



Complete



हमेशा की छुट्टी



Learning Roadmap



1. Introduction to Version Control
2. Getting Started with GitHub
3. Getting Started with Git
4. Working with GitHub UI
5. Essential Git Commands
6. Branching and Merging
7. Advance GitHub Features
8. Git Best Practices
9. Advanced Git Operations





React

1. Introduction to Version Control



1. What is Version Control?
2. Need of Version Control
3. Benefits of Version Control
4. Principle of Version Control
5. Evolution of Version Control
6. Diff Based vs Copy Based
7. Overview of Git



Allow myself to introduce...



1.1 What is Version Control?



1. A system that **tracks changes** to files over time
2. Manages **different versions** of source code and documents.
3. **Tracks modifications** and **maintains a history** of file versions.
4. Allows **multiple people** to work on the same project
5. **Records** who made what changes and when
6. **Facilitates collaboration** by managing contributions and changes from different team members.

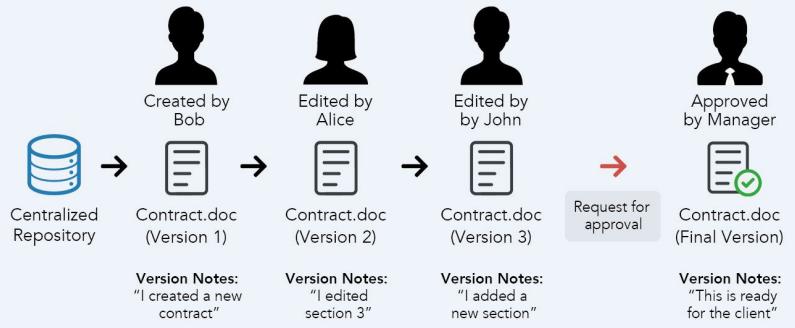




1.2 Need of Version Control



How Version Control Works



1. Helps manage and track changes in codebases or documents efficiently.
2. Prevents loss of work and supports rollback to previous versions.
3. Enables collaboration among team members without overwriting each other's work.
4. Provides accountability by showing who made what changes and when.



1.3 Benefits of Version Control



1. Collaboration: Multiple people can work on the same project without conflict.
2. Backup: Every change is saved, allowing retrieval of previous versions.
3. Accountability: Clearly shows who made changes and when.
4. Conflict Resolution: Handles merging and resolving conflicting changes in collaborative environments.



1.4 Principle of Version Control



Result = Start + Sum(Changes)

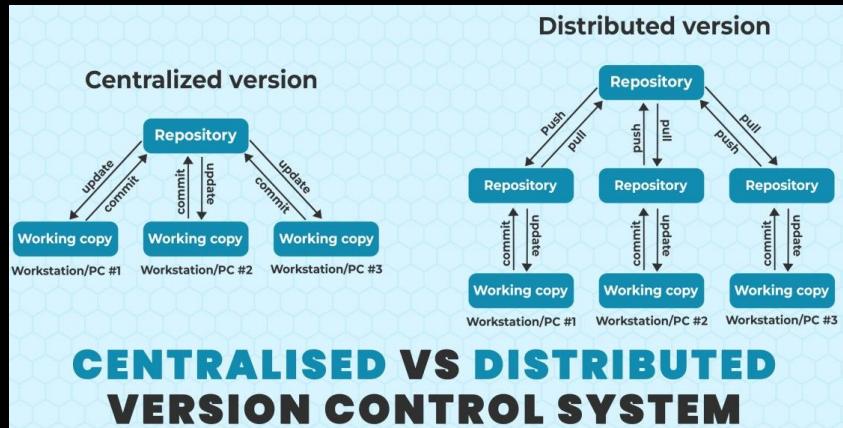
Bank Account

Date	Type	Description	Amount	Balance
08/06/12	CO	*****1,000.00*****1,000.00 4058A		
25/06/12	IN	*****0.37*****1,000.37 0000#		
30/09/12	P1	*****2,999.46*****3,999.81 CONDE		
25/12/12	P1	*****3,390.68*****7,390.49 CONDE		
25/12/12	IN	*****11,73*****7,402.22 0000#		
08/03/13	X1	*****1,257.53*****8,659.75 5001C		
08/03/13	X1	*****1,257.53*****9,917.28 5001C		
08/03/13	X1	*****1,257.53*****11,174.81 5001C		
08/03/13	X1	*****1,257.53*****12,432.34 5001C		
08/06/13	X1	*****1,713.97*****14,146.31 5001C		
08/06/13	X1	*****1,713.97*****15,860.28 5001C		
08/06/13	X1	*****1,713.97*****17,574.25 5001C		
08/06/13	X1	*****1,713.97*****19,268.22 5001C		
25/06/13	IN	*****1,59*****19,329.01 0000#		
08/07/13	X1	*****1,816.46*****21,146.25 5001C		
08/07/13	X1	*****1,816.46*****22,962.69 5001C		
08/07/13	X1	*****1,816.46*****24,779.13 5001C		
08/07/13	X1	*****1,816.46*****26,595.57 5001C		

1.5 Evolution of Version Control



1. Manual Versioning: Early developers used to manually name file versions.
2. Local Version Control Systems: Initial tools like RCS stored versions on individual machines.
3. Centralized Version Control: Systems like CVS and SVN introduced a single server to store files.
4. Distributed Version Control: Tools like Git and Mercurial allow users to have full project history on their local machines.
- 5.





1.6 Diff Based vs Copy Based



Feature	Diff-Based Version Control	Copy-Based Version Control
Storage Efficiency	Stores only differences (changes) between versions	Stores a full copy of the file for each version
Storage Usage	More efficient, uses less storage	Less efficient, uses more storage
Speed	Faster for tracking and committing small changes	Slower as every file is saved in its entirety
Tracking Mechanism	Tracks changes at a granular level (lines of code)	Saves entire file versions for each change
Examples	Git, SVN, Mercurial	Early manual version control, simple backup systems
Use Case	Ideal for large projects with frequent small changes	Useful in basic systems with fewer changes

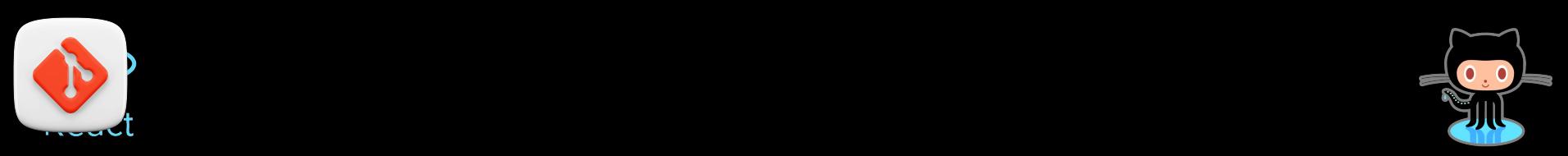


1.7 Overview of git



1. **Created by Linus Torvalds:** Developed in 2005 by the creator of Linux to manage the Linux kernel.
2. **Humorous Name:** "Git" is British slang for an unpleasant person, chosen humorously by Torvalds.
3. **Inspired by BitKeeper:** Git was created after Linux developers lost access to the proprietary BitKeeper system.
4. **Fully Distributed:** Every developer has a complete copy of the project history, allowing offline work and safer collaboration.
5. **Snapshot System:** Git stores snapshots of the project, not just differences, making it fast and efficient.
6. **Widely Used:** Git is the most popular version control system, powering platforms like GitHub and GitLab.
7. **Fast and Efficient:** Designed to handle large projects with speed.
8. **Branching Model:** Git makes branching and merging easy and efficient.







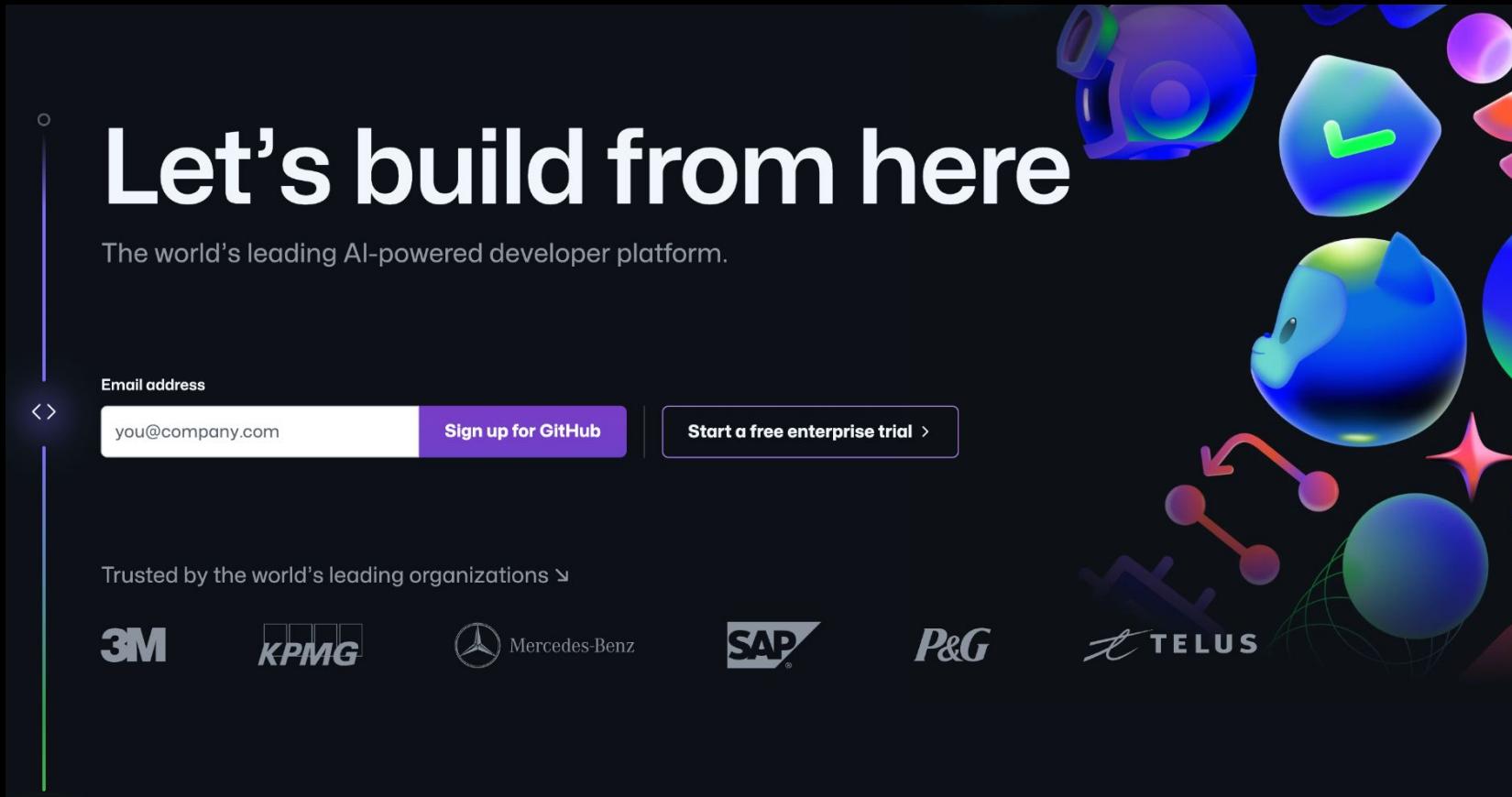
2. Getting Started with GitHub



1. Creating a GitHub account
2. Tour of the GitHub interface
3. Creating a repository on GitHub
4. Exploring Popular Repository
5. GitHub README files



2.1 Creating a GitHub account



The image shows a screenshot of the GitHub landing page. At the top, there's a large white banner with the text "Let's build from here" in bold black font. Below it, a subtext reads "The world's leading AI-powered developer platform." On the left, there's a form field for an email address with the placeholder "you@company.com". To its right are two buttons: "Sign up for GitHub" in purple and "Start a free enterprise trial >" in grey. The background features a dark, abstract design with glowing, translucent spheres and a network of lines. At the bottom, there's a section titled "Trusted by the world's leading organizations" with logos for 3M, KPMG, Mercedes-Benz, SAP, P&G, and TELUS.

Let's build from here

The world's leading AI-powered developer platform.

Email address

you@company.com

Sign up for GitHub

Start a free enterprise trial >

Trusted by the world's leading organizations

3M KPMG Mercedes-Benz SAP P&G TELUS



2.2 Tour of the GitHub interface



Dashboard

omprashantjain

Top repositories

New

Find a repository...

KG-Coding-with-Prashant-Sir/MERN_Live

KG-Coding-with-Prashant-Sir/votes-front-end

KG-Coding-with-Prashant-Sir/React_Complete_YouTube

KnowledgeGateCoding/Notes

KG-Coding-with-Prashant-Sir/C-Projects

KG-Coding-with-Prashant-Sir/Java_Complete_Youtube

KG-Coding-with-Prashant-Sir/Notes

Show more

Home

Ansh-2012 starred your repository yesterday

omprashantjain/ResumeReview

HTML ⭐ 2

chmtrip59 started following you 4 days ago

Chandra Mauli Tripathi chmtrip59

5 repositories

Trending repositories · See more

feizc/FluxMusic

Text-to-Music Generation with Rectified Flow Transformer

Python ⭐ 552

meltylabs/melty

Open source AI code editor. To download the packaged app:

TypeScript ⭐ 2.9k

Send feedback Filter

Type ⚡ to search

GitHub Models

Join the Limited Public Beta

Try, test, and deploy a range of popular AI models with an interactive playground, for free, right on GitHub.

Learn more

UNIVERSE'24

Check out our full schedule of AI, DevEx, and security sessions.

Get tickets now to our global developer event on Oct. 29-30.

Get tickets

Latest changes

Yesterday



2.3 Creating a repository on GitHub

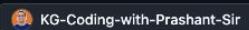


Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository](#).

Required fields are marked with an asterisk (*).

Owner *



Repository name *

Great repository names are short and memorable. Need inspiration? How about [psychic-guide](#) ?

Description (optional)

Public Anyone on the internet can see this repository. You choose who can commit.

Private You choose who can see and commit to this repository.

Initialize this repository with:

Add a README file

This is where you can write a long description for your project. [Learn more about READMEs](#).

Add .gitignore

Choose which files not to track from a list of templates. [Learn more about ignoring files](#).

Choose a license

A license tells others what they can and can't do with your code. [Learn more about licenses](#).

① You are creating a private repository in the KG-Coding-with-Prashant-Sir organization.

Create repository



2.4 Exploring Popular Repos



facebook / react

Type ⌘ to search | + ⌄ ⌂ ⌃ ⌅ ⌆

Code Issues Pull requests Actions Projects Wiki Security Insights

react Public Watch 6630 Fork 46.3k Star 227k

main 268 Branches 143 Tags Go to file Add file Code

sebmarkbage [DevTools] Build Updater List from the Commit instead of ... last year 99cba2b · 10 hours ago 19,396 Commits

.codesandbox Codesandbox: upgrade to Node.js 18 (#26330) last year

.github [ez] Remove trailing space from babel-refresh header 2 weeks ago

compiler [compiler] Add enablePropagateDepsInHIR flag 19 hours ago

fixtures [Flight] Enable Server Action Source Maps in flight-esm Fi... 2 weeks ago

packages [DevTools] Build Updater List from the Commit instead of ... 10 hours ago

scripts Temporarily disable suspending during work loop (#30762) 3 days ago

.editorconfig https link to editorconfig.org (#18421) 4 years ago

.eslintignore Fix ESLint and Prettier configs for React Compiler (#29073) 4 months ago

.eslintrc.js chore[react-devtools]: add global for native and use it to f... last month

.git-blame-ignore-revs Add run prettier commit to .git-blame-ignore-revs 2 months ago

.gitattributes .gitattributes to ensure LF line endings when we should 11 years ago

About

The library for web and native user interfaces.

react.dev

react javascript library ui
frontend declarative

Readme MIT license
Code of conduct Security policy
Activity Custom properties
227k stars 6.6k watching 46.3k forks
Report repository

Releases 101



2.4 Exploring Popular Repos



The screenshot shows a GitHub repository page for 'React_Complete_YouTube'. The repository is public and has 1 branch and 0 tags. The main branch contains 47 commits. The commits are listed as follows:

- Merge pull request #9 from harshendram/patch-1 (185a861 · 2 weeks ago)
- 17 Bootstrap/learning-bootstrap (bootstrap and todo · last year)
- 18-22 Topics/learning-fragment (concept 26, 27 · last year)
- 2 first-react-app (update · last year)
- 28-34 forms and useRef (update · last year)
- 3 create-react-comp/create-first-comp (update · last year)
- 35-36 Context API and useReducer (update · last year)
- 37-40 advance-react (update · last year)
- 46-51 react-router (cant pass object directly (post.reactions = object) · 3 months ago)
- 52 Redux (update · last year)
- Projects (Update TodoItems.jsx · 3 weeks ago)
- .gitignore (Update .gitignore · last year)

The repository has 216 forks and 116 stars. There are sections for About, Releases, and Packages.



