

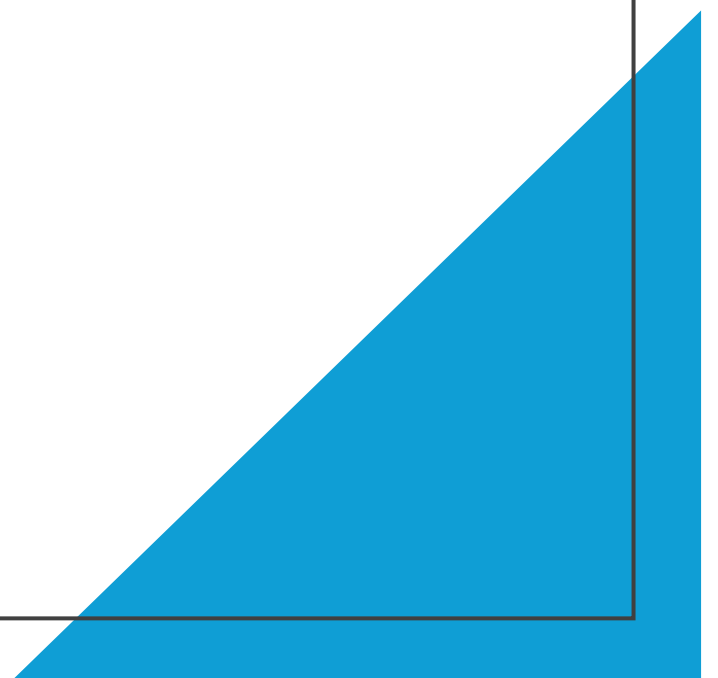


# LOCUS 2026

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## Git & Github

Software Fellowship Day 5





# Objectives



Initialize, stage, commit, and push with Git.



Branch, merge, and resolve conflicts smoothly.



Open pull requests and run concise code reviews.



Connect front-end to back-end via fetch/AJAX calls.



LAB: build a login page using the GitHub PR workflow.



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# Need of Version Control



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# Need of Version Control



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**managing changes:** versions of files over time



**collaborate:** multiple users to on a project



**history:** track of the changes made



**revert:** go back to previous versions conflict management: multiple users working on same files



**branching:** multiple features at the same time

# Setting up Git



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Checking installation of git

```
$ git version
```

# Setting up Git



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Configuring Git with username and email

```
git config --global user.name "[firstname lastname]"
```

set a name that is identifiable for credit when review version history

```
git config --global user.email "[valid-email]"
```

set an email address that will be associated with each history marker

Example:

```
$ git config --global user.name "John Doe"
```

```
$ git config --global user.email johndoe@example.com
```

