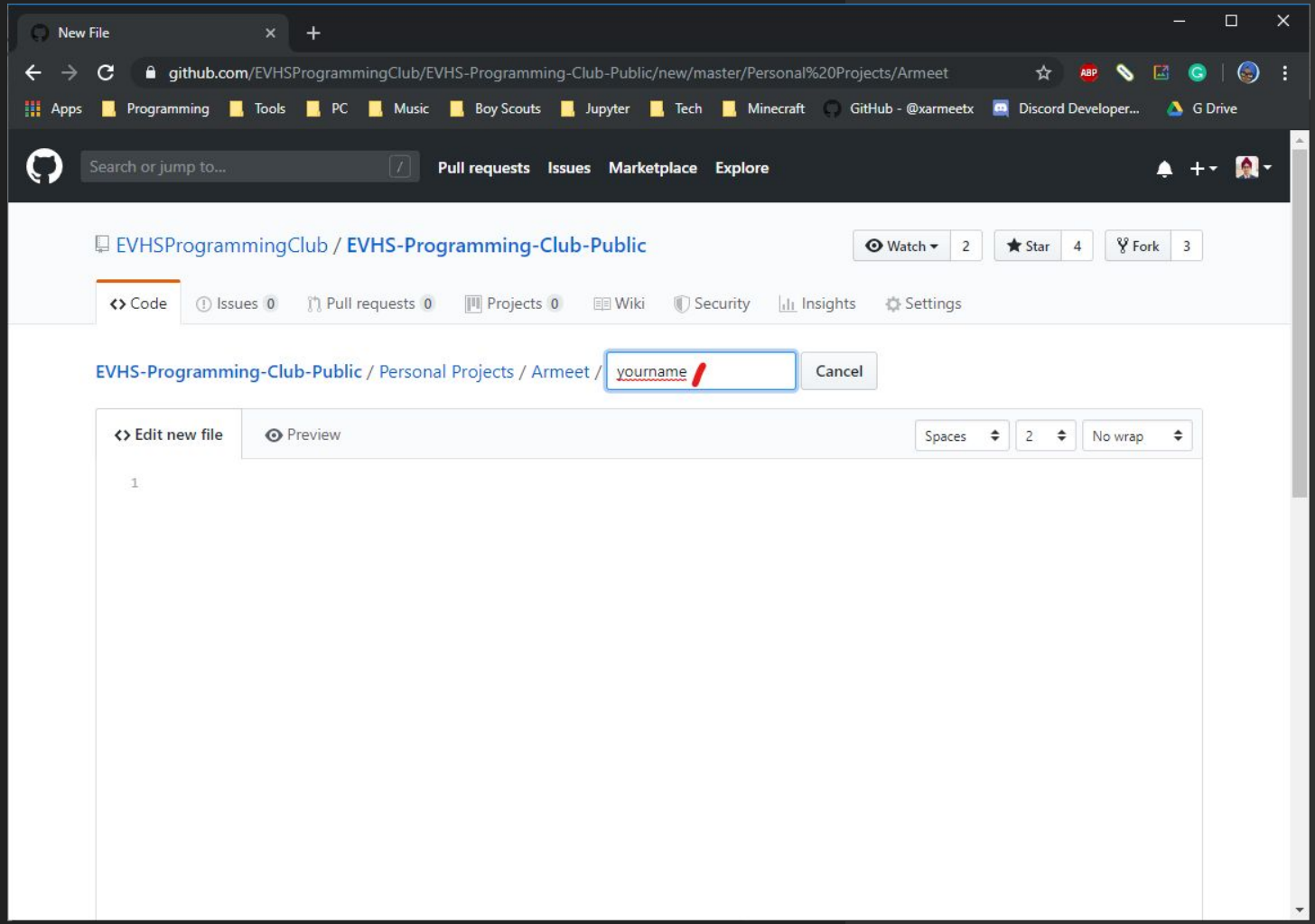
New File
github.com/EVHSProgrammingClub/EVHS-Programming-Club-Public/new/master/Personal%20Projects/Armeet
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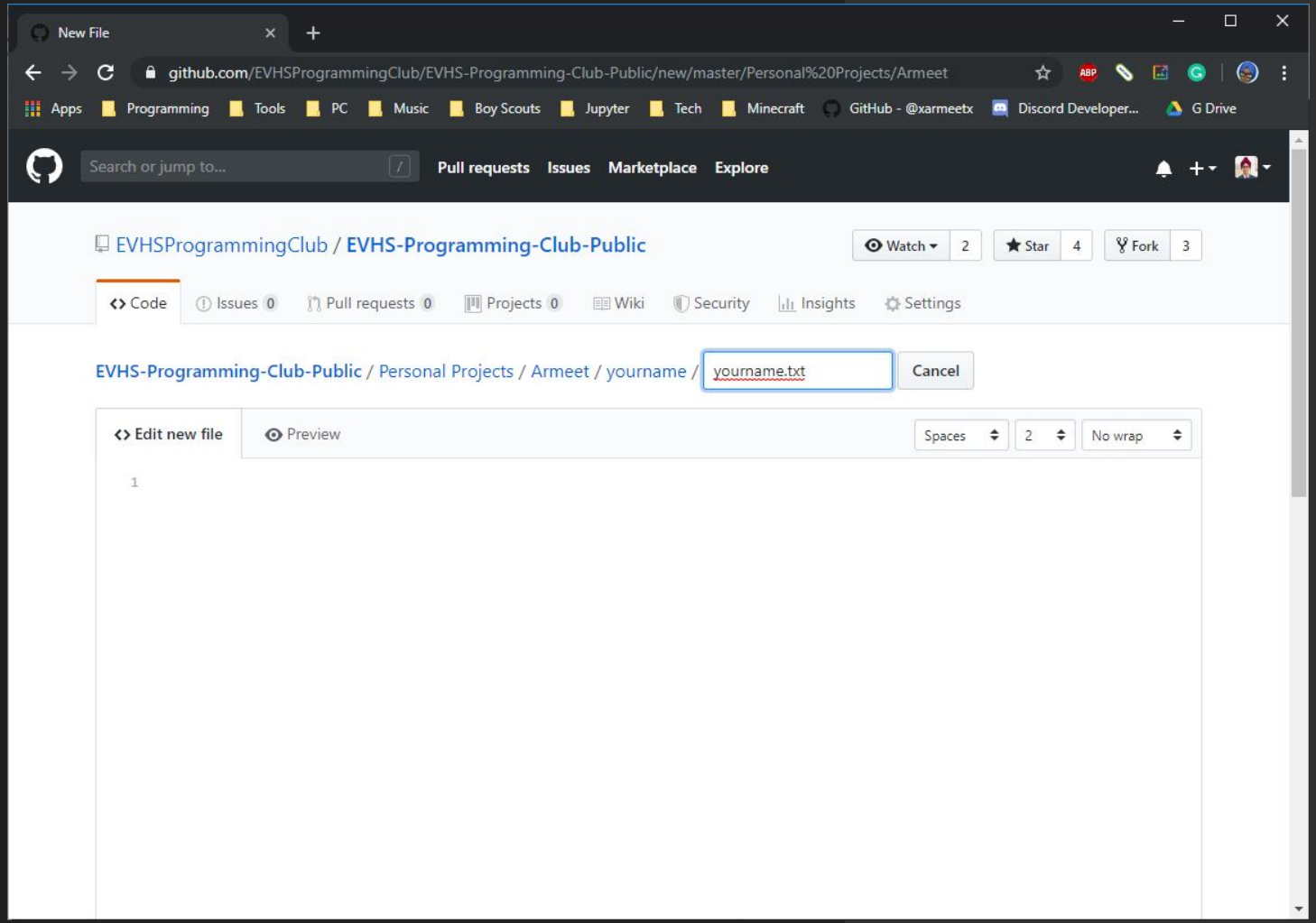
EVHS-Programming-Club-Public / Personal Projects / Armeet /