2.5 GitHub README files



README · Code of conduct · MIT license · Security

React • license MIT npm v18.3.1 (Runtime) Build and Test passing (Compiler) TypeScript passing PRs welcome

React is a JavaScript library for building user interfaces.

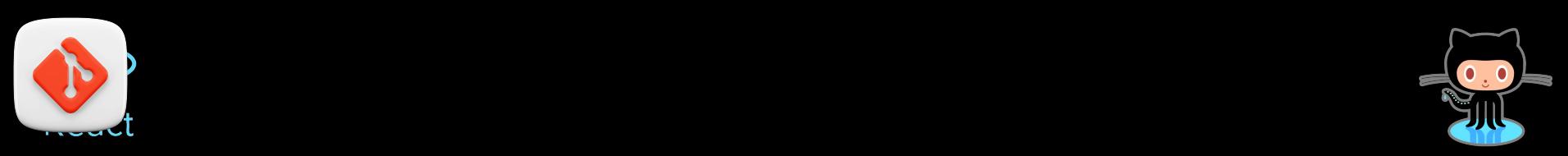
- **Declarative:** React makes it painless to create interactive UIs. Design simple views for each state in your application, and React will efficiently update and render just the right components when your data changes. Declarative views make your code more predictable, simpler to understand, and easier to debug.
- **Component-Based:** Build encapsulated components that manage their own state, then compose them to make complex UIs. Since component logic is written in JavaScript instead of templates, you can easily pass rich data through your app and keep the state out of the DOM.
- **Learn Once, Write Anywhere:** We don't make assumptions about the rest of your technology stack, so you can develop new features in React without rewriting existing code. React can also render on the server using [Node](#) and power mobile apps using [React Native](#).

[Learn how to use React in your project.](#)

Installation

React has been designed for gradual adoption from the start, and **you can use as little or as much React as you need:**

- Use [Quick Start](#) to get a taste of React.
- Add React to an Existing Project to use as little or as much React as you need.
- Create a New React App if you're looking for a powerful JavaScript toolchain.





3. Getting Started with Git



1. Installing Git
2. Configuring Git (user name, email)
3. Git help and documentation
4. What is a Repository
5. What is a Commit



3.1 Installing Git



git --local-branching-on-the-cheap

Type / to search entire site...

About

Documentation

Downloads

GUI Clients
Logos

Community

The entire [Pro Git book](#) written by Scott Chacon and Ben Straub is available to [read online for free](#). Dead tree versions are available on [Amazon.com](#).

Downloads

macOS Windows Linux/Unix

Older releases are available and the Git source repository is on GitHub.

GUI Clients

Git comes with built-in GUI tools (`git-gui`, `gitk`), but there are several third-party tools for users looking for a platform-specific experience.

[View GUI Clients →](#)

Logos

Various Git logos in PNG (bitmap) and EPS (vector) formats are available for use in online and print projects.

[View Logos →](#)

Git via Git

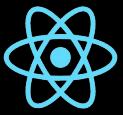
If you already have Git installed, you can get the latest development version via Git itself:

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

You can also always browse the current contents of the git repository using the [web interface](#).

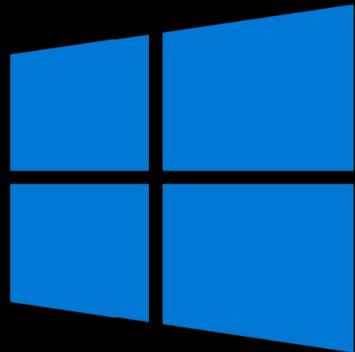
</> About this site
Patches, suggestions, and comments are welcome.

Git is a member of Software Freedom Conservancy



React

3.1 Windows Setup



Windows



React

3.1 Windows Setup

Download for Windows

[Click here to download](#) the latest **(2.46.0)** **32-bit** version of **Git for Windows**. This is the most recent [maintained build](#). It was released **about 1 month ago**, on 2024-07-29.

Other Git for Windows downloads

Standalone Installer

[32-bit Git for Windows Setup](#).

[64-bit Git for Windows Setup](#).

Portable ("thumbdrive edition")

[32-bit Git for Windows Portable](#).

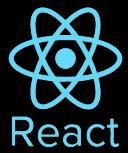
[64-bit Git for Windows Portable](#).

Using winget tool

Install [winget tool](#) if you don't already have it, then type this command in command prompt or Powershell.

```
winget install --id Git.Git -e --source winget
```

The current source code release is version **2.46.0**. If you want the newer version, you can build it from [the source code](#).



3.1 MAC Setup



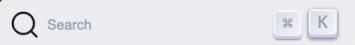


3.1 MAC Setup



Homebrew

The Missing Package Manager for macOS (or Linux)



English ▾

Install Homebrew

```
$ /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
```

Paste that in a macOS Terminal or Linux shell prompt.

The script explains what it will do and then pauses before it does it. Read about other [installation options](#).



React

3.1 MAC Setup

Download for macOS

There are several options for installing Git on macOS. Note that any non-source distributions are provided by third parties, and may not be up to date with the latest source release.

Choose one of the following options for installing Git on macOS:

Homebrew

Install [homebrew](#) if you don't already have it, then:

```
$ brew install git
```

MacPorts

Install [MacPorts](#) if you don't already have it, then:

```
$ sudo port install git
```



3.2 Configuring Git (user name)



Setting your Git username for every repository on your computer



- 1 Open Terminal.
- 2 Set a Git username:

```
git config --global user.name "Mona Lisa"
```

- 3 Confirm that you have set the Git username correctly:

```
$ git config --global user.name  
> Mona Lisa
```



3.2 Configuring Git (email)



Setting your email address for every repository on your computer

- 1 Open Terminal.
- 2 Set an email address in Git. You can use your [GitHub-provided noreply email address](#) or any email address.

```
git config --global user.email "YOUR_EMAIL"
```

- 3 Confirm that you have set the email address correctly in Git:

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

- 4 Add the email address to your account on GitHub, so that your commits are attributed to you and appear in your contributions graph. For more information, see "[Adding an email address to your GitHub account](#)."



3.3 Git help and documentation



git --fast-version-control

Type / to search entire site...

About

Documentation

- [Reference](#)
- [Book](#)
- [Videos](#)
- [External Links](#)

Downloads

Community

Reference

Quick reference guides: [GitHub Cheat Sheet](#) | [Visual Git Cheat Sheet](#)

[Complete list of all commands](#)

Setup and Config	Guides
git	gitattributes
config	Command-line interface conventions
help	Everyday Git
bugreport	Frequently Asked Questions (FAQ)
Credential helpers	Glossary
Getting and Creating Projects	Hooks
init	gitignore
clone	gitmodules
Basic Snapshotting	Revisions
add	Submodules
status	Tutorial
diff	Workflows
	All guides...



3.3 Git help and documentation



git --distributed-even-if-your-workflow-isnt

Type / to search entire site...

About

Documentation

- Reference
- Book**
- Videos
- External Links

Downloads

Community

This book is available in [English](#).

Full translation available in

azərbaycan dili,
български език,
Deutsch,
Español,
Français,
Ελληνικά,
日本語,
한국어,

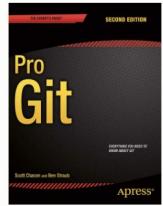
Book

The entire Pro Git book, written by Scott Chacon and Ben Straub and published by Apress, is available here. All content is licensed under the [Creative Commons Attribution Non Commercial Share Alike 3.0 license](#). Print versions of the book are available on [Amazon.com](#).

The version found here has been updated with corrections and additions from [hundreds of contributors](#). If you see an error or have a suggestion, patches and issues are welcome in its [GitHub repository](#).

1. Getting Started

- 1.1 About Version Control
- 1.2 A Short History of Git
- 1.3 What is Git?
- 1.4 The Command Line
- 1.5 Installing Git
- 1.6 First-Time Git Setup
- 1.7 Getting Help
- 1.8 Summary



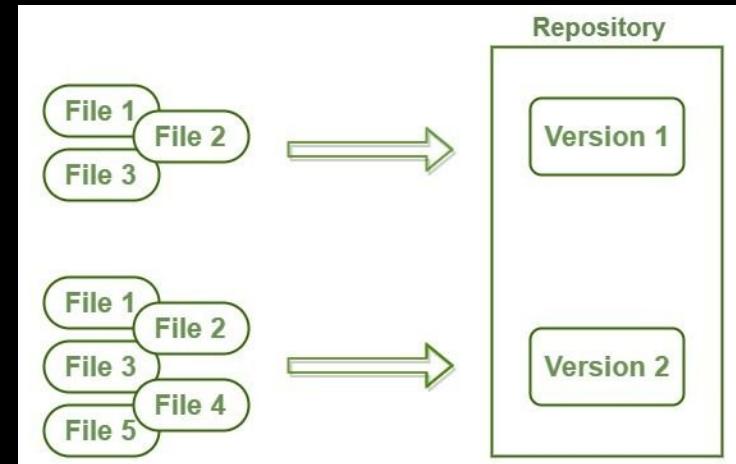
2nd Edition (2014)

Download Ebook

pdf epub

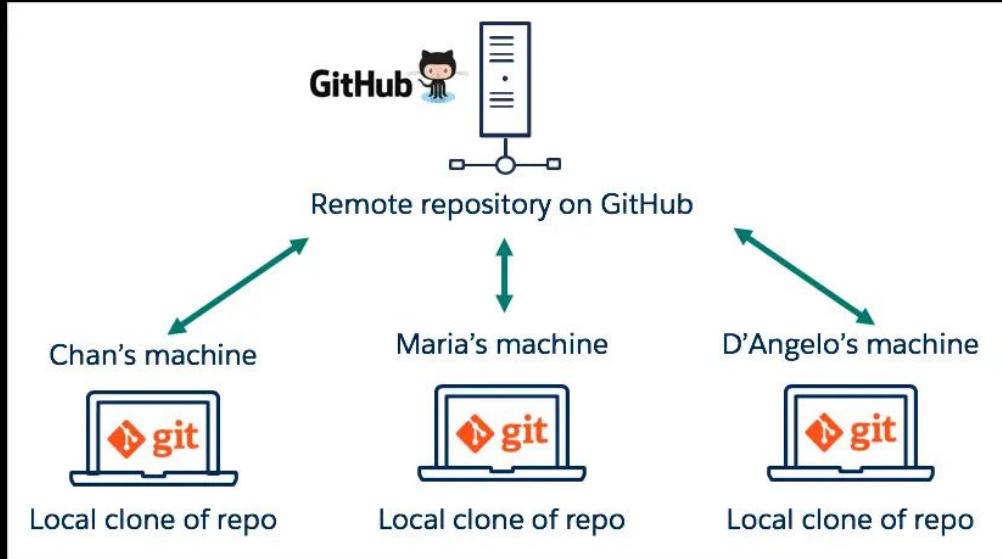


3.4 What is a Repository





3.4 What is a Repository



- A repository (repo) is a storage space for all project files and history.
- It tracks changes over time, enabling collaboration and version control.
- Repos can be local (on your machine) or remote (like GitHub).
- Contains subdirectories like the `.git` folder for managing versions.
- Git commands operate within a repository.



3.5 What is a Commit

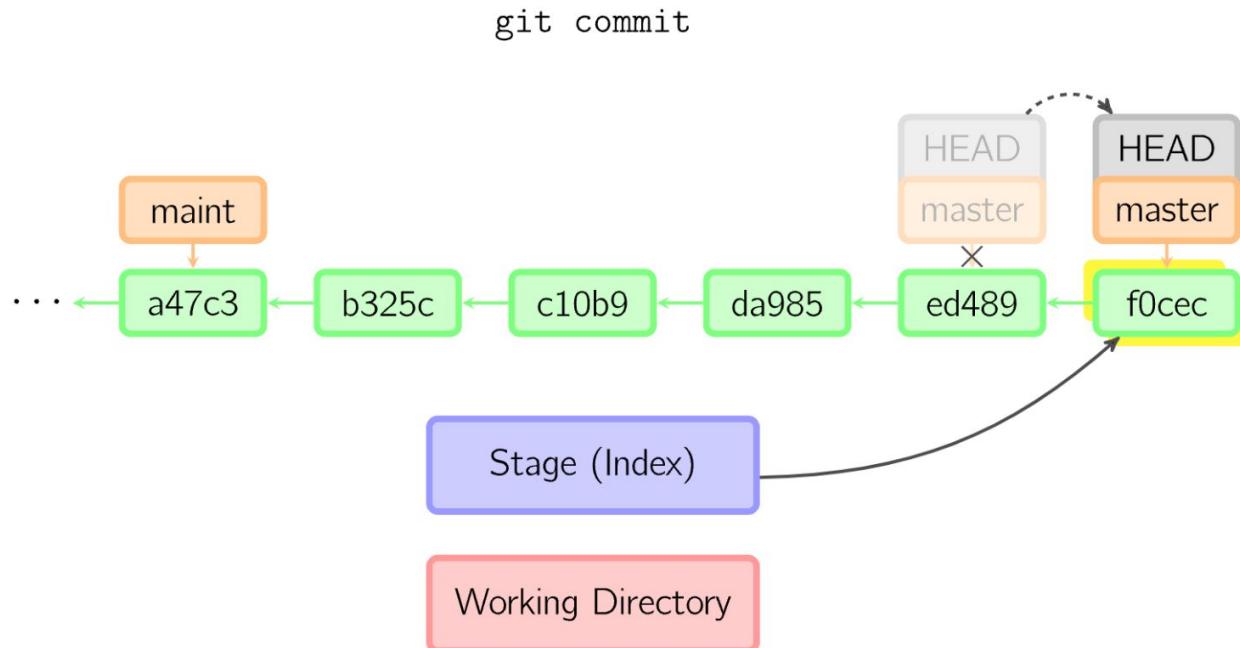


- Snapshots of your project at a specific point in time
- Each commit has a unique identifier (SHA-1 hash)
- Contain metadata such as author, date, and commit message
- Form a chain, with each commit pointing to its parent(s)
- Allow you to revert to previous states of your project

ae668..	
commit	size
tree	c4ec5
parent	a149e
author	Scott
committer	Scott
my commit message goes here and it is really, really cool	



3.5 What is a Commit





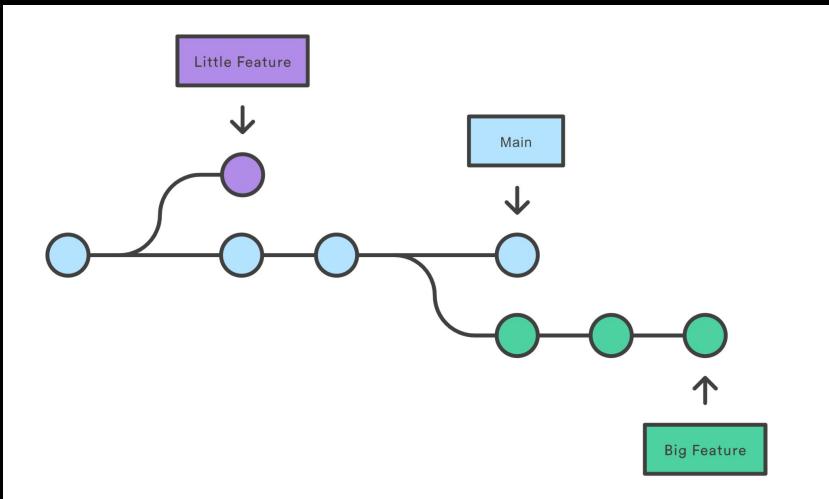
6. Branching and Merging

1. What are Branches
2. Branches on Github
3. git branch
4. git checkout & git switch
5. git fetch
6. git merge
7. Branch Tracking
8. Resolving conflicts
9. Pull requests and Merging on Github
10. Reviewing Code on Github





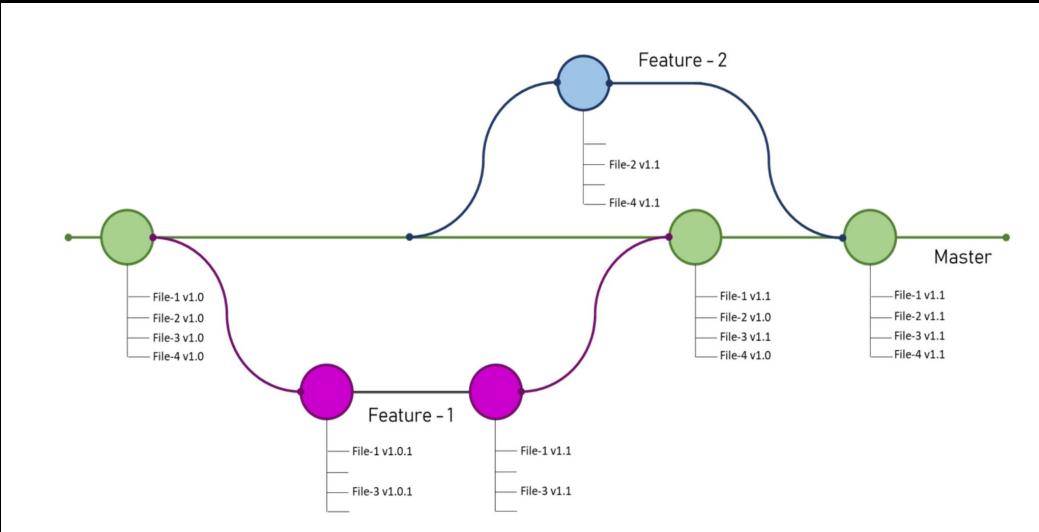
6.1 What are Branches ?