# Checking your settings



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```
$ git config --list
```

list all the settings Git can find at that point

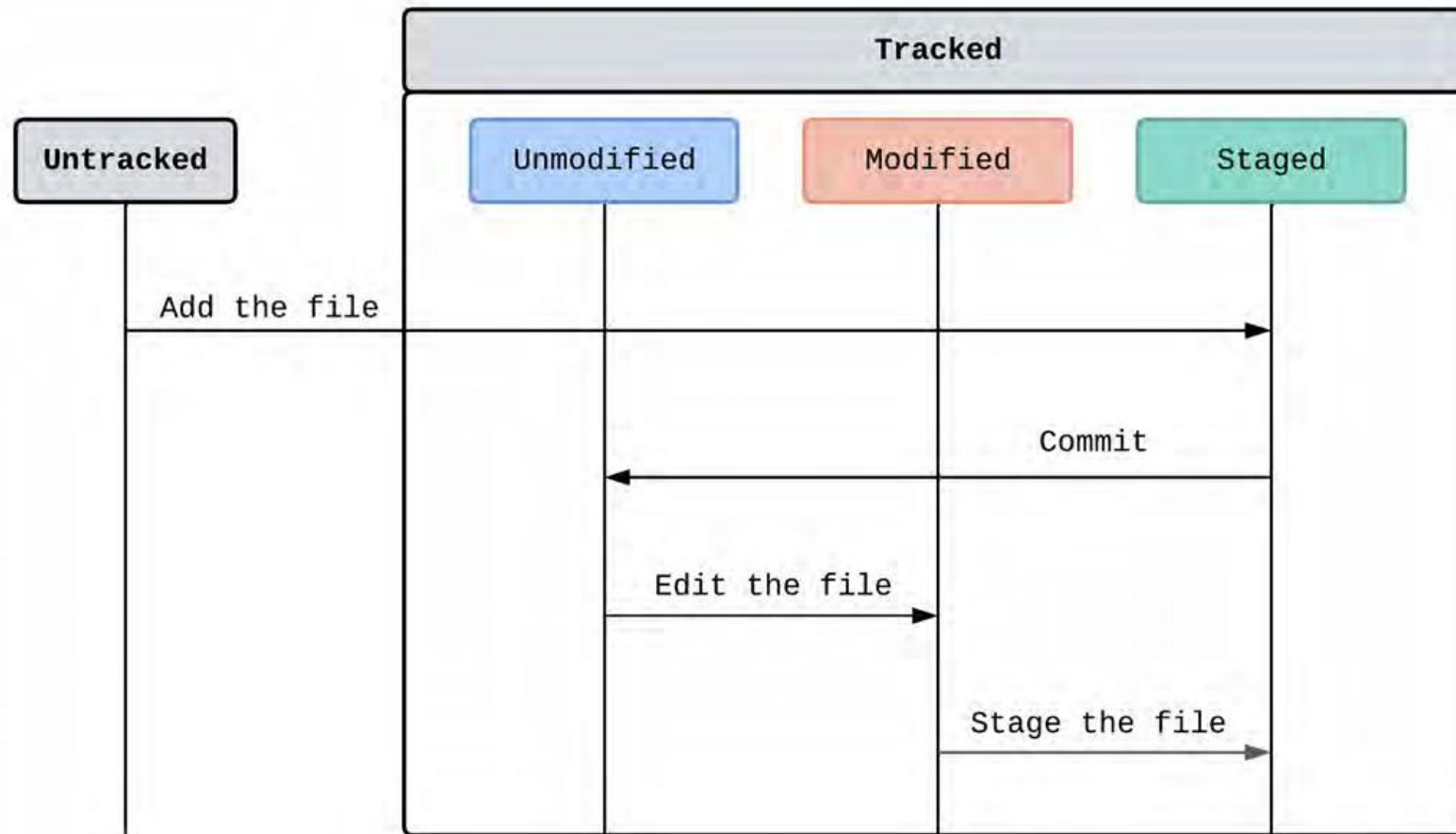
```
$ git config user.name
```

check specific key value for a setting

# Lifecycle of status of file



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# Setting up Git



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Creating a new git repository

```
git init
```

initialize an existing directory as a Git repository

or you can clone a repository but we'll get into it later.

- A hidden folder named **.git** is created which contains all the information of the repository such as change history, settings, compressed version of each file, etc.

# Tracking your files



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```
$ git add <filepath>
```

- Stage **changes** in the specified file(s), preparing them for the next commit
- Place the **changes** to the so called "staging area"

Example:

```
$ git add hangman.c
```

# Batch Staging



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```
$ git add .
```

- Stage ***changes*** in all the files in the current directory and its subdirectories.
- where . specifies the current working directory



`$ git status`

- Shows the current status of your git repo
- Displays the information about tracked and untracked files in the current working directory
- Tracked files are files that Git is aware of and are already being version controlled.
- Untracked files are files that are not yet added to the Git repository.

# Committing



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```
$ git branch -M <new_name>
```

- change the branch

# Committing



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```
$ git commit -m "Commit Message"
```

- used to save your changes to the local repository

# Viewing Commit History



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```
$ git log
```

- Displays the list of commits in reverse chronological order, showing the latest commits first
- Each commit in the log includes information such as the commit hash (SHA-1 checksum), author name, author email, commit date, the commit message, and the commit description (if any).
- Pressing the **Enter** key scrolls down through the log, displaying more commits if available. Press **q** to exit the log view.

# .gitignore



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- A .gitignore file is used in Git to specify files or directories that should be ignored by Git when committing changes.
- This is particularly useful for excluding sensitive information, temporary files, or build artifacts from your repository.