yourname
Cancel
Edit new file
Preview
Spaces
2
No wrap
1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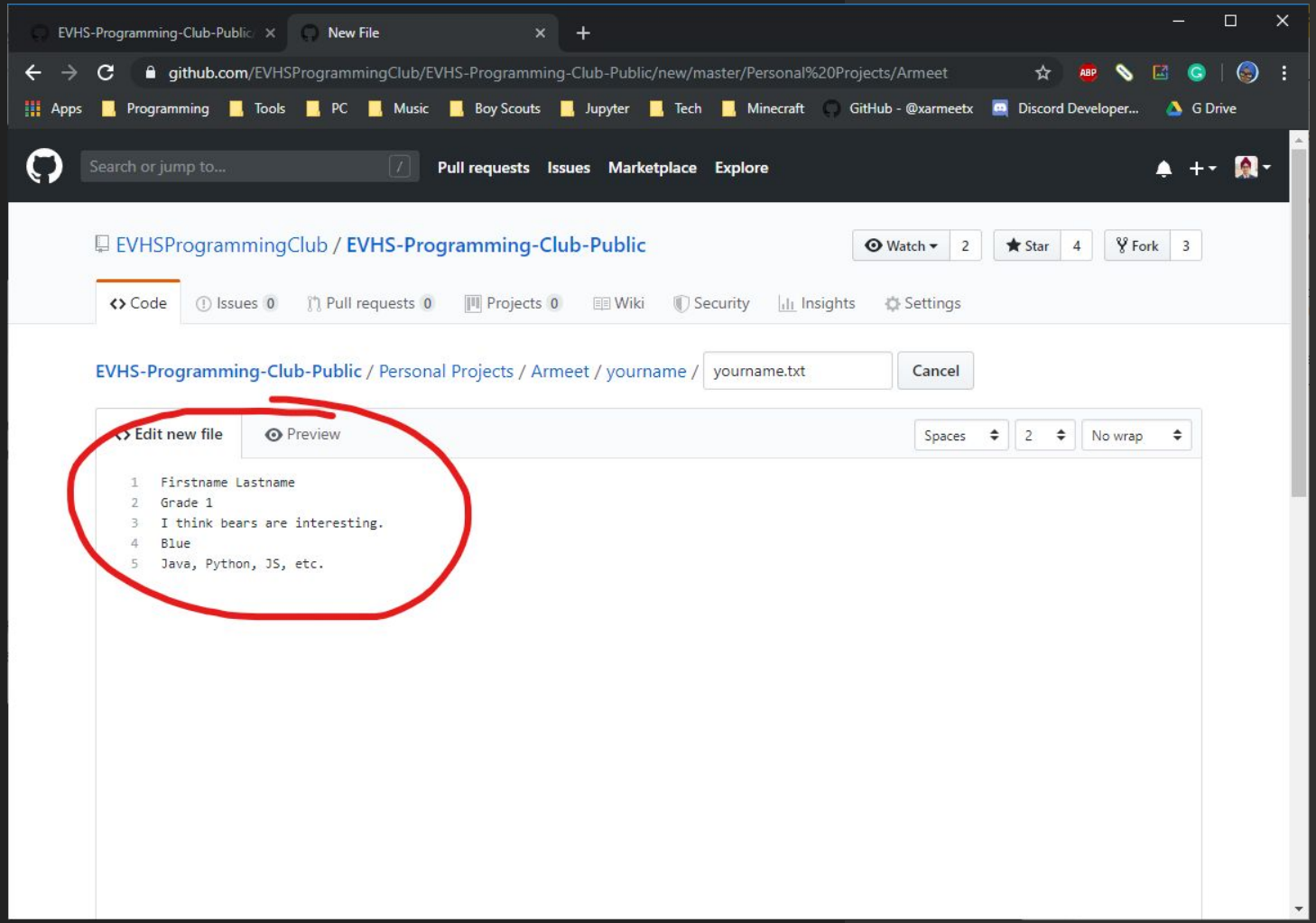
EVHS-Programming-Club-Public / Personal Projects / Armeet / yourname /
yourname.txt
Cancel
Edit new file
Preview
Spaces
2
No wrap
1