- Git branches are pointers to snapshots of your changes.
- New branches isolate work when adding features or fixing bugs.
- Branching prevents unstable code from affecting the main codebase.
- It allows you to clean up the commit history before merging.
- Each branch represents an independent line of development and records new commits separately.



6.1 What are Branches ?



- **Isolated Development:** Git branches allow working on features independently without affecting the main codebase.
- **Parallel Workflows:** Multiple branches enable team members to collaborate without conflicts.
- **Version Control:** Each branch tracks a separate set of changes.
- **Easy Integration:** Completed branches can be merged back into the main project.



6.2 Branches on GitHub

facebook / react

Type ⌘ to search

Code Issues Pull requests Actions Projects Wiki Security Insights

Branches

Overview Active Stale All

Search branches...

Branch	Updated	Check status	Behind	Ahead	Pull request
gh/mvitousek/23/orig	8 hours ago	✓ 2/2	5	2	...
gh/mvitousek/27/orig	8 hours ago		5	1	...
gh/mvitousek/28/orig	8 hours ago	✓ 2/2	5	3	...
gh/mvitousek/23/head	8 hours ago	✓ 19 / 19	5	4	#30902
gh/mvitousek/23/base	8 hours ago	✓ 2/2	5	1	...
gh/mvitousek/28/base	8 hours ago	✓ 19 / 19	5	4	...
gh/mvitousek/28/head	8 hours ago	✓ 19 / 19	5	5	#30913
gh/mvitousek/27/base	8 hours ago	✓ 189 / 191	5	0	...
gh/mvitousek/27/head	8 hours ago	✓ 19 / 19	5	1	#30912



6.3 git branch



```
git branch
```

List all of the branches in your repository. This is synonymous with `git branch --list`.

```
git branch <branch>
```

Create a new branch called `<branch>`. This does *not* check out the new branch.

```
git branch -d <branch>
```

Delete the specified branch. This is a “safe” operation in that Git prevents you from deleting the branch if it has unmerged changes.

```
git branch -D <branch>
```

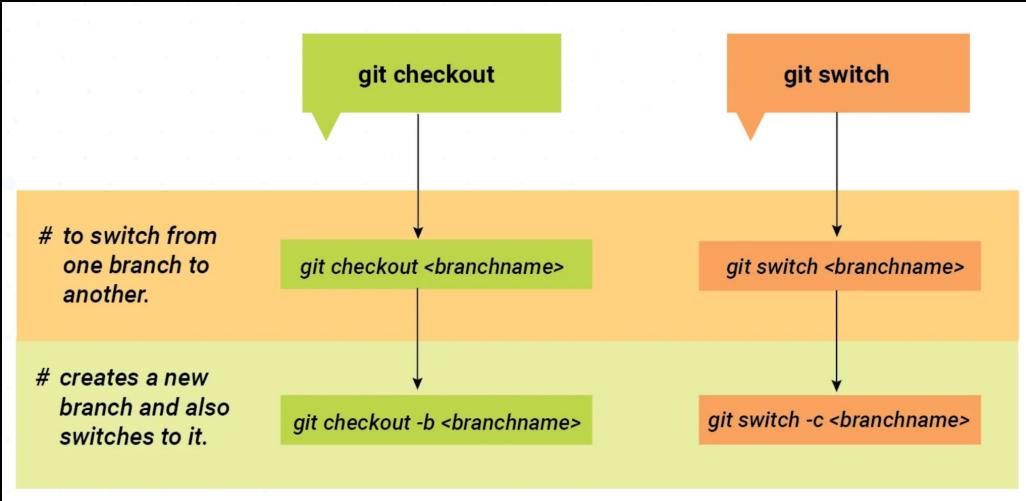
Force delete the specified branch, even if it has unmerged changes. This is the command to use if you want to permanently throw away all of the commits associated with a particular line of development.

```
git branch -m <branch>
```

- Lists all branches in the repository.
- Can create, delete, or rename branches.
- It's important to understand that branches are just pointers to commits. When you create a branch, all Git needs to do is create a new pointer, it doesn't change the repository in any other way.



6.4 git checkout & git switch



git checkout

- Switches between branches or restores files.
- Can also create and switch to a new branch.

git switch

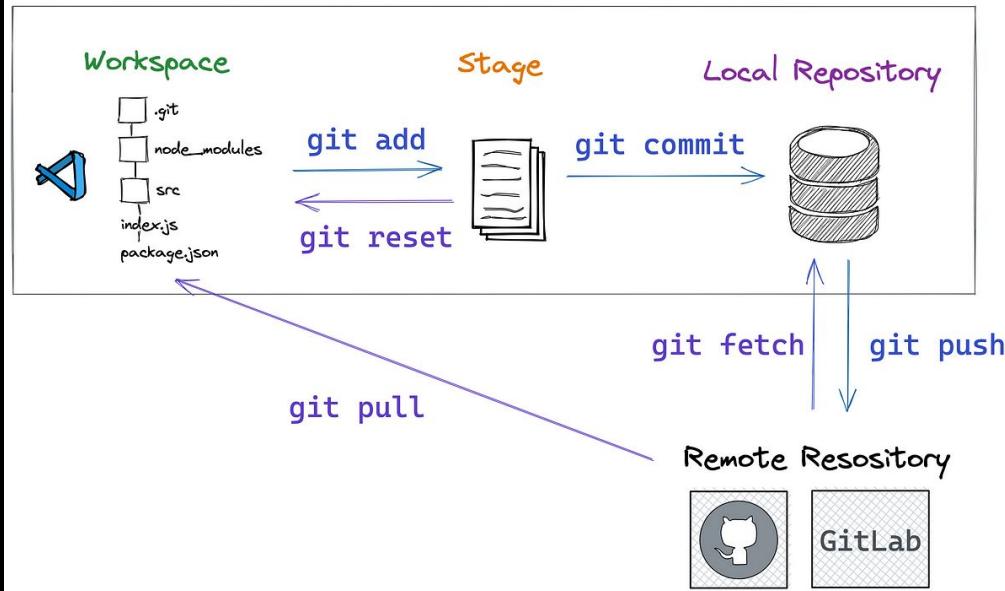
- A simpler command to switch between branches.
- Similar to `git checkout` but only for switching branches.



6.5 git fetch



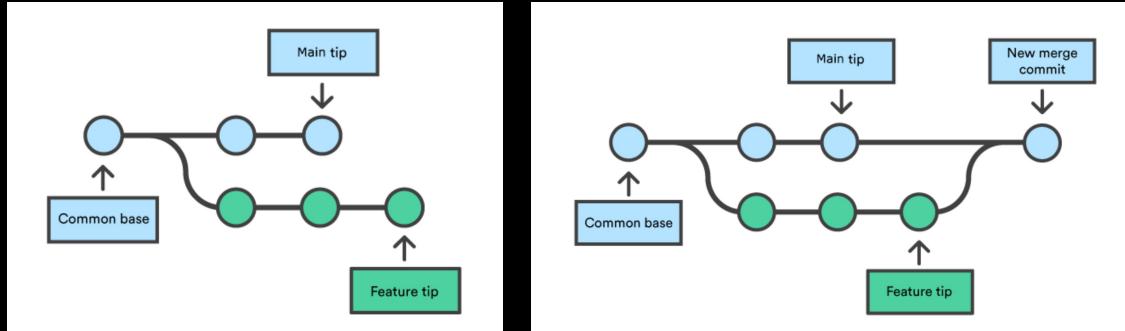
Local



- Downloads changes from a remote repository without merging them.
- Updates local tracking branches.



6.6 git merge



```
# Merge in the new-feature branch
git checkout main
git merge new-feature
git branch -d new-feature
```

- Combines changes from one branch into the current branch.
- Merges commit histories and resolves conflicts if needed.
- Git merge will combine multiple sequences of commits into one unified history.



React

6.7 Branch Tracking



1. View Tracking Information:

```
git branch -vv
```

2. Tracking a Remote Branch:

- You can set a local branch to track a remote branch, meaning it will automatically fetch updates from the remote branch.
- Command:

```
git branch -u origin/branch_name
```

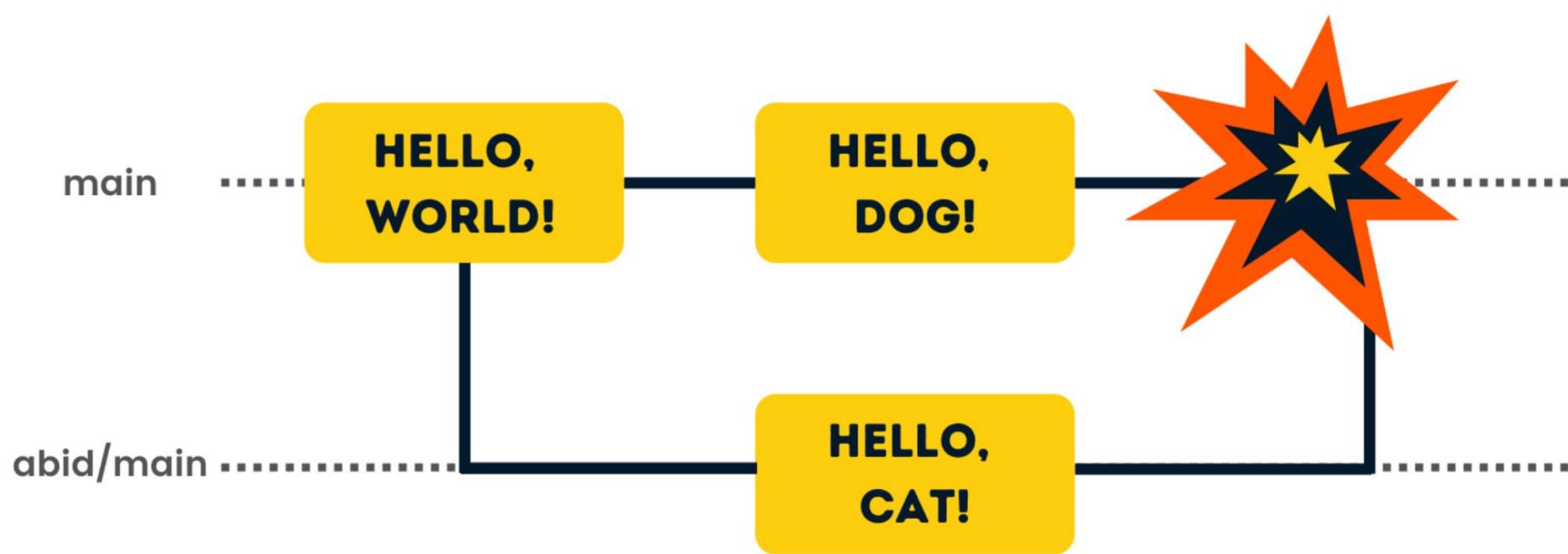
3. Set Upstream During Checkout:

- When creating a new branch and you want it to track the remote branch immediately, use:

```
git checkout -b branch_name --track origin/branch_name
```



6.8 Resolving conflicts





6.8 Resolving conflicts



Current Repository: foo Current Branch: master Pull origin: Last fetched just now

Changes (3) History src/Foobar.java

3 changed files

bin/.gitignore

bin/Foobar.class

src/Foobar.java

Merge branch 'master' of https://

Description

Commit to master

Committed 3 minutes ago idk

Undo

```
@@ -9,7 +9,13 @@ public class Foobar
    boolean myBoolean;
    char myChar;
    Scanner input = new Scanner(System.in);
+<<<<< HEAD
    System.out.println(10.1 % 2);
=====
+
+    System.out.println( 5.1 % 2 );
+
+>>>>> 8a55f481e4ccdc195a8956281d6fbc4595186648
    System.out.print("Gimme an int: ");
    myInt = input.nextInt();
    System.out.print("Gimme a double: ");
@@ -19,7 +25,9 @@ public class Foobar
    System.out.print("Gimme a char: ");
    myChar = input.next().charAt(0);
+
-    System.out.println();
+    System.out.println( );
+
+
    System.out.printf("%20s","Your int was...");
    System.out.printf("%10d",myInt);
    System.out.println();
@@ -31,17 +39,17 @@ public class Foobar
    System.out.println();
    System.out.printf("%20s","Your boolean was...");
```



6.9 Pull Requests and Merging on Github



facebook / react

Type ⌘ to search

Code Issues Pull requests Actions Projects Wiki Security Insights

Filters is:pr is:open Labels 71 Milestones 1 New pull request

Author	Label	Projects	Milestones	Reviews	Assignee	Sort
172 Open ✓ 15,806 Closed						
[compiler][playground] Fix displayed naming of outlined functions	CLA Signed					
#30907 opened 1 minute ago by mvitousek						
[DevTools] Add Flight Renderer	CLA Signed React Core Team					
#30906 opened 11 hours ago by sebmarkbage						
[DevTools] Add Map for Server Component Logs	CLA Signed React Core Team					
#30905 opened 13 hours ago by sebmarkbage						
[compiler] Allow ref access in useImperativeHandle	CLA Signed					
#30904 opened 14 hours ago by mvitousek						
[compiler] Improve handling of refs	CLA Signed					
#30902 opened 16 hours ago by mvitousek						
[compiler][wip] Inline single return JSX for known function components	CLA Signed React Core Team					
#30901 opened 18 hours ago by josephsavona · Draft						
[DevTools] Delete fiberToFiberInstanceMap	CLA Signed React Core Team					
#30900 opened 19 hours ago by sebmarkbage						
[DevTools] Refactor Error / Warning Count Tracking	CLA Signed React Core Team					
#30899 opened 19 hours ago by sebmarkbage						



6.10 Reviewing Code on Github



[compiler][rewrite] PropagateScopeDeps hir rewrite #30894
mofeiZ wants to merge 7 commits into [gh/mofeiZ/18/base](#) from [gh/mofeiZ/18/head](#) [View changes](#)

[Open](#)

[View deployment](#)

[View reviewed changes](#)

compiler/packages/babel-plugin-react-compiler/src/HIR/CollectHoistablePropertyLoads.ts

Comment on lines [+337](#) to [+340](#)

```
337 +     const isMutableAtInstr =
338 +         object.mutableRange.end > object.mutableRange.start + 1 &&
339 +         object.scope != null &&
340 +         inRange(instr, object.scope.range);
```

mofeiZ 2 days ago [Contributor](#) [Author](#) [...](#)

This is a little awkward, and also an example of being able to make use of more granular mutable range (instead of scope-range info)

Note that mutableRanges are no longer valid at this point, but we're only comparing relative start/ends (end === start + 1 indicates nonmutable value)

[Reply...](#)



6. Advance Git Operations



1. git reflog
2. git blame
3. git stash
4. git revert
5. git reset
6. git commit --amend
7. git cherry-pick
8. git rebase
9. Git rebase interactive
10. Keeping a clean history



6.1 git reflog



```
0fe6c79 (HEAD -> main, origin/main, origin/HEAD) HEAD@{0}: commit (merge): Me
rge branch 'ridoy-branch'
20f1680 HEAD@{1}: checkout: moving from ridoy-branch to main
396a6f7 HEAD@{2}: checkout: moving from main to ridoy-branch
396a6f7 HEAD@{2}: checkout: moving from main to ridoy-branch
20f1680 HEAD@{3}: commit: new commit in main
12f5ace HEAD@{4}: checkout: moving from ridoy-branch to main
396a6f7 HEAD@{5}: commit: Commit in ridoy
12f5ace HEAD@{6}: checkout: moving from main to ridoy-branch
12f5ace HEAD@{7}: checkout: moving from ridoy-branch to main
12f5ace HEAD@{8}: checkout: moving from main to ridoy-branch
12f5ace HEAD@{9}: checkout: moving from test-branch to main
c0a9d15 (origin/test-branch, origin/rahul-branch, test-branch, rahul-branch) HEAD@{10}: checkout: moving f
rom main to test-branch
12f5ace HEAD@{11}: checkout: moving from rahul-branch to main
```

- Purpose: Shows the history of where HEAD has pointed.
- Usage: Ideal for undoing resets or finding lost commits.



