

# Git



# What and why Git?

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- Git is a version control system
- It helps with collaborating on code, reviewing changes, and syncing changes on everyone's computers
- The history of all changes are also logged

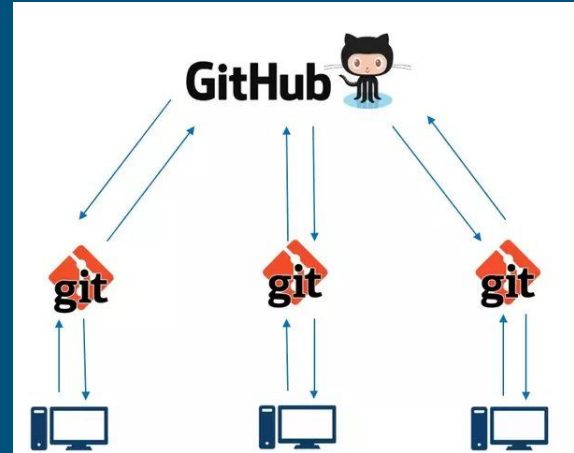


git

# What is Github?



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- Github is the service that stores our code
- We use Git to interact with Github



# Differences

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 <b>git</b>	 <b>GitHub</b>
1. It is a software	1. It is a service
2. It is installed locally on the system	2. It is hosted on Web
3. It is a command line tool	3. It provides a graphical interface
4. It is a tool to manage different versions of edits, made to files in a git repository	4. It is a space to upload a copy of the <b>Git</b> repository
5. It provides functionalities like Version Control System Source Code Management	5. It provides functionalities of Git like VCS, Source Code Management as well as adding few of its own features

# Installation

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Signup for a Github account: <https://github.com>

<https://git-scm.com/downloads>

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Insert VR Codes

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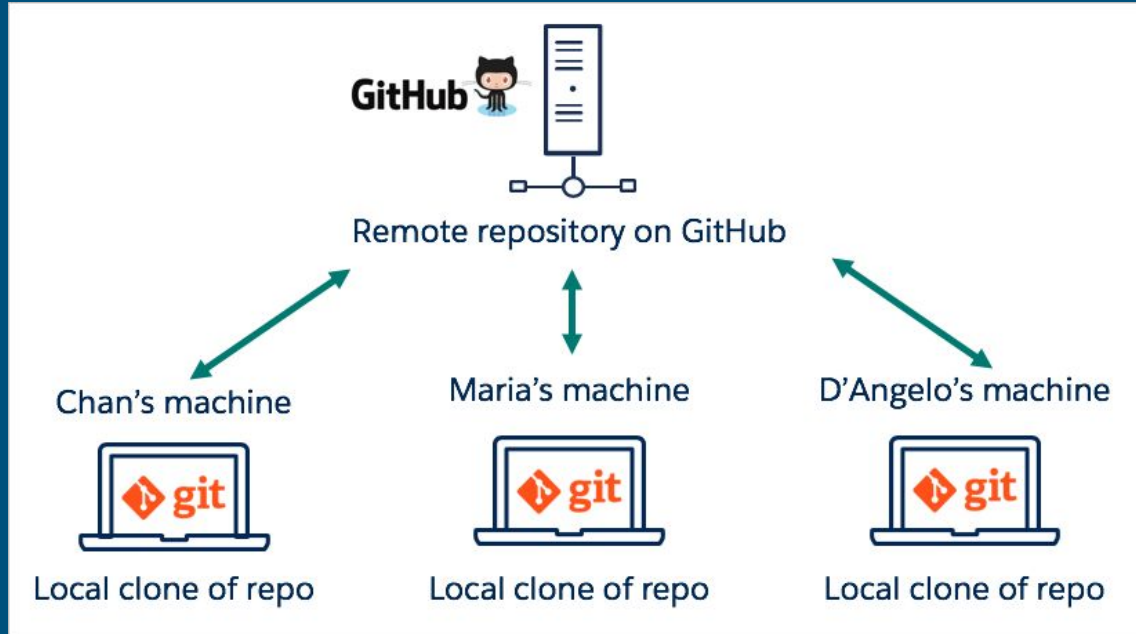
# Repositories

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- Projects in Git(hub) is called a repository
- Your code files and folders are stored, but images and all file formats are allowed!