12 lines (11 sloc) | 420 Bytes

Raw Blame History

```
This is for your personal projects.

1. Make a folder with your first name.
2. Inside the folder, make a yourname.md file and put
  - your first and last name
  - your grade
  - something about you
  - fav color
  - programming languages you know
(if you do know how md files work, feel free to make this prettier)
3. Put your personal project in here. (or files with links to your repo on github)
4. Thats all for now!
```


EVHS-Programming-Club-Public
New File
github.com/EVHSProgrammingClub/EVHS-Programming-Club-Public/new/master/Personal%20Projects/Armeet
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EVHS-Programming-Club-Public / Personal Projects / Armeet / yourname /
yourname.txt
Cancel
Edit new file
Preview
Spaces
2
No wrap
1 Firstname Lastname
2 Grade 1
3 I think bears are interesting.
4 Blue
5 Java, Python, JS, etc.

EVHS-Programming-Club-Public | New File

github.com/EVHSProgrammingClub/EVHS-Programming-Club-Public/new/master/Personal%20Projects/Armeet

Apps | Programming | Tools | PC | Music | Boy Scouts | Jupyter | Tech | Minecraft | GitHub - @xarmeetx | Discord Developer... | G Drive

Commit new file

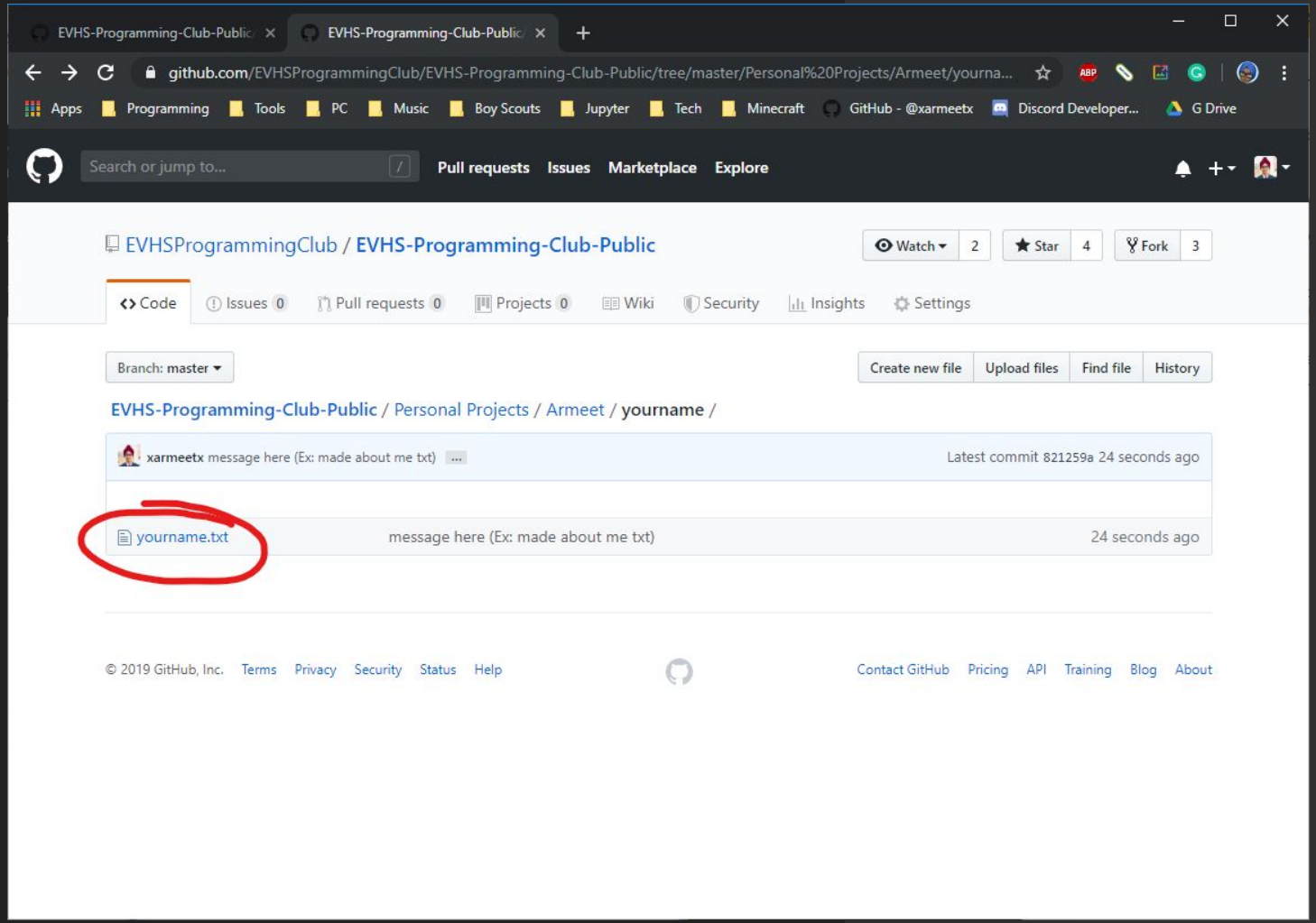
message here (Ex: made about me txt)

More details here

Commit directly to the `master` branch.

Create a **new branch** for this commit and start a pull request. Learn more about pull requests.