6.2 git blame



```
prashantjain@Prashants-Mac-mini MERN_Live % git blame README.md
^a8f3e4d (Prashant Jain 2024-06-19 08:48:47 +0530 1) # MERN_Live
^a8f3e4d (Prashant Jain 2024-06-19 08:48:47 +0530 2) This Repo will have all
the code that will be practised as part of the course.
12f5ace1 (Prashant Jain 2024-09-10 20:56:48 +0530 3)
12f5ace1 (Prashant Jain 2024-09-10 20:56:48 +0530 4)
12f5ace1 (Prashant Jain 2024-09-10 20:56:48 +0530 5) testing
prashantjain@Prashants-Mac-mini MERN_Live % █
```

- **Purpose:** Shows who last modified each line in a file, along with the commit details.
- **Usage:** Useful for identifying responsibility for code changes.



6.3 git stash



git stash

- To Stash the current changes

```
git stash
```

- To apply the last stash

```
git stash apply
```

- To apply and remove the last stash

```
git stash pop
```

- To list all the stash saved

```
git stash list
```

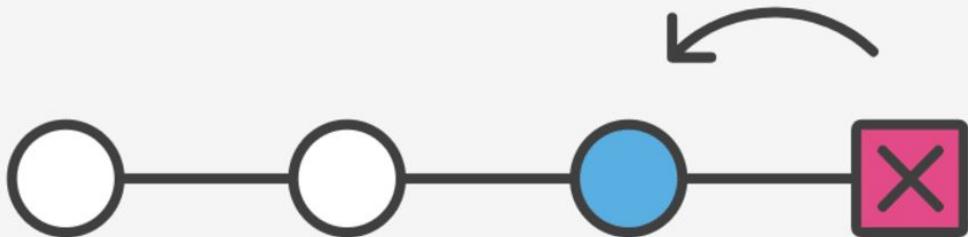
- To delete the stash saved

```
git stash drop
```

- Purpose: Temporarily saves your changes (working directory and index) and returns your workspace to a clean state.
- Useful when switching branches.
- Ideal for saving incomplete work without committing it.



6.4 git revert



Reverts a commit by creating a new commit that undoes the changes introduced by a specific commit, without altering the commit history.

bash

Copy code

```
git revert <commit-hash>
```

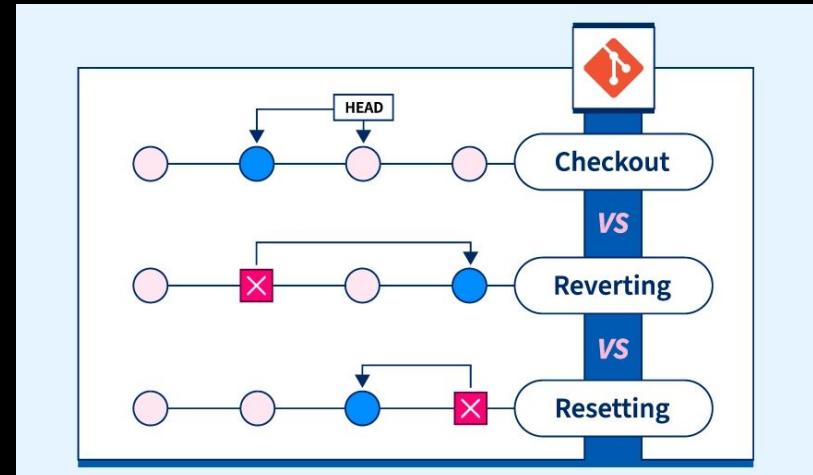


6.5 git reset



```
bash                                     Copy code
git reset --hard <commit-hash>

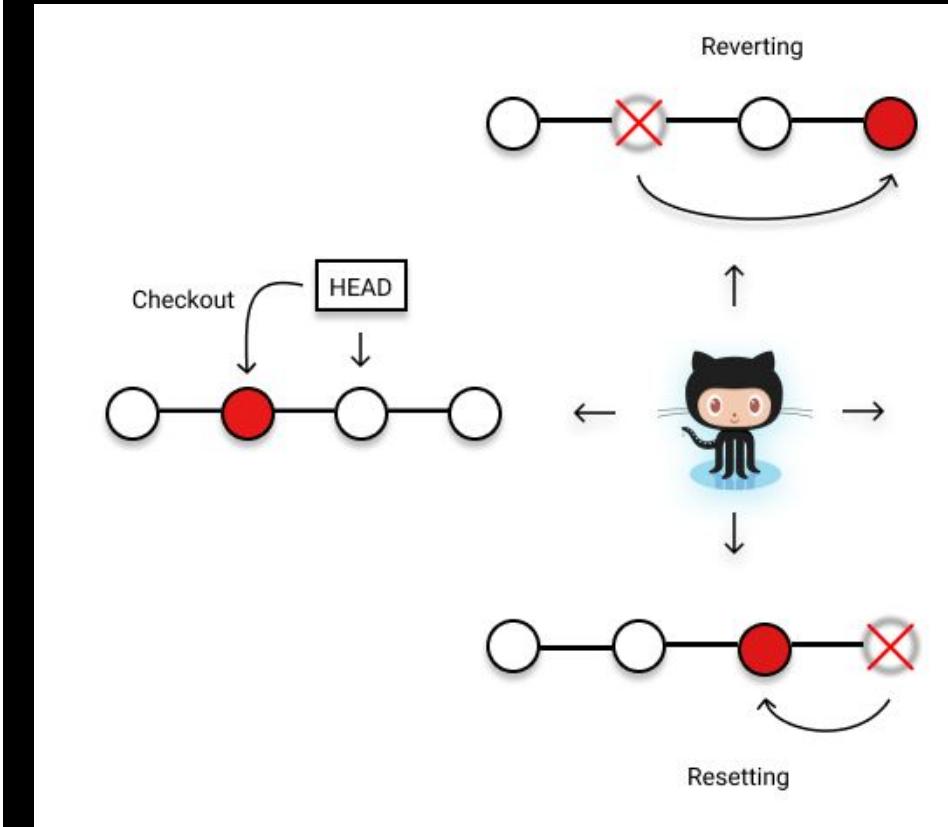
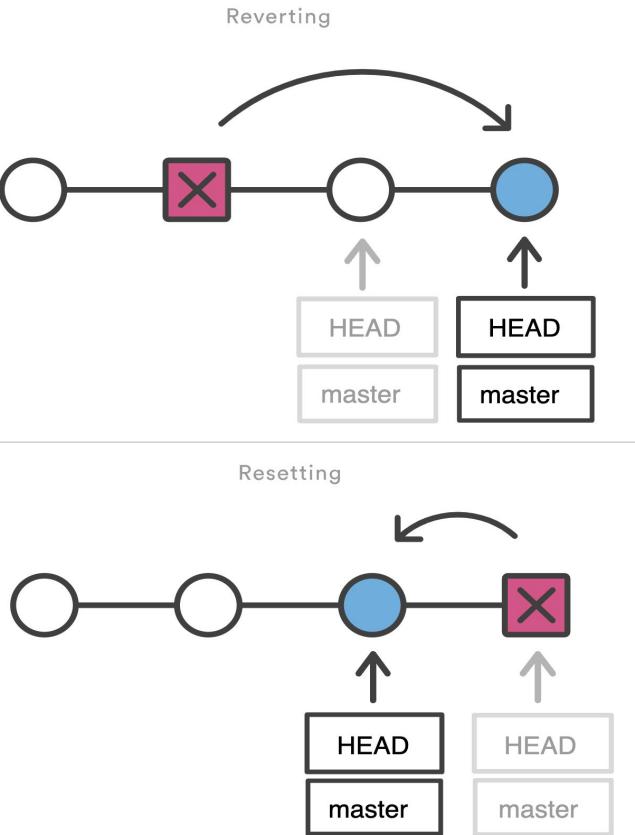
bash                                     Copy code
git reset --soft <commit-hash>
```



- **Purpose:** Moves the current branch `HEAD` to a specific commit.
- **Mode supported** (`--soft`, `--mixed`, `--hard`).
- **Usage:** Used to undo changes in commits, index, or working directory.



6.5 git reset vs revert





6.6 git commit --amend



bash

Copy code

```
git commit --amend -m "New message"
```

- While `git commit --amend` does **change history**, it only changes the most recent commit on your current branch.
- **Modify the Last Commit:** Edit the last commit's message or content.
- **Fix Mistakes:** Useful for **correcting typos or adding forgotten changes**.
- **Replaces the Commit:** Does not create a new commit, just **replaces** the previous one.
- **Avoid with Pushed Commits:** Should only be used for local commits to avoid history conflicts.



6.7 git cherry-pick



```
bash                                     Copy code
git cherry-pick <commit-hash>
```

Cherry-pick multiple commits:

```
bash                                     Copy code
git cherry-pick <commit-hash1> <commit-hash2>
```



- **Purpose:** Applies changes from specific commits in one branch to another branch.
- **Useful** when you want to move specific features without merging everything.
- **Usage:** Great for bringing in specific features from another branch.



6.8 git rebase



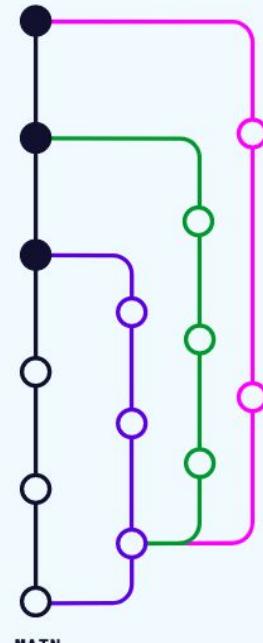
bash

Copy code

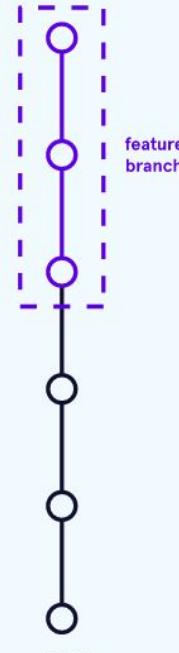
```
git rebase <branch-name>
```

- Purpose: Reapplies commits on top of another base commit.
- Can be used to clean up commit history and incorporate changes from one branch into another.

Git Merge



Git Rebase





6.9 git rebase -i



Interactive rebase for editing commits:

bash

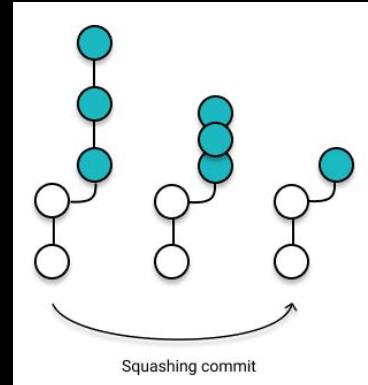
Copy code

```
git rebase -i <base-commit>
```

- **Rearrange or Edit Commits:** Allows you to modify, reorder, squash, or remove commits in a branch to clean up the commit history.
- **Useful for History Cleanup:** Ideal for refining commits before sharing or pushing, creating a cleaner and more understandable commit history.
- **This changes history: Do not do this after pushing.**

```
pick 2231360 some old commit
pick ee2adc2 Adds new feature

# Rebase 2cf755d..ee2adc2 onto 2cf755d (9 commands)
#
# Commands:
# p, pick = use commit
# r, reword = use commit, but edit the commit message
# e, edit = use commit, but stop for amending
# s, squash = use commit, but meld into previous commit
# f, fixup = like "squash", but discard this commit's log message
# x, exec = run command (the rest of the line) using shell
# d, drop = remove commit
```

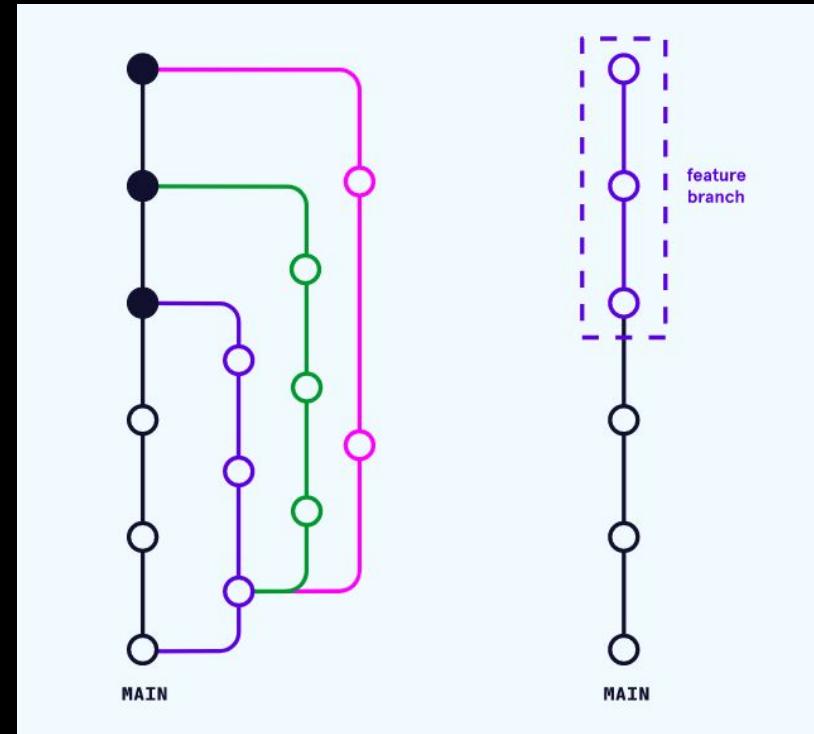




6.10 Keeping a *clean* history



- Avoid messy, redundant commits; use tools like `git rebase` to **clean up history**.
- Squash multiple small or meaningless commits into one meaningful commit.
- Use descriptive commit messages to keep the **history readable** and easy to follow.
- Regularly review and tidy up **branches before merging** into the main branch.





4. Working with GitHub UI



1. Creating or Uploading files on GitHub
2. Editing Files
3. Committing changes
4. Viewing commit history
5. Forking of Other Repos
6. Working with Github Desktop
7. Git inside VSCode



4.1 Creating or Uploading files on GitHub



omprashantjain / **git-test**

Type to search

Code Issues Pull requests Actions Projects Security Insights Settings

git-test Private Unwatch 1

main 1 Branch 0 Tags Go to file Add file Code Create new file Upload files 39c384 2 minutes ago

README.md Initial commit

README Initial commit

git-test



4.2 Editing Files



omprashantjain / git-test

Code Issues Pull requests Actions Projects Security Insights Settings

git-test / README.md in main

Cancel changes Commit changes...

Edit Preview Spaces 2 Soft wrap

```
1 # git-test
2
3 We are just trying to edit this.|
```

Use **Control + Shift + m** to toggle the **tab** key moving focus. Alternatively, use **esc** then **tab** to move to the next interactive element on the page.

Attach files by dragging & dropping, selecting or pasting them.



4.3 Committing changes



omprashantjain / git-test

Code Issues Pull requests

git-test / README.md

Edit Preview

```
1 # git-test
2
3 We will commit this now
```

Commit changes

Commit message

Update README.md

Extended description

Add an optional extended description..