# .gitignore



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▼ admin	20	# Go workspace file
◆ .gitignore	21	go.work
📡 go.mod	22	go.work.sum
☰ go.sum	23	
🔑 LICENSE	24	# env file
📄 Makefile	25	.env
📄 tailwind.config.js	26	

# Pushing to remote repo



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```
$ git push origin <branch_name>
```

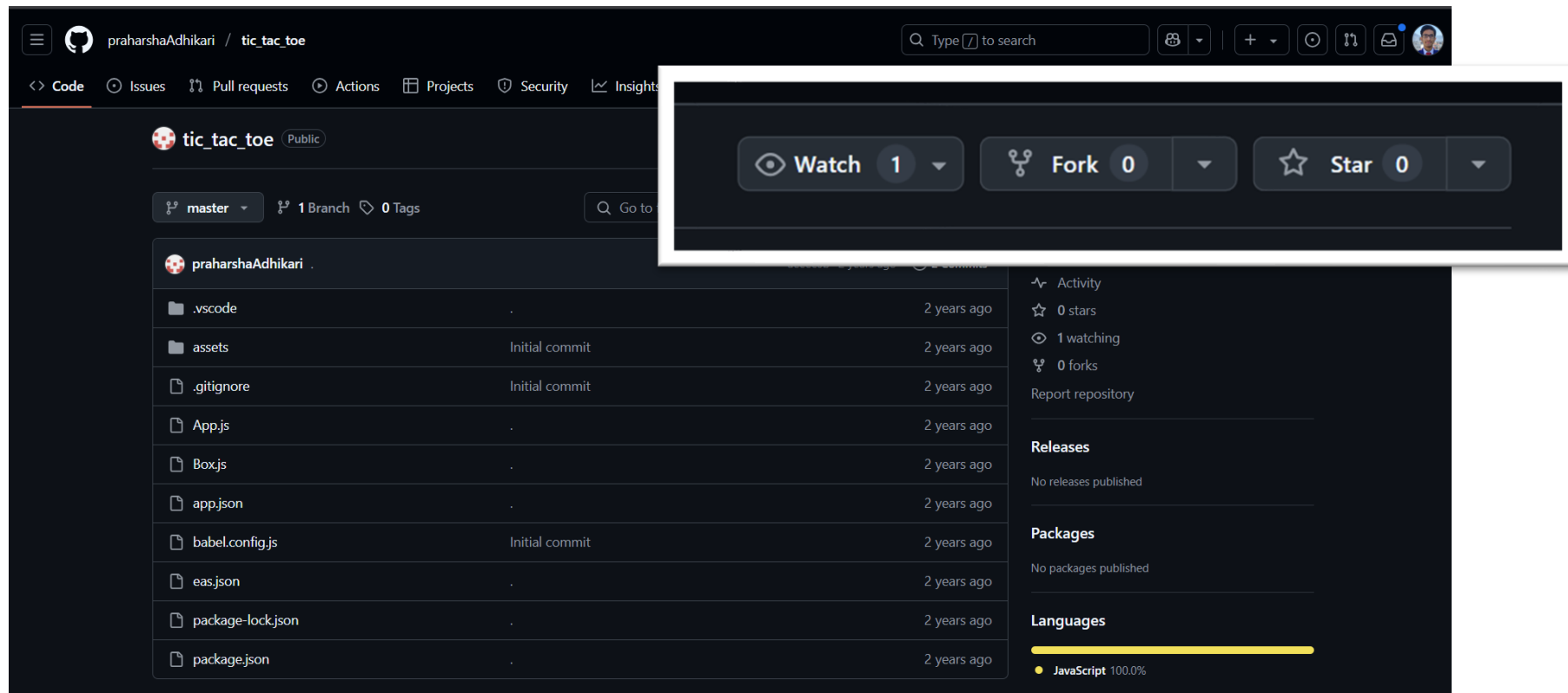
- git push is used to send your local commits to a remote repository like GitHub.
- It updates the remote branch with your local branch's changes.
- If someone else has pushed changes before you, you may need to pull and merge first.