Commit new file | Cancel


EVHS-Programming-Club-Public
EVHS-Programming-Club-Public
github.com/EVHSProgrammingClub/EVHS-Programming-Club-Public/tree/master/Personal%20Projects/Armeet/yourna...
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Create new file
Upload files
Find file
History
EVHS-Programming-Club-Public / Personal Projects / Armeet / yourname /
xarmeetx message here (Ex: made about me txt)
Latest commit 821259a 24 seconds ago
yourname.txt
message here (Ex: made about me txt)
24 seconds ago
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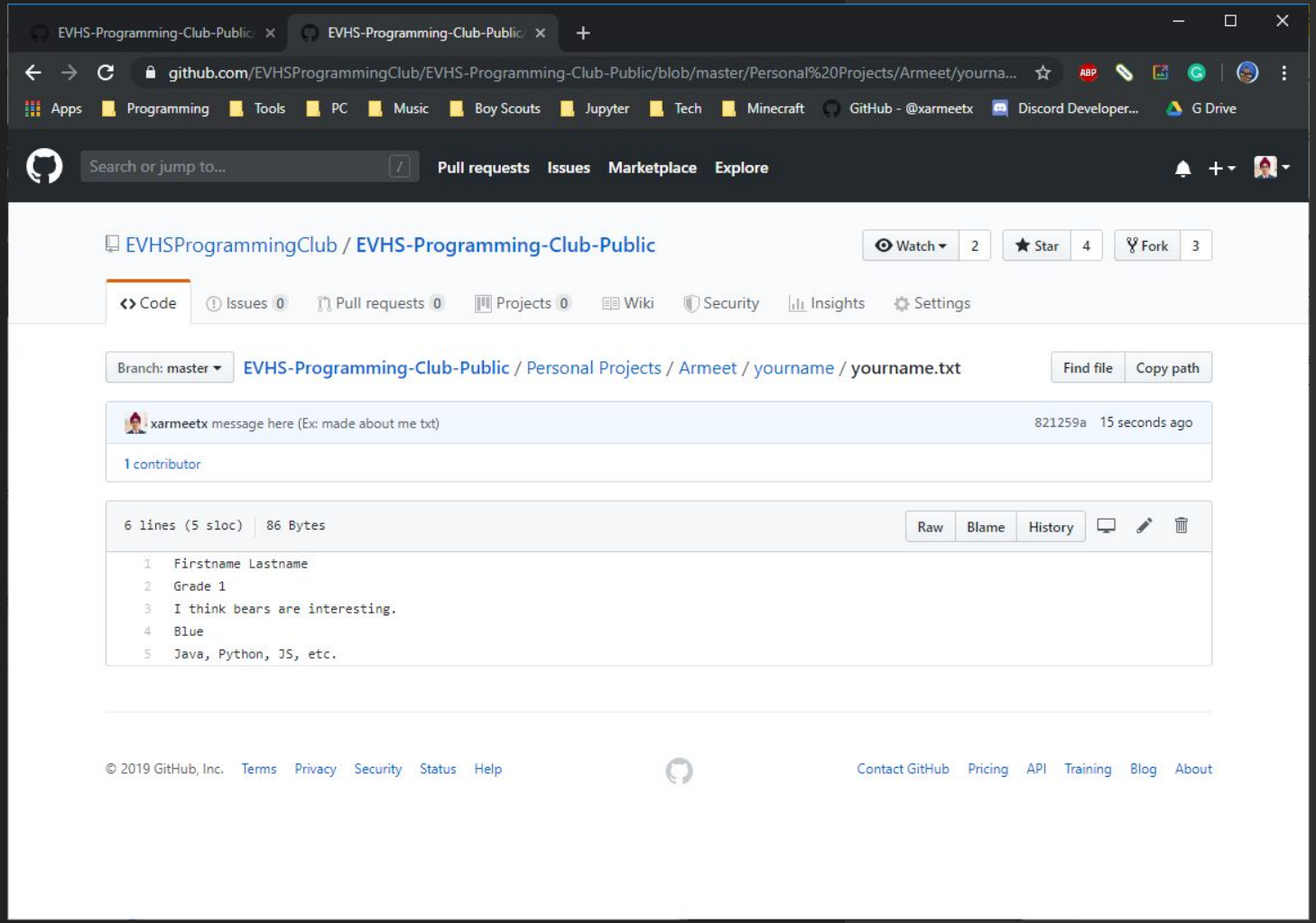
EVHS-Programming-Club-Public