Commit Email

prashant@knowledgegate.in

Commit directly to the main branch

Create a new branch for this commit and start a pull request
[Learn more about pull requests](#)

Cancel Commit changes

Use **Control + Shift + m** to toggle the tab key

Attach files by dragging & dropping, selecting or pasting them.

element on the page.



4.4 Viewing commit history



KG-Coding-with-Prashant-Sir / MERN_Live

Type ⌘ to search

Code Issues Pull requests Actions Projects Wiki Security 6 Insights Settings

Commits

main All users All time

- o- Commits on Sep 6, 2024
 - Class #46**
omprashantjain committed yesterday
4879d0e
- o- Commits on Sep 5, 2024
 - Live Class 45**
omprashantjain committed 2 days ago
497caa4
- o- Commits on Sep 4, 2024
 - Live Class #44**
omprashantjain committed 3 days ago
c9f75d0
- o- Commits on Sep 3, 2024
 - Live Class 43**
omprashantjain committed 4 days ago
ac15a0e
- o- Commits on Aug 31, 2024



4.5 Forking of Other Repos





4.6 Working with Github Desktop



?

GitHub
Desktop

Download

Release Notes

Help

Download GitHub Desktop

Focus on what matters instead of fighting with Git. Whether you're new to Git or a seasoned user, GitHub Desktop simplifies your development workflow.

[Download for macOS](#)

Try beta features and help improve future releases

Experience the latest features and bug fixes before they're released.

[Check out Beta](#)

Do you use an Apple silicon Mac?

See the [Apple docs](#) about Apple vs Intel chips.

[Download for Apple silicon Mac](#)

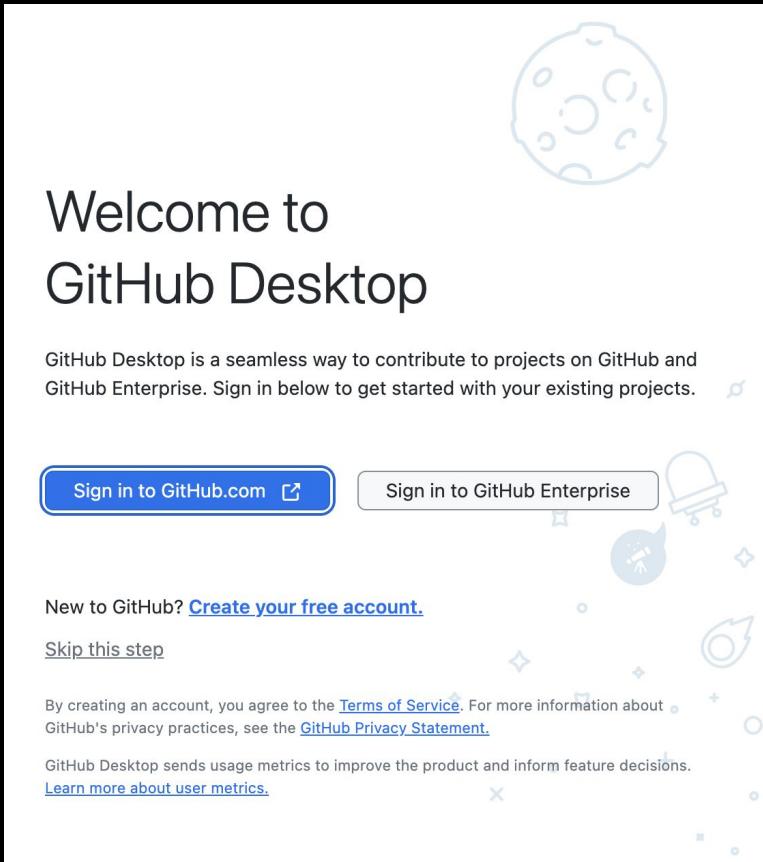
Looking for Windows?

Need to download the install for Windows?

[Download for Windows](#)



4.6 Working with Github Desktop



Welcome to GitHub Desktop

GitHub Desktop is a seamless way to contribute to projects on GitHub and GitHub Enterprise. Sign in below to get started with your existing projects.

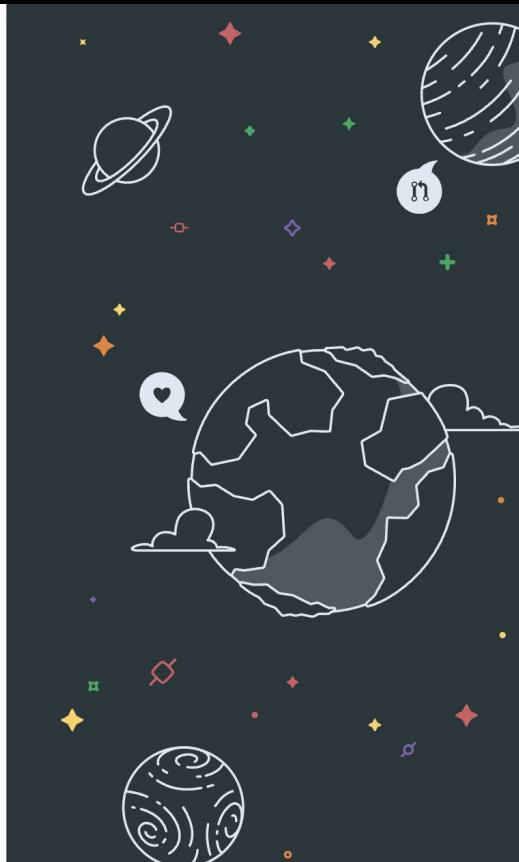
[Sign in to GitHub.com](#)  [Sign in to GitHub Enterprise](#)

New to GitHub? [Create your free account](#).

[Skip this step](#)

By creating an account, you agree to the [Terms of Service](#). For more information about GitHub's privacy practices, see the [GitHub Privacy Statement](#).

GitHub Desktop sends usage metrics to improve the product and inform feature decisions.
[Learn more about user metrics](#).





4.6 Working with Github Desktop



Let's get started!

Add a repository to GitHub Desktop to start collaborating

mern

Your Repositories

- omprashantjain/machine_learning
- KG-Coding-with-Prashant-Sir
- KG-Coding-with-Prashant-Sir/MERN_Live**
- KnowledgeGateCoding
- KnowledgeGateCoding/SingleShot_UniversityExamSeries_Notes

Clone KG-Coding-with-Prashant-Sir/MERN_Live

Create a Tutorial Repository...

Clone a Repository from the Internet...

Create a New Repository on your Local Drive...

Add an Existing Repository from your Local Drive...

ProTip! You can drag & drop an existing repository folder here to add it to Desktop



4.6 Working with Github Desktop



Current Repository MERN_Live Current Branch main Fetch origin Last fetched just now

Check out the new [accessibility settings](#) to control the visibility of the link underlines and diff check marks.

Changes 4 History 3 React/3-vite-project/package.json

4 changed files

3 React/3-vite-pr.../package.json

3 React/3-vite-pr.../README.md

3 React/5-using-bo.../index.html

4 Tailwind/1 First/index.html

@@ -4,7 +4,7 @@

	4	4	
	4	5	"version": "1.0.0",
	5	6	"type": "module",
	6	7	"scripts": {
✓ ✓	7	-	"dev": "vite",
✓	7	+	"dev": "vite",
	8	8	"build": "vite build",
	9	9	"lint": "eslint .",
	10	10	"preview": "vite preview"

Summary (required)

Description

+ Commit to main



4.7 Git inside VSCode



SOURCE CONTROL

Message (Enter to commit on "main")

✓ Commit

Changes

- { package.json 3 React/3-vite-project M
- { README.md 3 React/3-vite-project M
- ▷ index.html 3 React/5-using-bootstrap M
- ▷ index.html 4 Tailwind/1 First M

SOURCE CONTROL GRAPH

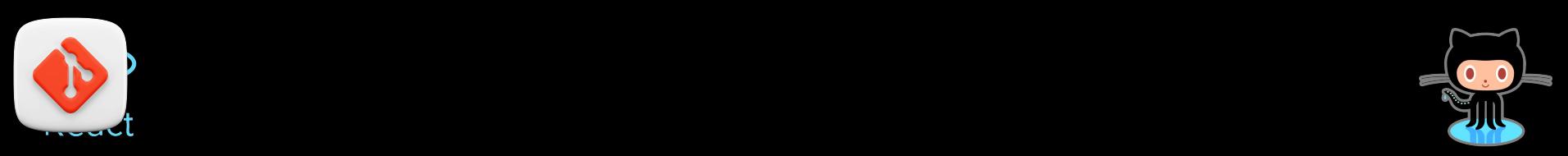
- Class #46 Prashant Jain
- Live Class 45 Prashant Jain
- Live Class #44 Prashant Jain
- Live Class 43 Prashant Jain
- class 42 Prashant Jain
- Class 41 Prashant Jain
- Class 40 Prashant Jain
- class 39 Prashant Jain
- update Prashant Jain
- Live Class 37 Prashant Jain

index.html .../1 First M X package.json M README.md M

4 Tailwind > 1 First > index.html > html > head

```
1 <!doctype html>
2 <html>
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-
6   <script src="https://cdn.tailwindcss.com"></script>
7 </head><h1 font-bold underline">
8   Hello world!
9 </h1>
10 </body>
11 </html>
```

Ln 3, Col 7 Spaces: 2 UTF-8 LF HTML





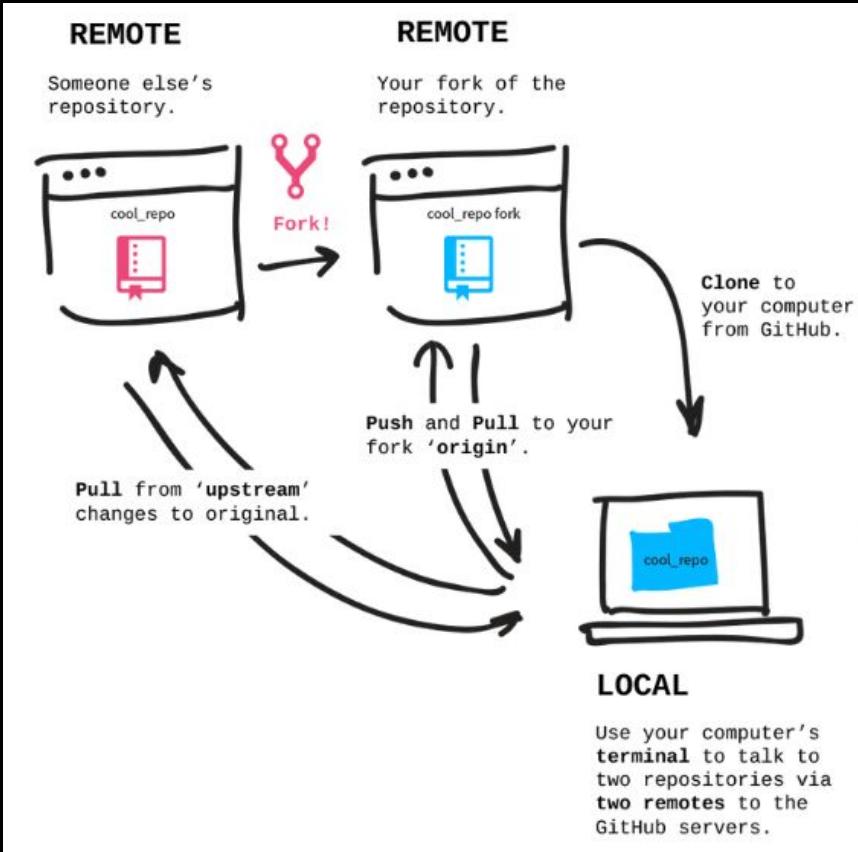
5. Essential Git Commands



1. `git clone`
2. What is Working Directory
3. `git status`
4. What is Staging Area
5. `git diff`
6. `git add & git checkout`
7. `git commit & git reset`
8. `git log`
9. `git push & git pull`



5.1 git clone



- Creates a local copy of a remote repository.
- Downloads all files, branches, and commit history.



5.1 git clone



Local Codespaces

Clone ?

HTTPS SSH GitHub CLI

<https://github.com/KG-Coding-with-Prashant->

Clone using the web URL.

Open with GitHub Desktop

Download ZIP

A screenshot of a GitHub repository page showing the 'Clone' section. It displays three cloning options: HTTPS (selected), SSH, and GitHub CLI. Below these is a web URL for cloning. There are also links to open the repository with GitHub Desktop or download it as a ZIP file.



5.2 What is Working Directory



The **desk** where you're actively working on a draft of a book or project. The drafts and notes on your desk are not yet published or saved in the library.

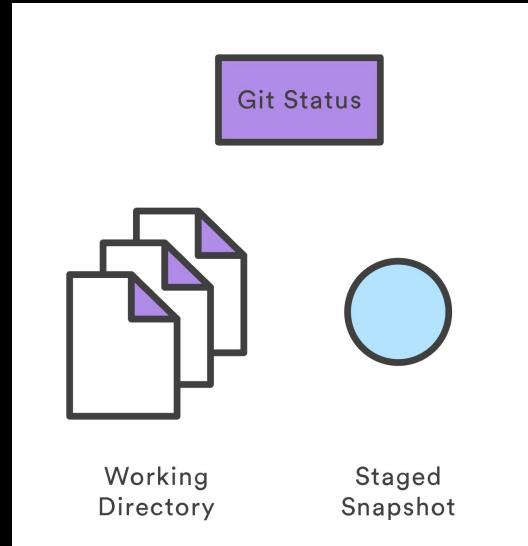
- The current state of your project files on your local machine.
- Shows the files you're actively working on.
- Changes here are not tracked until added to the staging area.
- It reflects a specific snapshot or branch of the repository.



5.3 git status



```
# On branch main
# Changes to be committed:
# (use "git reset HEAD <file>..." to unstage)
#
#modified: hello.py
#
# 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: main.py
#
# Untracked files:
# (use "git add <file>..." to include in what will be committed)
#
#hello.pyc
```



- Displays the current state of the working directory.
- Shows changes that have been staged, unstaged, or not tracked.



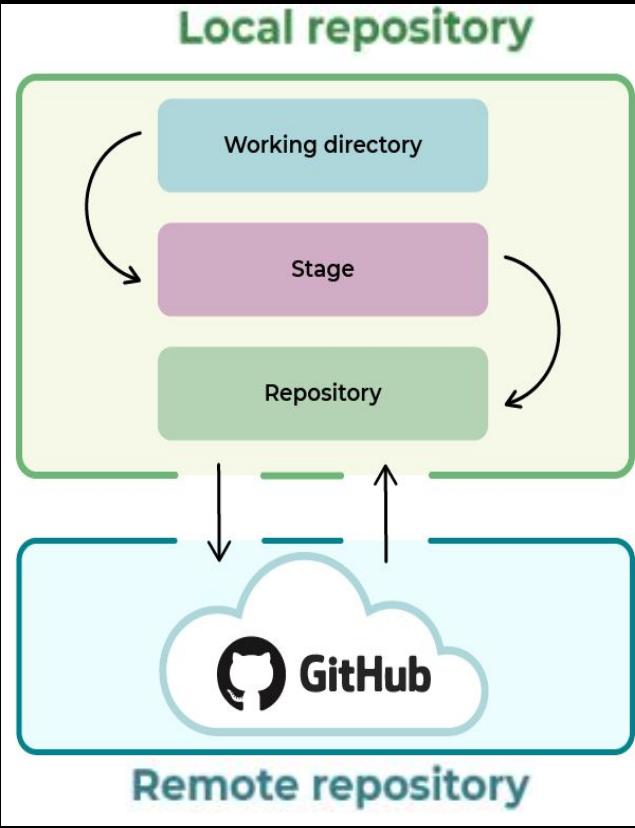
5.4 What is Staging Area



A **clipboard** where you place specific pages you want to review before finalizing a document. You might choose only a few changes to add for the next version of the book.