- It's commonly used after you've committed changes locally and want to share them or back them up

# Forking



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- Creating a replica of other's remote repository in your own remote repository

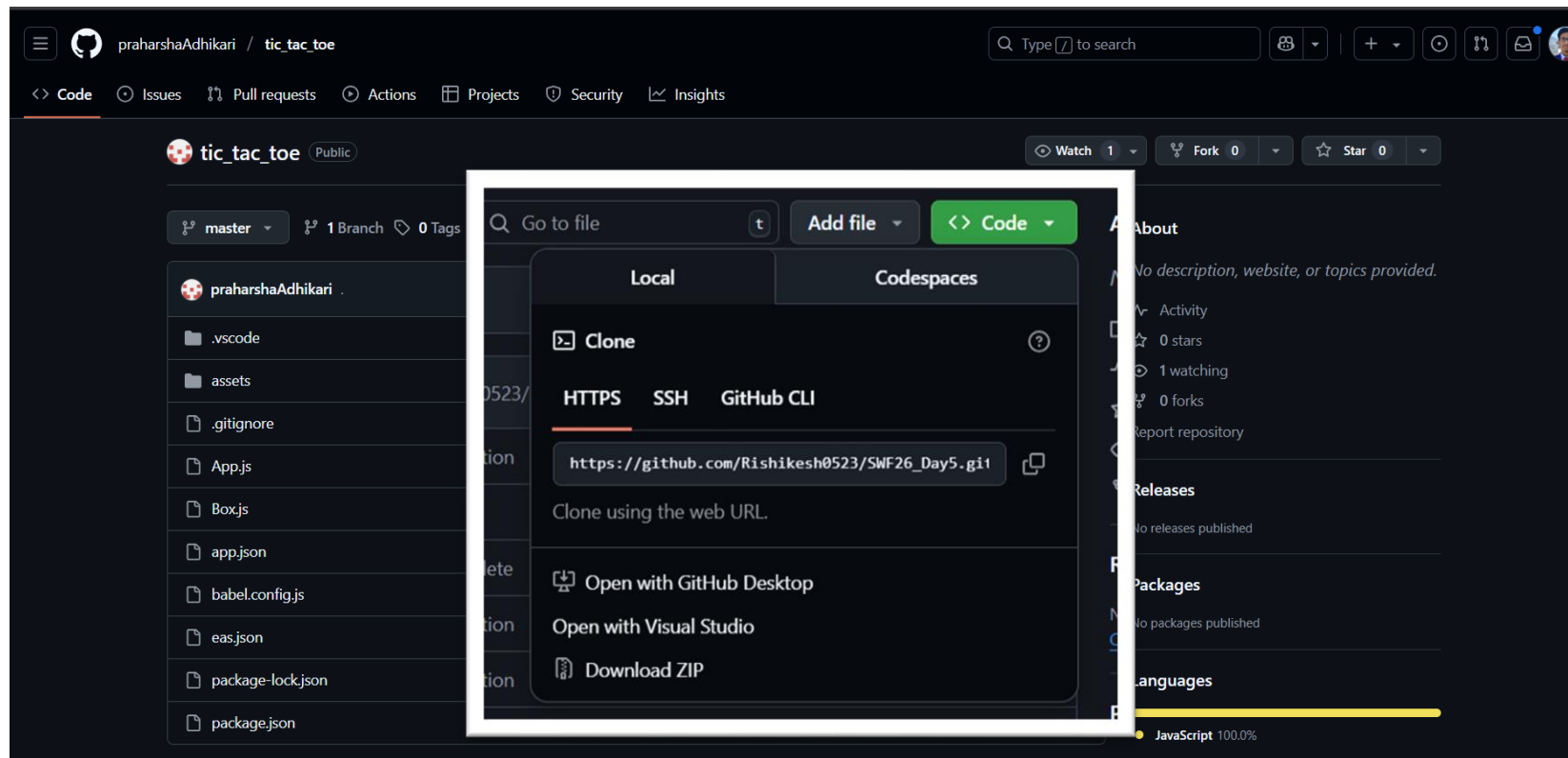


# Cloning



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- Creating a replica of remote repository in your own local repository



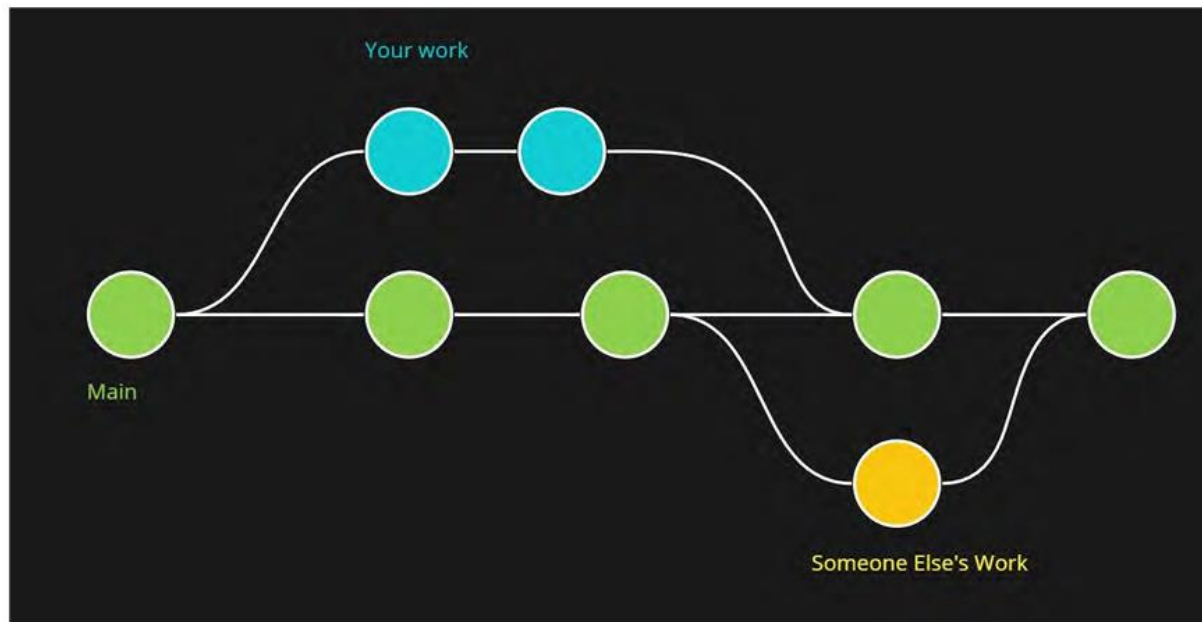
# Cloning



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```
$ git clone <url>
```