# Local vs Remote Repositories

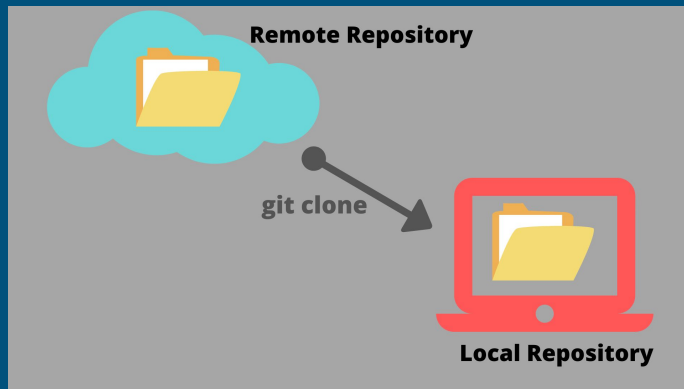
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# Cloning a repository

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- Cloning copies a remote repository from Github using Git commands to a local repository
- We can now make changes to the code!!!

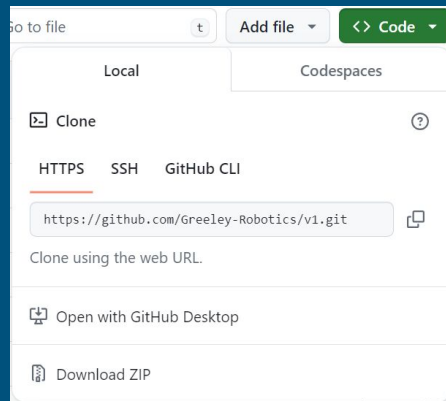




# Cloning 2024-2025 Robot Code

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- Copy and the link from { insert robot name }'s repository link
- Use the `git clone pasteRepositoryLink` command. Command creates a subfolder in the current folder with the contents of the repository

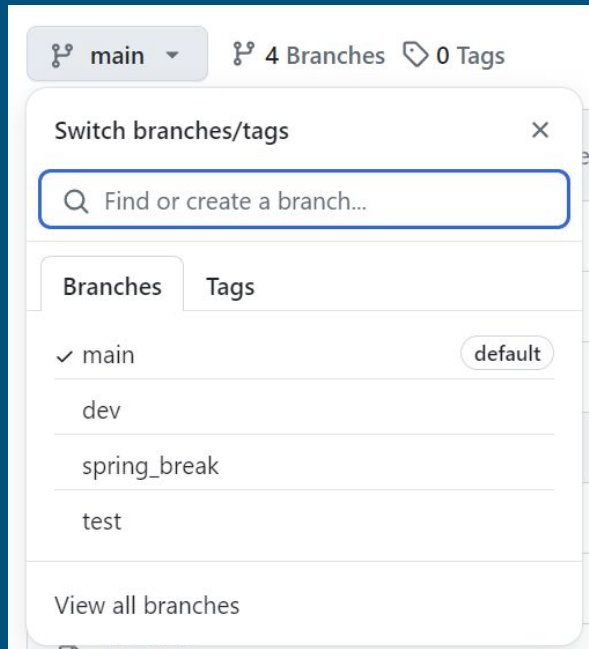


- You can create branches from it or other branches



# Branch Conventions

- `main` branch: final robot code
- `test` branch: test robot code
- `dev` branch: we will collaborate on this branch
- Additional branches
- Please do not merge branches without creating a pull request