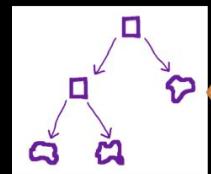
5.4 What is Staging Area



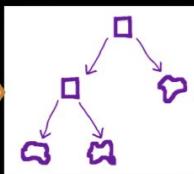
- Also known as the "index" or "cache"
- An intermediate area between the working directory and repository
- Holds changes that are ready to be committed
- Allows you to selectively choose which changes to include in the next commit
- Acts as a preview of your next commit



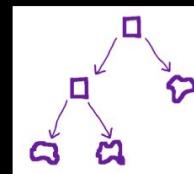
Working directory



Staging Area

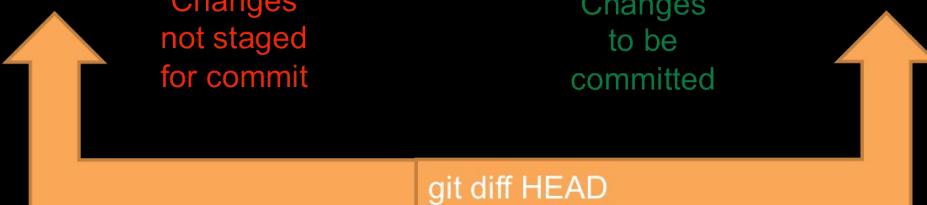


HEAD commit



Changes
not staged
for commit

Changes
to be
committed

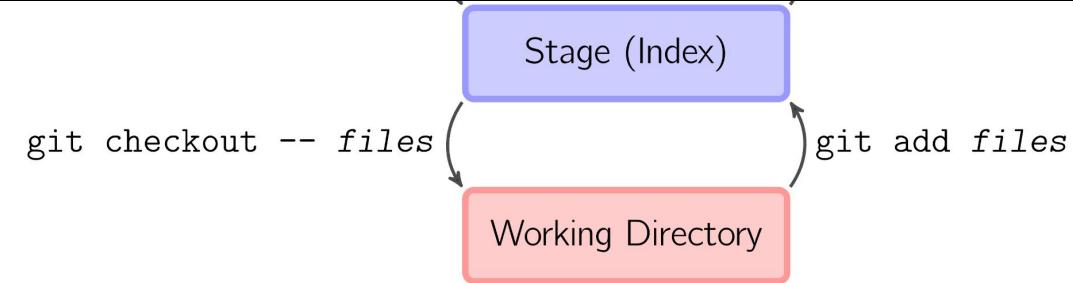


- Shows the differences between two states of a repository.
- Can be used to view changes between:
 - Working directory and staging area (uncommitted changes).
 - Staging area and last commit (staged changes).
 - Two different commits or branches.
- Useful for reviewing changes before committing or pushing them.





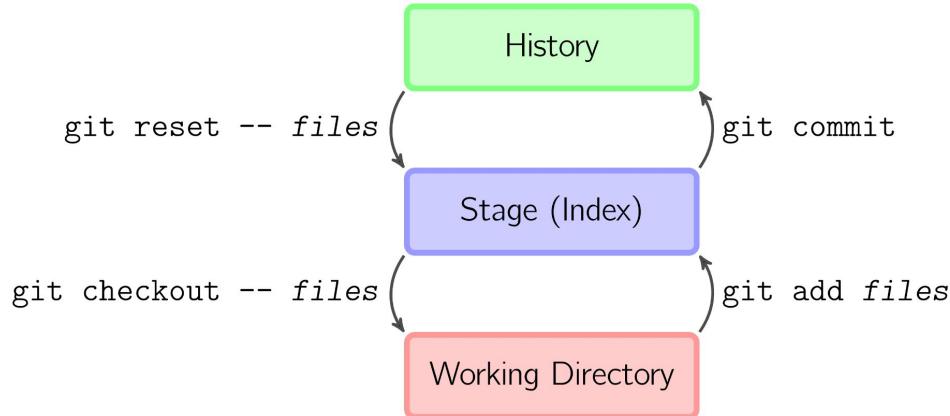
5.6 git add & git checkout



- **git add**
 - Stages changes to be committed.
 - Can add individual files or all changes with `git add`
- **git checkout**
 - Replaces the contents of the working directory with the version from the target branch or commit.



5.7 git commit & git reset



- **git commit**
 - Records the staged changes in the repository's history.
 - Requires a commit message describing the changes.
- **git reset**
 - Undoes changes by moving the current branch pointer to a previous commit. Modes (`--soft`, `--mixed`, `--hard`)



5.8 git log



Along with the ordinary `git log` information, include which files were altered and the relative number of lines that were added or deleted from each of them.

```
git log -p
```

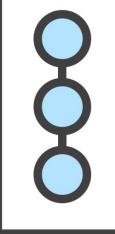
Display the patch representing each commit. This shows the full diff of each commit, which is the most detailed view you can have of your project history.

```
git log --author=<pattern>
```

```
git log --author="John Smith" -p hello.py
```

This will display a full diff of all the changes John Smith has made to the file `hello.py`.

Git Log



Committed History

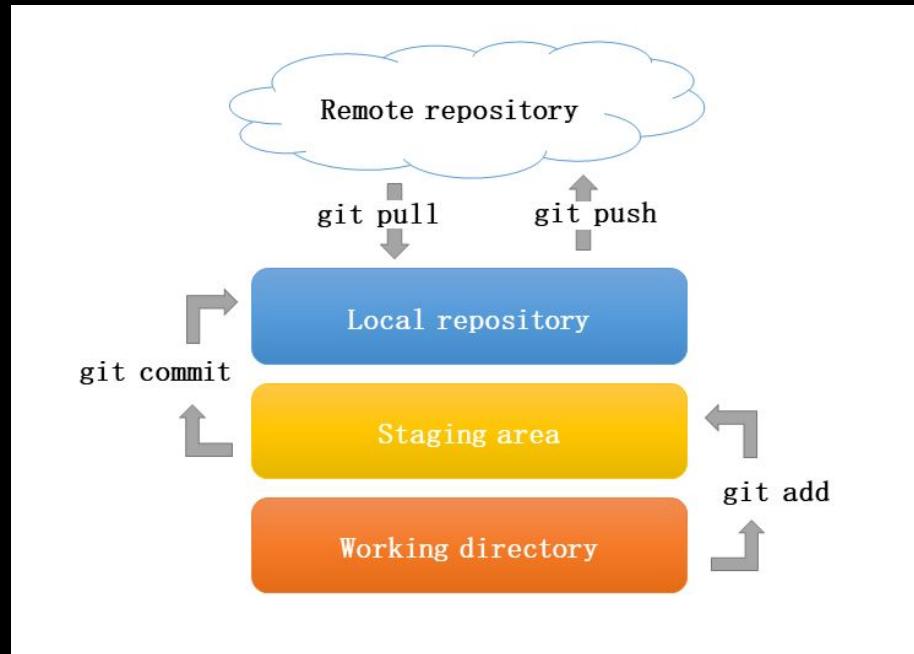
- Displays the commit history of the repository.
- Shows commit messages, authors, and timestamps.



5.9 git push & git pull



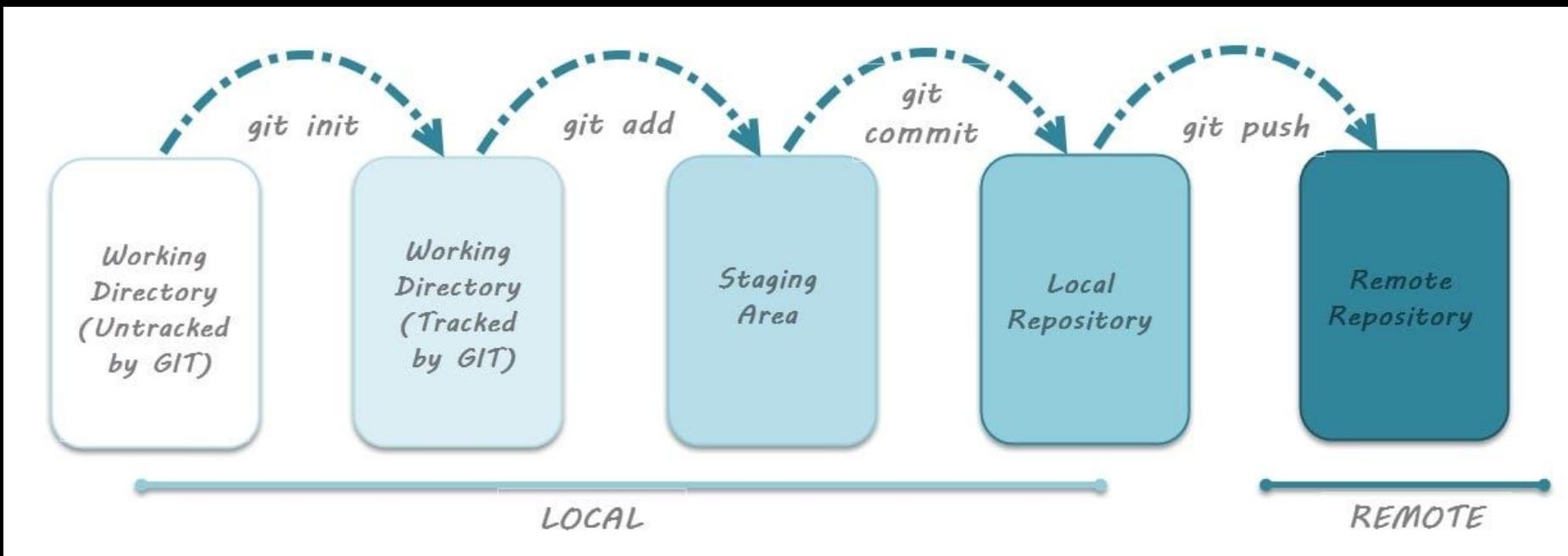
- git push
 - Uploads local commits to a remote repository.
 - Typically pushes to a specific branch.
- git pull
 - Fetches and merges changes from a remote repository into the local branch.
 - Combines git fetch and git merge.

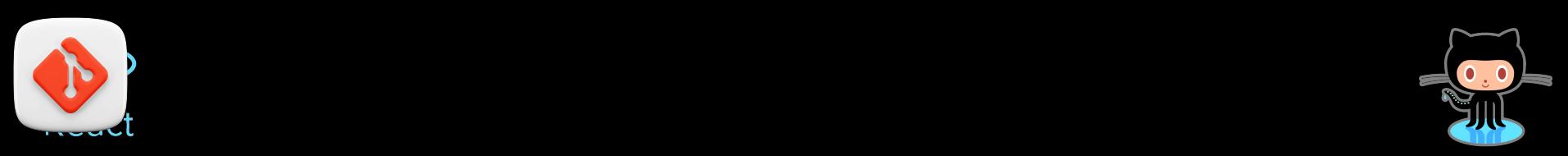




React

Summary







Syncing the Fork



kg-react-native (Public)
forked from [facebook/react-native](#)

main ▾ 1 Branch 0 Tags Go to file Add file Code

This branch is 1 commit ahead of, 23 commits behind [facebook/react-native:main](#). Contribute Sync fork

omprashantjain Update README.md

- .bundle Introduce Gemfile, ruby-version ([facebook#45589](#))
- .circleci Remove CCI leftovers ([facebook#45589](#))
- .github Zip slices to preserve symlinks ([facebook#46399](#))
- flow-typed/npm update babel and fix tests accordingly ([facebook#46399](#))
- gradle(wrapper) Gradle to 8.10.1 ([facebook#46399](#))
- jest Revert D61014834: Substitute babel-pre
- packages feat(JS): Expose text content types to JS
- scripts Fix wrong command for publishing of ext

This branch is out-of-date
Update branch to merge the latest changes from the upstream repository into this branch.
Discard 1 commit to make this branch match the upstream repository. 1 commit will be removed from this branch.
[Learn more about syncing a fork](#)

Discard 1 commit

Update branch



Raising the pull request in a Fork



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 comparisons](#).

base repository: facebook/react-native base: main head repository: KG-Coding-with-Prashant-Si... compare: main

✓ Able to merge. These branches can be automatically merged.

Discuss and review the changes in this comparison with others. [Learn about pull requests](#)

Create pull request

-o- 1 commit

1 file changed

1 contributor

Commits on Sep 10, 2024

Update README.md

 omprashantjain committed 2 days ago

Verified



4cccea1



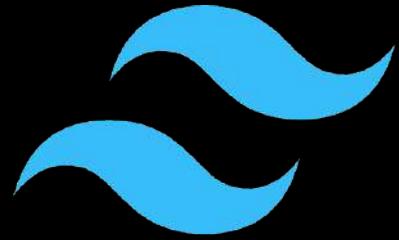
Showing 1 changed file with 1 addition and 1 deletion.

Split Unified

2 README.md

@@ -1,6 +1,6 @@

```
1 <h1 align="center">
2 <a href="https://reactnative.dev/">
3 - React Native
4 + Best of Luck Mohit.
5 </a>
6 </h1>
```

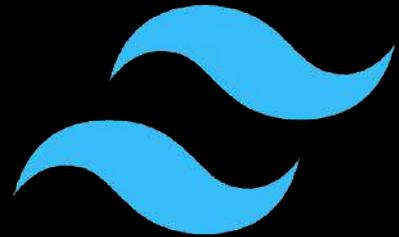


tailwindcss

**Rapidly build modern websites
without ever leaving your HTML.**

A utility-first CSS framework packed with classes like `flex`, `pt-4`, `text-center` and `rotate-90` that can be composed to build any design, directly in your markup.

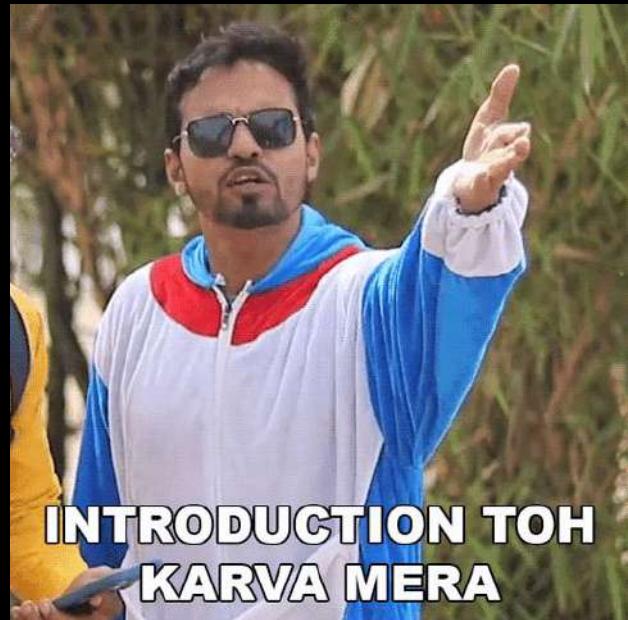




tailwindcss

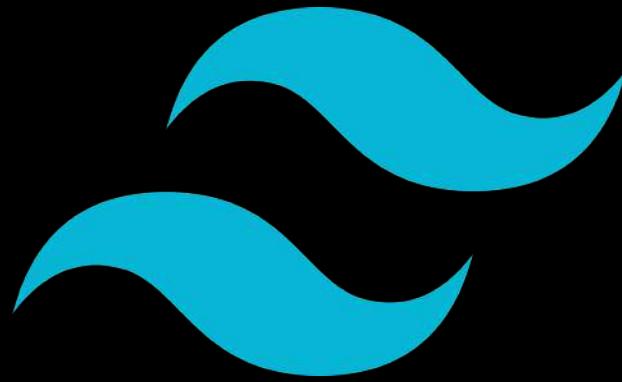
INTRODUCTION

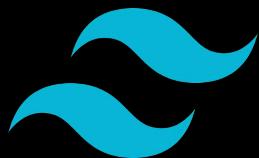
- What is tailwind-css
- Utility Classes
- Core Components
- Installation and Usage
- Using Pre-Built Components



What is Tailwind CSS

1. **Responsive:** Mobile-first design for all device sizes.
2. **Utility-First:** Provides low-level utility classes for building custom designs.
3. **Highly Customizable:** Easily extendable through a config file.
4. **Responsive Design:** Built-in responsive utilities (e.g., sm:, md:).
5. **No Predefined Components:** Focuses on building custom components.
6. **Purge CSS:** Removes unused styles in production for smaller files.
7. **Fast Development:** Style elements directly in markup for speed.



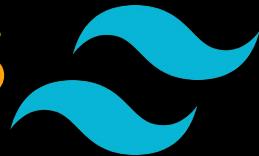


Utility Classes

```
1  /* Colors */
2  .text-primary { color: #007bff; }
3  .bg-primary { background-color: #007bff; }
4
5  /* Sizing */
6  .w-full { width: 100%; }
7  .h-full { height: 100%; }
8
9  /* Typography */
10 .text-center { text-align: center; }
11 .font-bold { font-weight: bold; }
12
13 /* Spacing */
14 .m-1 { margin: 0.25rem; }
15 .m-2 { margin: 0.5rem; }
16 .p-1 { padding: 0.25rem; }
17 .p-2 { padding: 0.5rem; }
```

```
19  /* Layout */
20  .d-flex { display: flex; }
21  .flex-col { flex-direction: column; }
22  .items-center { align-items: center; }
23  .justify-center { justify-content: center; }
24
25  /* Misc */
26  .rounded { border-radius: 0.25rem; }
27  .hidden { display: none; }
```

Core Components Tailwind CSS



Utility-First Fundamentals

Using a utility-first workflow to build complex components from a constrained set of primitive utilities.