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github.com/EVHSProgrammingClub/EVHS-Programming-Club-Public/blob/master/Personal%20Projects/Armeet/yourna...
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Branch: master
EVHS-Programming-Club-Public / Personal Projects / Armeet / yourname / yourname.txt
Find file
Copy path
xarmeetx message here (Ex: made about me txt)
821259a 15 seconds ago
1 contributor
6 lines (5 sloc) 86 Bytes
Raw
Blame
History
1 Firstname Lastname
2 Grade 1
3 I think bears are interesting.
4 Blue
5 Java, Python, JS, etc.
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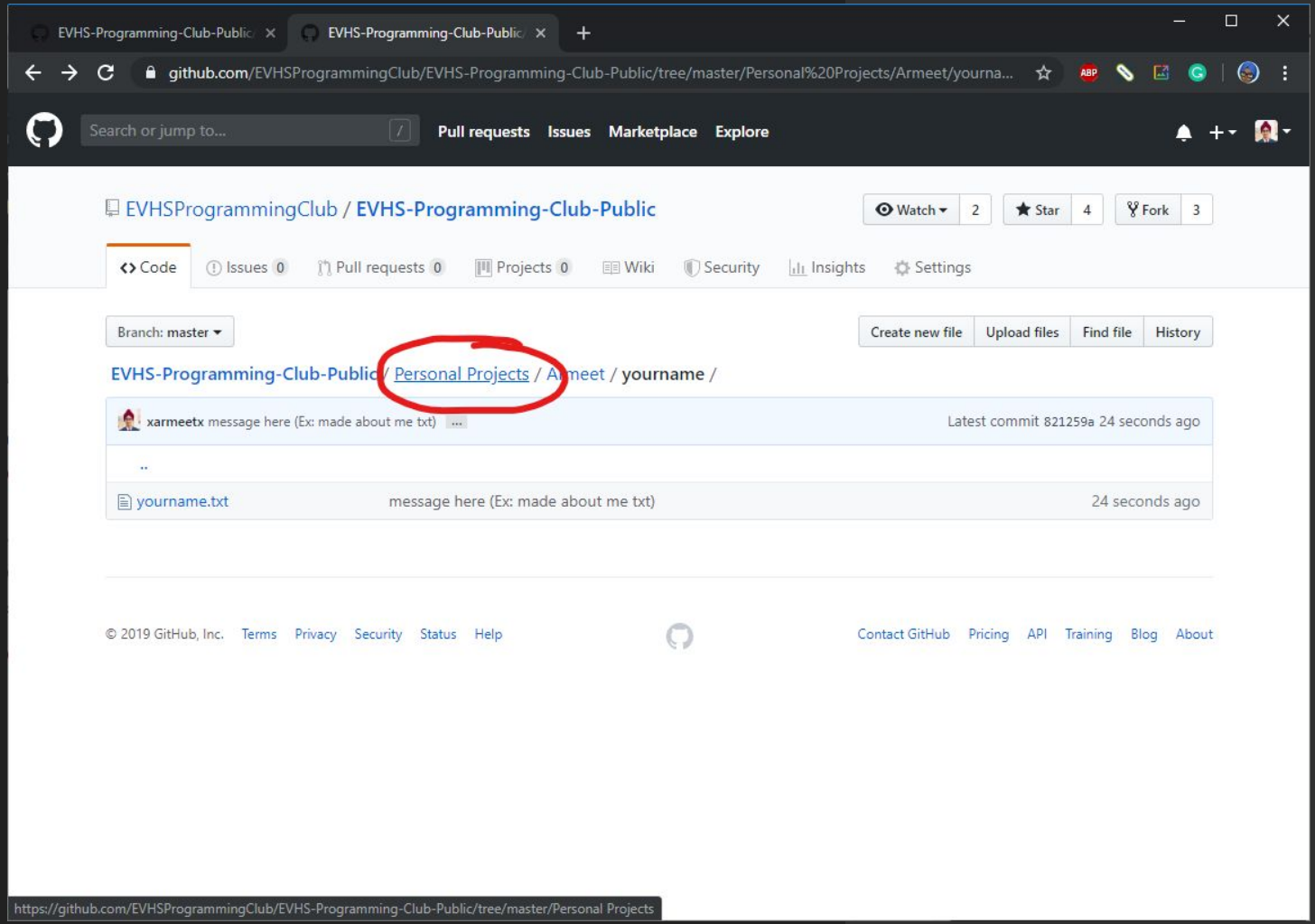