# Branching and Merging



```
$ git checkout -b  
<branch_name>
```

```
$ git merge  
<branch_name>
```

# Creating a Pull Request



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This branch is 1 commit ahead of `GlitchyStar717/SWF26_Day5:main` .

[Contribute](#) [Sync fork](#)

**Rishikesh0523** Added some content!

<code>.github/workflows</code>	Skeleton Creati	now	11 Commits
<code>Rishikesh_\$\$\$</code>	Added some co	yesterday	
<code>Shashank_Sleeping</code>	Coding Comple	now	
<code>tests</code>	Skeleton Creati	yesterday	

This branch is 1 commit ahead of `GlitchyStar717/SWF26_Day5:main`

Open a pull request to contribute your changes upstream.

[Open pull request](#)

# Creating a Pull Request



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## Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also [compare across forks](#) or [learn more about diff](#)



base repository: GlitchyStar717/SWF26\_Day5 ▾

base: main ▾



head repository: Rishikesh0523/SWF26\_Day5 ▾

compare: main ▾



### Add a title

Added some content!

### Add a description

Write

Preview




Add your description here...





# Creating a Pull Request



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 Markdown is supported


 Paste, drop, or click to add files


☒ Allow edits by maintainers 

Create pull request



 Remember, contributions to this repository should follow our [GitHub Community Guidelines](#).

 1 commit

 1 file changed

# Linking frontend & backend (AJAX/fetch)



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[https://github.com/Rishikesh0523/ajax\\_demo](https://github.com/Rishikesh0523/ajax_demo)

# Lab: Team build login page with backend API integration via GitHub PR flow

[https://github.com/GlitchyStar717/SWF26\\_Day5](https://github.com/GlitchyStar717/SWF26_Day5)



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Thank You!