Hover, Focus & Other States

Style elements in interactive states like hover, focus, and more using conditional modifiers.



Reusing Styles

Manage duplication and keep your projects maintainable by creating reusable abstractions.



Responsive Design

Build fully responsive user interfaces that adapt to any screen size using responsive modifiers.



Dark Mode

Optimize your site for dark mode directly in your HTML using the dark mode modifier.



Customizing the Framework

Customize the framework to match your brand and extend it with your own custom styles.

FAQs Tailwind

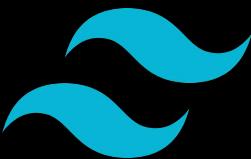
Why not just use inline styles?

A common reaction to this approach is wondering, “isn’t this just inline styles?” and in some ways it is — you’re applying styles directly to elements instead of assigning them a class name and then styling that class.

But using utility classes has a few important advantages over inline styles:

- **Designing with constraints.** Using inline styles, every value is a magic number. With utilities, you’re choosing styles from a predefined design system, which makes it much easier to build visually consistent UIs.
- **Responsive design.** You can’t use media queries in inline styles, but you can use Tailwind’s responsive utilities to build fully responsive interfaces easily.
- **Hover, focus, and other states.** Inline styles can’t target states like hover or focus, but Tailwind’s state variants make it easy to style those states with utility classes.

Playing with Tailwind



tailwind PLAY Share

HTML CSS Config

v3.4.10 Tidy

```
1 <!--
2   Welcome to Tailwind Play, the official Tailwind CSS playground!
3
4   Everything here works just like it does when you're running Tailwind locally
5   with a real build pipeline. You can customize your config file, use features
6   like `@apply`, or even add third-party plugins.
7
8   Feel free to play with this example if you're just learning, or trash it and
9   start from scratch if you know enough to be dangerous. Have fun!
10 -->
11 <div class="relative flex min-h-screen flex-col justify-center overflow-hidden bg-gray-50 py-6 sm:py-12">
12   
13   <div class="absolute inset-0 bg-[url(/img/grid.svg)] bg-center [mask-image:linear-gradient(180deg, white, rgba(255,255,255,0))]"></div>
14   <div class="relative bg-white px-6 pb-8 pt-10 shadow-xl ring-1 ring-gray-900/5 sm:mx-auto sm:max-w-lg sm:rounded-lg sm:px-10">
15     <div class="mx-auto max-w-md">
16       
17       <div class="divide-y divide-gray-300/50">
18         <div class="space-y-6 py-8 text-base leading-7 text-gray-600">
19           <p>An advanced online playground for Tailwind CSS, including support for things like:</p>
20           <ul class="space-y-4">
21             <li class="flex items-center">
22               <svg class="h-6 w-6 flex-none fill-sky-100 stroke-sky-500 stroke-2" stroke-linecap="round" stroke-linejoin="round">
23                 <circle cx="12" cy="12" r="11" />
24                 <path d="M8 13 2.165a1 1 0 0 0 1.521-.126L16 9" fill="none" />
25               </svg>
26             <p class="ml-4">
27               Customizing your
28               <code>tailwind.config.js</code> file
29             </p>
30           </li>
31           <li class="flex items-center">
```

Generated CSS 2.05 kB

tailwind PLAY

An advanced online playground for Tailwind CSS, including support for things like:

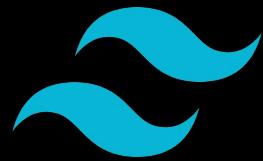
- Customizing your `tailwind.config.js` file
- Extracting classes with `@apply`
- Code completion with instant preview

Perfect for learning how the framework works, prototyping a new idea, or creating a demo to share online.

Want to dig deeper into Tailwind?

[Read the docs →](#)

Including Tailwind CSS



Installation

Get started with Tailwind CSS

Tailwind CSS works by scanning all of your HTML files, JavaScript components, and any other templates for class names, generating the corresponding styles and then writing them to a static CSS file.

It's fast, flexible, and reliable — with zero-runtime.

Installation

[Tailwind CLI](#) [Using PostCSS](#) [Framework Guides](#) [Play CDN](#)

Use the Play CDN to try Tailwind right in the browser without any build step. The Play CDN is designed for development purposes only, and is not the best choice for production.

1 Add the Play CDN script to your HTML.

Add the Play CDN script tag to the `<head>` of your HTML file, and start using Tailwind's utility classes to style your content.

```
index.html
<!doctype html>
<html>
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<script src="https://cdn.tailwindcss.com"></script>
</head>
<body>
<h1 class="text-3xl font-bold underline">
Hello world!
</h1>
</body>
</html>
```

Installing Extension



 tailwindcss

INTELLISENSE

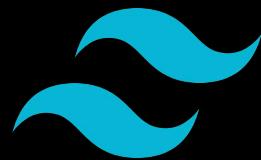
FOR



Visual Studio Code

```
class="bg-tl md:flex md:items-center md:  
v class="fl bg-teal-50  
<h2 class="t bg-teal-100  
    Back End D bg-teal-200  
</h2> bg-teal-300 background  
</div> bg-teal-400  
div class="mt bg-teal-500  
<span class= bg-teal-600  
    <button ty bg-teal-700  
        Edit bg-teal-800  
    </button> bg-teal-900  
</span> bg-transparent  
<span class= bg-top  
    <button type="button" class="inline-t  
        Publish  
    </button>  
</span>
```

Installing Extension



Tailwind CSS IntelliSense v0.12.10

Tailwind Labs tailwindcss.com | 7,381,739 | (99)

Intelligent Tailwind CSS tooling for VS Code

[Install](#)



Auto Update



DETAILS

FEATURES

CHANGELOG

A screenshot of the Visual Studio Code interface. A code editor window shows a snippet of Tailwind CSS-based HTML. A tooltip or callout box is overlaid on the code, displaying a list of Tailwind utility classes such as "bg-transparent", "bg-teal-50", "bg-teal-100", "bg-teal-200", "bg-teal-300", "bg-teal-400", "bg-teal-500", "bg-teal-600", "bg-teal-700", "bg-teal-800", and "bg-teal-900". The background of the code editor shows a dark theme with some blurred UI elements. At the bottom of the screenshot, there are two logos: the Tailwind CSS logo and the Visual Studio Code logo.

Categories

Linters

Resources

[Marketplace](#)

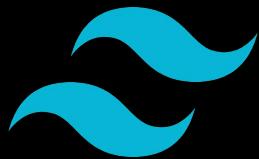
[Issues](#)

[Repository](#)

[License](#)

[Tailwind Labs](#)

Installing Tailwind CSS



1. Install:

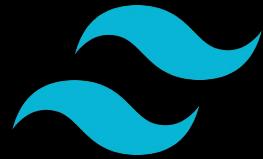
```
npm init -y
```

```
npm install -D tailwindcss postcss autoprefixer
```

2. Initialize Tailwind CSS Config

```
npx tailwindcss init
```

Configure Content



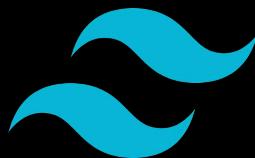
Configure Tailwind in the Configuration Files (`tailwind.config.js`)

`content: ["*.html"] // Add this line to scan for classes`

The `content` section of your `tailwind.config.js` file is where you configure the paths to all of your HTML templates, JavaScript components, and any other source files that contain Tailwind class names.

`tailwind.config.js`

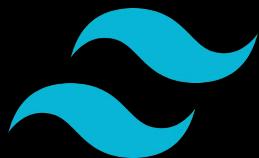
```
/** @type {import('tailwindcss').Config} */
module.exports = {
  content: [
    './pages/**/*.{html,js}',
    './components/**/*.{html,js}',
  ],
  // ...
}
```



Using Directives

Add Tailwind Directives to src/input.css

```
/* src/index.css */
@tailwind base;
@tailwind components;
@tailwind utilities;
```



Including Index CSS

5. Include `src/output.css` into your `index.html`

6. Run Command

```
npx tailwindcss -i ./src/input.css -o ./src/output.css --watch
```

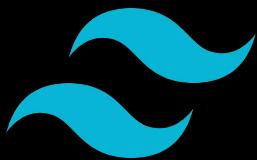
7. Declare Shortcut:

```
"scripts": {  
  "test": "echo \"Error: no test specified\" && exit 1",  
  "tailwind": "npx tailwindcss -i ./src/input.css -o ./src/output.css --watch"  
},
```

8. Run Command

```
npm run tailwind
```

Pre-built Components



Creative Tim TW Components Components Resources Ecosystem PRO Blocks Discover Submit Login

A free repository for community components using [Tailwind CSS](#)

Open source Tailwind UI components and templates to bootstrap your new apps, projects or landing sites!

Search Components

Latest components

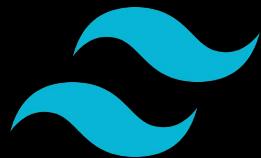
The newest featured Tailwind CSS components and templates from the community

Shadcn UI Navbar Component - Horizon AI
Boilerplate vldmihalache

Tailwind CSS Buttons Variants Loopple @ 3.3

Tailwind CSS Icon Only Buttons Loopple @ 3.3

No Predefined CSS



```
index.html # output.css 3
tailwind > src > index.html > ...
2  <html lang="en">
9   <body>
10  |  <h1 class="text-red-100">Tailwind Text Alignment</h1>
11  |</body>
12 </html>
```

```
← → ⌂ 127.0.0.1:5500/tailwind/src/index.html
Tailwind Text Alignment
```

```
index.html # output.css 3
tailwind > src > # output.css > .text-red-100
503  ::backdrop {
555  }
556
557  .text-red-100 {
558  --tw-text-opacity: 1;
559  color: rgb(254 226 226 / var(--tw-text-opacity));
560 }
```

Pre-built Components

TailwindFlex

Search

Tags

Create Component

Sign In

Community-built

Tailwind CSS Components Library

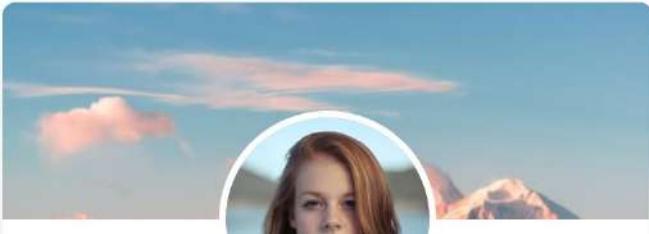
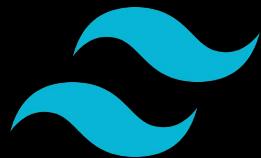
Design and Development tips
in your inbox. Every weekday.

Let's not stress about website designs. Create Stunning UIs Effortlessly, with Over 1600+
Ready to Use Components

Button, Footer, etc

Find 

Testing Tailwind CSS



Sarah Smith

Freelance Web Designer



2k



10k



15

Follow



Cait Genevieve

📍 New York, NY

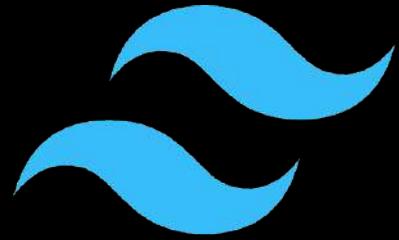
Follow

Message



12 Followers you know

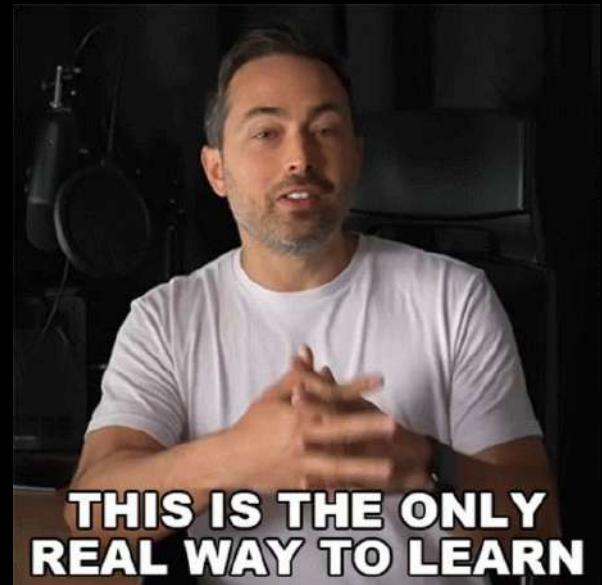


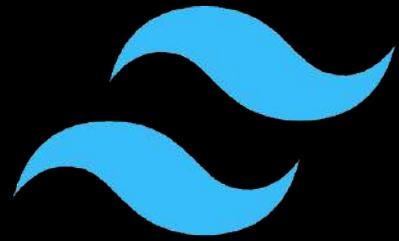


tailwindcss

LEARNING

- 1. Colors
- 2. States & Dark Mode
- 3. Responsive Design
- 4. Spacing
- 5. Typography
- 6. Sizing
- 7. Layouts
- 8. Flex
- 9. Grid
- 10. Border
- 11. Effects
- 12. Filters
- 13. Animations
- 14. Directives



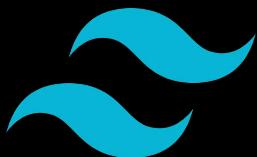


tailwindcss

LEARNING

1. Colors





1.1 Text-Color

Setting the text color

Use the `text-*` utilities to control the text color of an element.

The quick brown fox jumps over the lazy dog.

```
<p class="text-sky-400">The quick brown fox...</p>
```

```
<h1>Tailwind CSS Text Colors</h1>
<p class="text-blue-500">This text is blue.</p>
<p class="text-green-600">This text is green.</p>
<p class="text-red-700">This text is red.</p>
<p class="text-purple-800">This text is purple.</p>
<p class="text-gray-500">This text is gray.</p>
<p class="text-yellow-400">This text is yellow.</p>
```

Tailwind CSS Text Colors

This text is blue.

This text is green.

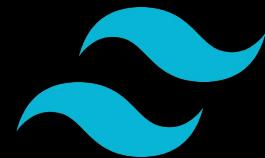
This text is red.

This text is purple.

This text is gray.

This text is yellow.

1.2 Background-Color



Tailwind CSS Background Colors

This div has a blue background.

This div has a green background.

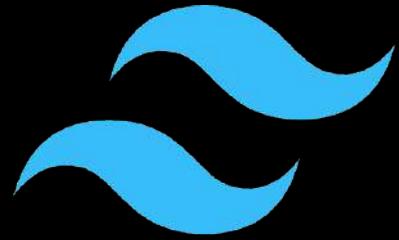
This div has a red background.

This div has a purple background.

This div has a gray background.

This div has a yellow background.

```
<h1>Tailwind CSS Background Colors</h1>
<div class="■bg-blue-500 ■text-white">This div has a blue background.</div>
<div class="■bg-green-600 ■text-white">This div has a green background.</div>
<div class="■bg-red-700 ■text-white">This div has a red background.</div>
<div class="■bg-purple-800 ■text-white">This div has a purple background.</div>
<div class="■bg-gray-500 ■text-white">This div has a gray background.</div>
<div class="■bg-yellow-400 □text-black">This div has a yellow background.</div>
```



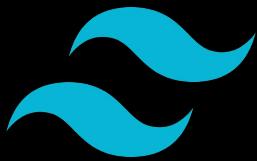
tailwindcss

LEARNING

2. States & Dark Mode



2.1 Hover



Save changes

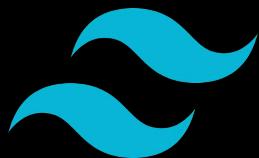
```
<button class="bg-sky-500 hover:bg-sky-700 ..." >  
  Save changes  
</button>
```

▼ How does this compare to traditional CSS?

When writing CSS the traditional way, a single class name would do different things based on the current state.