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EVHS-Programming-Club-Public
github.com/EVHSProgrammingClub/EVHS-Programming-Club-Public/tree/master/Personal%20Projects/Armeet/yourna...
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Find file
History
EVHS-Programming-Club-Public / Personal Projects / Armeet / yourname /
xarmeetx message here (Ex: made about me txt) ...
Latest commit 821259a 24 seconds ago
..
yourname.txt
message here (Ex: made about me txt)
24 seconds ago
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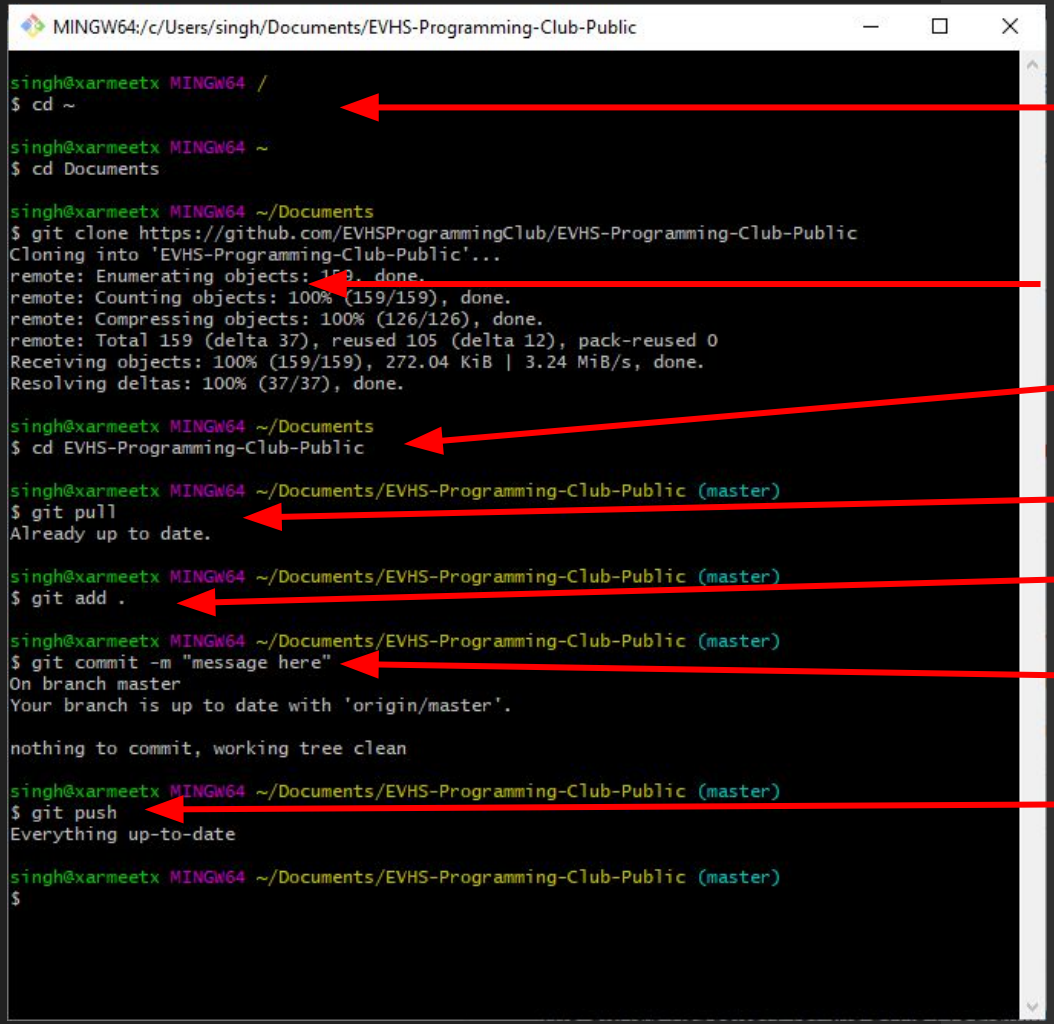
https://github.com/EVHSProgrammingClub/EVHS-Programming-Club-Public/tree/master/Personal Projects