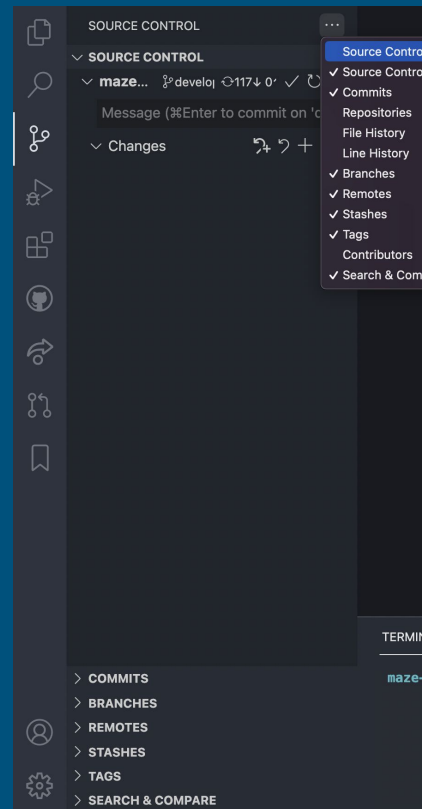
# Source Control - Switching Branches

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- Use ``git switch branchName`` to switch branches

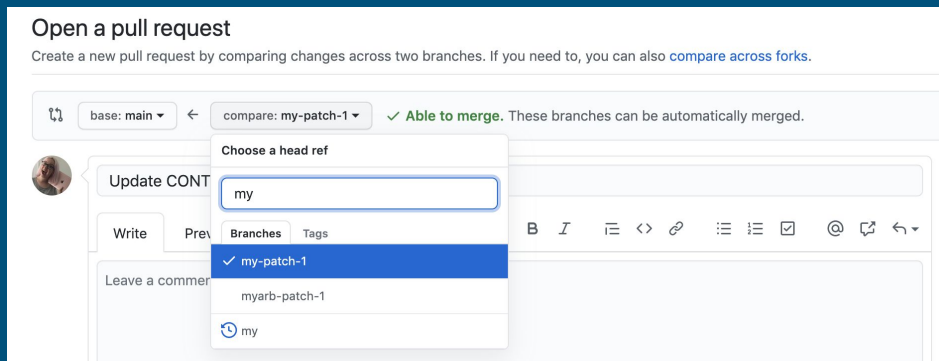
# Source Control - Commit

1. Create change
2. Navigate to the source control tab
3. Type in message for commit
4. Click check mark
5. Sync



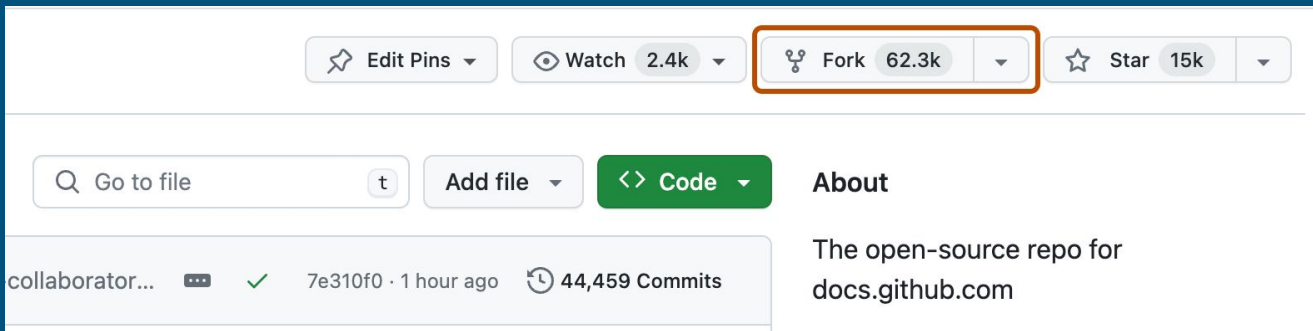
# Pull Requests

- Invite others to review and approve your changes before merging into another branch
  - In our case, we may merge your changes into the `test` or `dev` branches



# Experimenting on your own

- Fork the robot repository



# Kahoot Time!

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Insert Kahoot link

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# Additional Resources

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- [`Fireship` 100 Seconds of GIT](#)
- [`FreeCodeCamp` Crash Course GIT & Github](#)