Navigate to where you want the repo to be on your laptop

Clone Repo

Navigate to repo on laptop

Pull changes

Add files

Commit files

Push files

Cloning a Repository

git clone “link here”

- Makes a synced copy of the repository on your laptop, where you typed git clone
- You can now change the files in this repository, add, commit, push, and pull

Adding files

git add .

- Tells github which files to track and which files to upload
- Adds all the changes

Commiting

git commit -m “message here”

- Stages the files
- Last step before pushing
- Gives each file a message

Pushing

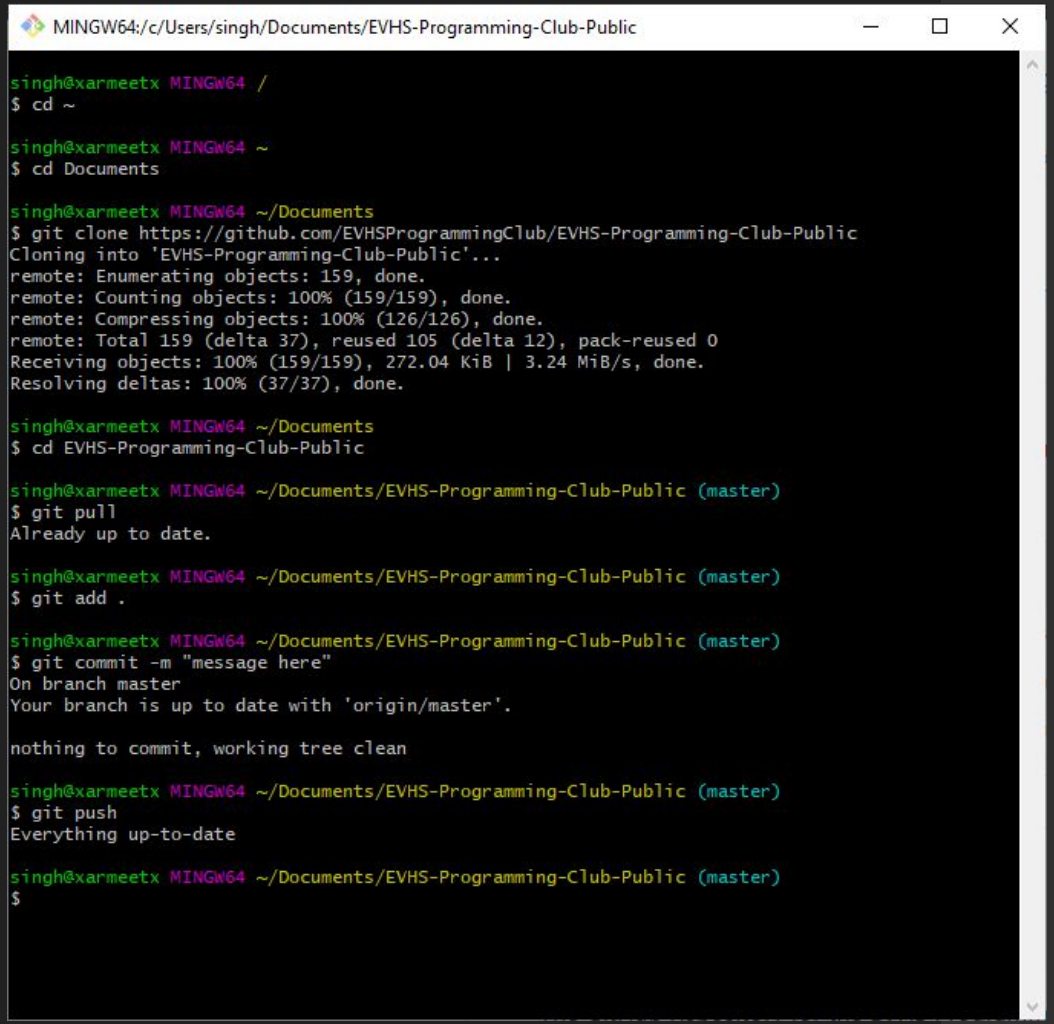
git push

- Pushes all your changes, new files, deleted files to repository
- Adds commit message to each file

Pulling

git pull

- Pulls the changes from the repo.
- If someone else has made a change, you will receive their changes.


MINGW64:/c/Users/singh/Documents/EVHS-Programming-Club-Public
singh@xarmeetx MINGW64 /
$ cd ~
singh@xarmeetx MINGW64 ~
$ cd Documents
singh@xarmeetx MINGW64 ~/Documents
$ git clone https://github.com/EVHSProgrammingClub/EVHS-Programming-Club-Public
Cloning into 'EVHS-Programming-Club-Public'...
remote: Enumerating objects: 159, done.
remote: Counting objects: 100% (159/159), done.
remote: Compressing objects: 100% (126/126), done.
remote: Total 159 (delta 37), reused 105 (delta 12), pack-reused 0
Receiving objects: 100% (159/159), 272.04 KiB | 3.24 MiB/s, done.
Resolving deltas: 100% (37/37), done.
singh@xarmeetx MINGW64 ~/Documents
$ cd EVHS-Programming-Club-Public
singh@xarmeetx MINGW64 ~/Documents/EVHS-Programming-Club-Public (master)
$ git pull
Already up to date.
singh@xarmeetx MINGW64 ~/Documents/EVHS-Programming-Club-Public (master)
$ git add .
singh@xarmeetx MINGW64 ~/Documents/EVHS-Programming-Club-Public (master)
$ git commit -m "message here"
On branch master
Your branch is up to date with 'origin/master'.
nothing to commit, working tree clean
singh@xarmeetx MINGW64 ~/Documents/EVHS-Programming-Club-Public (master)
$ git push
Everything up-to-date
singh@xarmeetx MINGW64 ~/Documents/EVHS-Programming-Club-Public (master)
$

Part 2: Pong Game

Starting code link:

https://repl.it/@Ccde123456789/Starting-Code-for-Pong

Phase 1:

Draw the left paddle

(Use object properties, and the variables there)

fillRect() is your friend for this

And draw the ball

Phase 2:

Create a right paddle object.

(Make sure it’s on the right size of the screen)

(Use the left paddle as a guide)

Draw the right paddle

Phase 3:

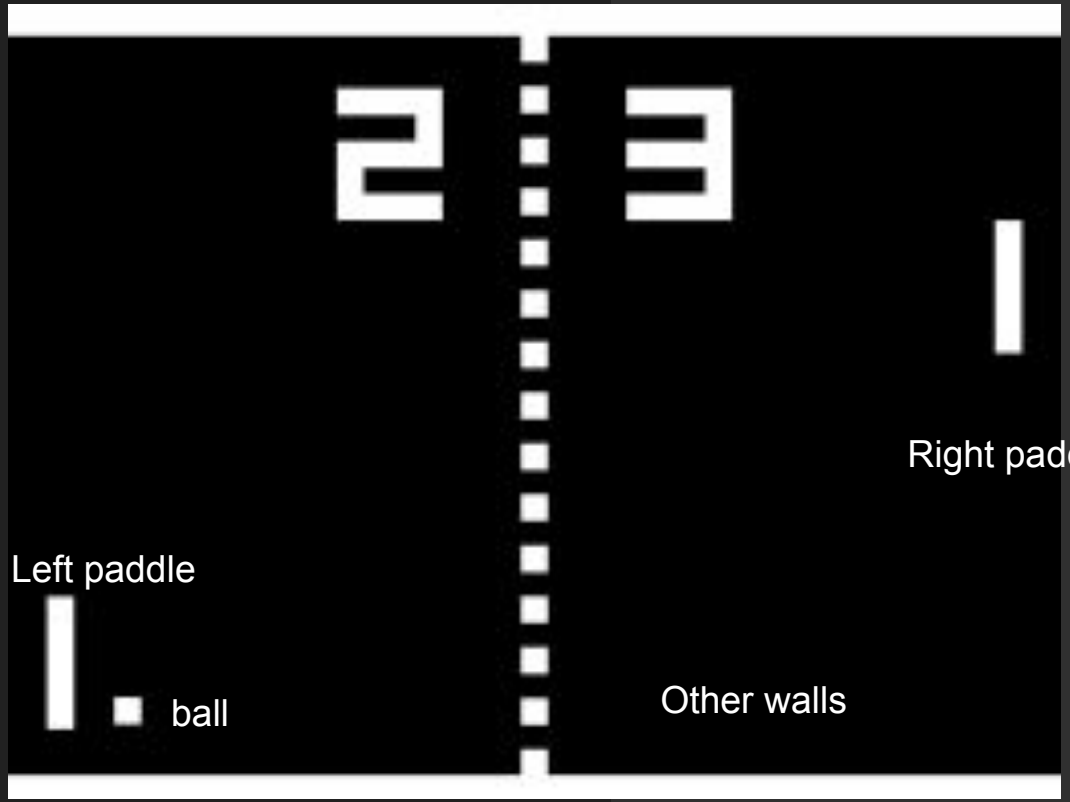
For the dotted line, here's the code: try to understand it before you move on.

```
for (let i = grid; i < canvas.height - grid; i += grid * 2) {
  context.fillRect(canvas.width / 2 - grid / 2, i, grid, grid);
}
```

Add the walls.

And the dotted line

Objects



Phase 4:

The loop adds one frame after another. Each frame, the position of these objects changes a little.

Make the ball and paddles move

Phase 5:

Every key has a key-code.

The provided ones are for the arrow down and up

Add key listeners for the left paddle

The keylistener edits the speed of the paddle when the key is pressed down. When it’s picked up, the paddle speed returns to 0.

Phase 7:

Play around with it, and try to understand how it works.

Fill in the collision function

https://developer.mozilla.org/en-US/docs/Games/Techniques/2D_collision_detection

Phase 8:

Use the function built in phase 7

Make sure the collision won’t happen in multiple frames

Make the ball bounce off both paddles

Also remember to think of what will happen to the ball’s speed when it’ll bounce off the paddle.

Phase 9:

What will happen to the displayed points?

Reset the ball when a point is scored on the right side

Think about what will happen to the ball. Which way will it go?

Phase 10:

What will happen to the displayed points?

Reset the ball when a point is scored on the left side

Think about what will happen to the ball. Which way will it go?