- ✖ Traditionally the same class name applies different styles on hover

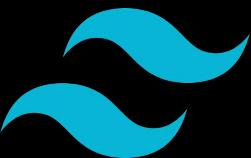
```
.btn-primary {  
  background-color: #0ea5e9;  
}  
.btn-primary:hover {  
  background-color: #0369a1;  
}
```



2.2 Pseudo-classes

Save changes

```
<button class="bg-violet-500 hover:bg-violet-600  
active:bg-violet-700 focus:outline-none focus:ring  
focus:ring-violet-300">  
  Save changes  
</button>
```



2.3 Dark Mode

Light mode



Writes Upside-Down

The Zero Gravity Pen can be used to write in any orientation, including upside-down. It even works in outer space.

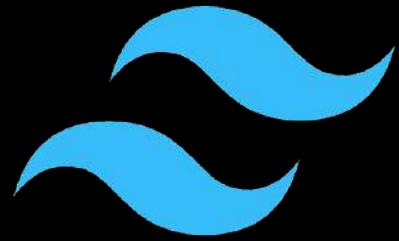
Dark mode



Writes Upside-Down

The Zero Gravity Pen can be used to write in any orientation, including upside-down. It even works in outer space.

```
<div class="bg-white dark:bg-slate-800 rounded-lg px-6 py-8 ring-1 ring-slate-900/5 s
<div>
  <span class="inline-flex items-center justify-center p-2 bg-indigo-500 rounded-md
    <svg class="h-6 w-6 text-white" xmlns="http://www.w3.org/2000/svg" fill="none"
      </span>
</div>
<h3 class="text-slate-900 dark:text-white mt-5 text-base font-medium tracking-tight
<p class="text-slate-500 dark:text-slate-400 mt-2 text-sm">
  The Zero Gravity Pen can be used to write in any orientation, including upside-do
</p>
</div>
```



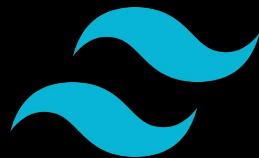
tailwindcss

LEARNING

3. Responsive Design



3 Responsive Design



First, make sure you've added the viewport meta tag to the `<head>` of your document:

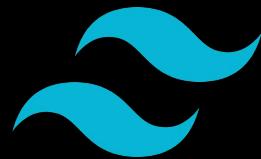
```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

Then to add a utility but only have it take effect at a certain breakpoint, all you need to do is prefix the utility with the breakpoint name, followed by the `:` character:

```
<!-- Width of 16 by default, 32 on medium screens, and 48 on large screens -->  

```

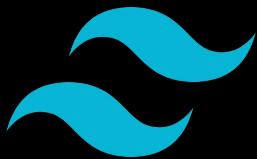
3 Responsive Design



There are five breakpoints by default, inspired by common device resolutions:

Breakpoint prefix	Minimum width	CSS
`sm`	640px	`@media (min-width: 640px) { ... }`
`md`	768px	`@media (min-width: 768px) { ... }`
`lg`	1024px	`@media (min-width: 1024px) { ... }`
`xl`	1280px	`@media (min-width: 1280px) { ... }`
`2xl`	1536px	`@media (min-width: 1536px) { ... }`

3 Responsive Design



Targeting mobile screens

Where this approach surprises people most often is that to style something for mobile, you need to use the unprefixed version of a utility, not the `sm:` prefixed version. Don't think of `sm:` as meaning "on small screens", think of it as "at the small *breakpoint*".

- ✗ **Don't use `sm:` to target mobile devices**

```
<!-- This will only center text on screens 640px and wider, not on small screens -->

</div>


```

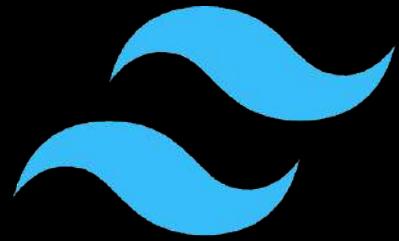
- ✓ **Use unprefixed utilities to target mobile, and override them at larger breakpoints**

```
<!-- This will center text on mobile, and left align it on screens 640px and wider -->

</div>


```

For this reason, it's often a good idea to implement the mobile layout for a design first, then layer on any changes that make sense for `sm` screens, followed by `md` screens, etc.



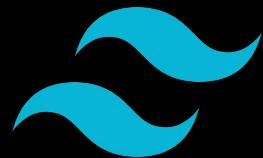
tailwindcss

LEARNING

4. Spacing



4.1 Margin



Tailwind Margins

m-2: All sides

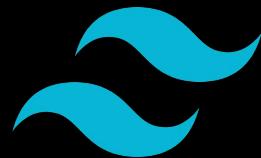
mx-4: Horizontal

my-3: Vertical

mt-4: Top only

```
<h1>Tailwind Margins</h1>
<div class="■bg-blue-200 m-2">m-2: All sides</div>
<div class="■bg-green-200 mx-4">mx-4: Horizontal</div>
<div class="■bg-red-200 my-3">my-3: Vertical</div>
<div class="■bg-purple-200 mt-4">mt-4: Top only</div>
```

4.2 Padding



Tailwind Padding

p-2: All sides

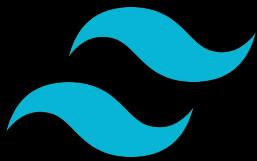
px-4: Horizontal

py-3: Vertical

pt-4: Top only

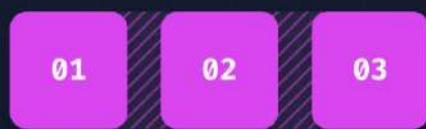
```
<h1>Tailwind Padding</h1>
<div class="■bg-blue-200 p-2 border ■border-blue-500">p-2: All sides</div>
<div class="■bg-green-200 px-4 border ■border-green-500">px-4: Horizontal</div>
<div class="■bg-red-200 py-3 border ■border-red-500">py-3: Vertical</div>
<div class="■bg-purple-200 pt-4 border ■border-purple-500">pt-4: Top only</div>
```

4.3 Spacing

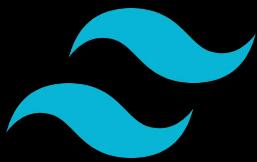


Add horizontal space between children

Use the `space-x-*` utilities to control the horizontal space between elements.



```
<div class="flex space-x-4 ...">  
  <div>01</div>  
  <div>02</div>  
  <div>03</div>  
</div>
```



4.3 Spacing

Add vertical space between children

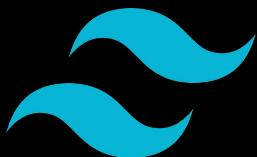
Use the `space-y-*` utilities to control the vertical space between elements.

01

02

03

```
<div class="flex flex-col space-y-4 ...>
  <div>01</div>
  <div>02</div>
  <div>03</div>
</div>
```



4.3 Spacing

```
<h1 class="m-2">Tailwind Space Utilities</h1>

<h2 class="m-2">Vertical Space (space-y-4)</h2>
<div class="space-y-4 m-2">
  <div class="bg-blue-200 p-2">First item</div>
  <div class="bg-blue-200 p-2">Second item</div>
  <div class="bg-blue-200 p-2">Third item</div>
</div>

<h2 class="m-2">Horizontal Space (space-x-4)</h2>
<div class="space-x-4 m-2">
  <span class="bg-green-200 p-2">First</span>
  <span class="bg-green-200 p-2">Second</span>
  <span class="bg-green-200 p-2">Third</span>
</div>
```

This example demonstrates two key space utilities in Tailwind CSS:

1. `space-y-4`: Adds vertical space (1rem or 16px by default) between child elements.
2. `space-x-4`: Adds horizontal space (1rem or 16px by default) between child elements.

Tailwind Space Utilities

Vertical Space (space-y-4)

First item

Second item

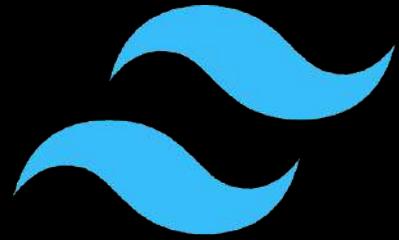
Third item

Horizontal Space (space-x-4)

First

Second

Third



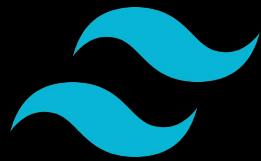
tailwindcss

LEARNING

5. *Typography*



5.1 Font-Family



font-sans

The quick brown fox jumps over the lazy dog.

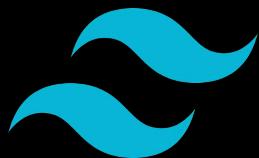
font-serif

The quick brown fox jumps over the lazy dog.

font-mono

The quick brown fox jumps over the lazy dog.

```
<p class="font-sans ...">The quick brown fox ...</p>
<p class="font-serif ...">The quick brown fox ...</p>
<p class="font-mono ...">The quick brown fox ...</p>
```



5.2 Text-size

Tailwind Font Sizes

text-xs: This is extra small text.

text-sm: This is small text.

text-base: This is the base text size.

text-lg: This is large text.

text-xl: This is extra large text.

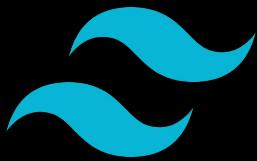
text-2xl: This is 2x large text.

text-3xl: This is 3x large text.

text-4xl: This is 4x large text.

```
<h1 class="text-2xl mb-4">Tailwind Font Sizes</h1>
<p class="text-xs">text-xs: This is extra small text.</p>
<p class="text-sm">text-sm: This is small text.</p>
<p class="text-base">text-base: This is the base text size.</p>
<p class="text-lg">text-lg: This is large text.</p>
<p class="text-xl">text-xl: This is extra large text.</p>
<p class="text-2xl">text-2xl: This is 2x large text.</p>
<p class="text-3xl">text-3xl: This is 3x large text.</p>
<p class="text-4xl">text-4xl: This is 4x large text.</p>
```

5.3 Font Style



The `italic` utility can be used to make text italic. Likewise, the `not-italic` utility can be used to display text normally — typically to reset italic text at different breakpoints.

italic

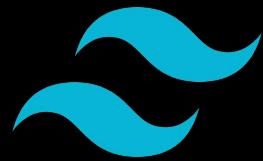
The quick brown fox jumps over the lazy dog.

not-italic

The quick brown fox jumps over the lazy dog.

```
<p class="italic ...>The quick brown fox ...</p>
<p class="not-italic ...>The quick brown fox ...</p>
```

5.4 Font-Weight



Tailwind Font Weights

`font-thin`: This is thin text (100)

`font-extralight`: This is extra light text (200)

`font-light`: This is light text (300)

`font-normal`: This is normal text (400)

`font-medium`: This is medium text (500)

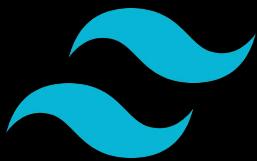
`font-semibold`: This is semibold text (600)

`font-bold`: This is bold text (700)

`font-extrabold`: This is extra bold text (800)

`font-black`: This is black text (900)

```
<h1 class="text-2xl font-bold mb-4">Tailwind Font Weights</h1>
<p class="font-thin">font-thin: This is thin text (100)</p>
<p class="font-extralight">font-extralight: This is extra light text (200)</p>
<p class="font-light">font-light: This is light text (300)</p>
<p class="font-normal">font-normal: This is normal text (400)</p>
<p class="font-medium">font-medium: This is medium text (500)</p>
<p class="font-semibold">font-semibold: This is semibold text (600)</p>
<p class="font-bold">font-bold: This is bold text (700)</p>
<p class="font-extrabold">font-extrabold: This is extra bold text (800)</p>
<p class="font-black">font-black: This is black text (900)</p>
```



5.5 Letter-Spacing

Setting the letter spacing

Use the `tracking-*` utilities to control the letter spacing of an element.

tracking-tight

The quick brown fox jumps over the lazy dog.

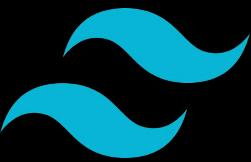
tracking-normal

The quick brown fox jumps over the lazy dog.

tracking-wide

The quick brown fox jumps over the lazy dog.

```
<p class="tracking-tight ...">The quick brown fox ...</p>
<p class="tracking-normal ...">The quick brown fox ...</p>
<p class="tracking-wide ...">The quick brown fox ...</p>
```



5.6 Line Height

Use the `'leading-none'`, `'leading-tight'`, `'leading-snug'`, `'leading-normal'`, `'leading-relaxed'`, and `'leading-loose'` utilities to give an element a relative line-height based on its current font-size.

leading-normal

So I started to walk into the water. I won't lie to you boys, I was terrified. But I pressed on, and as I made my way past the breakers a strange calm came over me. I don't know if it was divine intervention or the kinship of all living things but I tell you Jerry at that moment, I was a marine biologist.

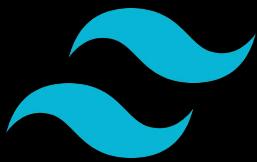
leading-relaxed

So I started to walk into the water. I won't lie to you boys, I was terrified. But I pressed on, and as I made my way past the breakers a strange calm came over me. I don't know if it was divine intervention or the kinship of all living things but I tell you Jerry at that moment, I was a marine biologist.

leading-loose

So I started to walk into the water. I won't lie to you boys, I was terrified. But I pressed on, and as I made my way past the breakers a strange calm came over me. I don't know if it was divine intervention or the kinship of all living things but I tell you Jerry at that moment, I was a marine biologist.

```
<p class="leading-normal ...">So I started to walk into the water...</p>
<p class="leading-relaxed ...">So I started to walk into the water...</p>
<p class="leading-loose ...">So I started to walk into the water...</p>
```



5.7 List Style

To create bulleted or numeric lists, use the `list-disc` and `list-decimal` utilities.

list-disc

- Now this is a story all about how, my life got flipped-turned upside down
- And I'd like to take a minute just sit right there
- I'll tell you how I became the prince of a town called Bel-Air

list-decimal

1. Now this is a story all about how, my life got flipped-turned upside down
2. And I'd like to take a minute just sit right there
3. I'll tell you how I became the prince of a town called Bel-Air

list-none

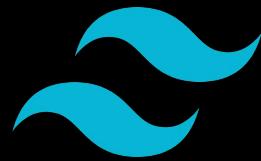
Now this is a story all about how, my life got flipped-turned upside down
And I'd like to take a minute just sit right there
I'll tell you how I became the prince of a town called Bel-Air

```
<ul class="list-disc">
  <li>Now this is a story all about how, my life got flipped-turned upside down</li>
  <!-- ... -->
</ul>

<ol class="list-decimal">
  <li>Now this is a story all about how, my life got flipped-turned upside down</li>
  <!-- ... -->
</ol>

<ul class="list-none">
  <li>Now this is a story all about how, my life got flipped-turned upside down</li>
  <!-- ... -->
</ul>
```

5.8 Text-Alignment



Tailwind Text Alignment

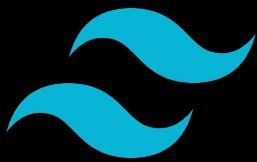
text-left: This paragraph is aligned to the left.

text-center: This paragraph is centered.

text-right: This paragraph is aligned to the right.

text-justify: This paragraph is justified. It contains a longer text to demonstrate the effect of justification. Notice how the text is spread out to align with both the left and right edges.

```
<h1 class="text-2xl font-bold mb-4">Tailwind Text Alignment</h1>
<div class="space-y-4">
  <p class="text-left bg-blue-100 p-2">
    text-left: This paragraph is aligned to the left.
  </p>
  <p class="text-center bg-green-100 p-2">
    text-center: This paragraph is centered.
  </p>
  <p class="text-right bg-red-100 p-2">
    text-right: This paragraph is aligned to the right.
  </p>
  <p class="text-justify bg-yellow-100 p-2">
    text-justify: This paragraph is justified. It contains a longer text to demonstrate the effect of
    justification. Notice how the text is spread out to align with both the left and right edges.
  </p>
</div>
```



5.9 Text Decoration

Control how text is decorated with the `'underline'`, `'no-underline'`, and `'line-through'` utilities.

`underline`

The quick brown fox jumps over the lazy dog.

`overline`

The quick brown fox jumps over the lazy dog.

`line-through`

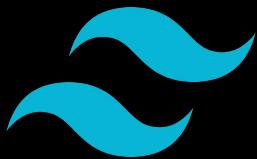
~~The quick brown fox jumps over the lazy dog.~~

`no-underline`

The quick brown fox jumps over the lazy dog.

```
<p class="underline ...">The quick brown fox ...</p>
<p class="overline ...">The quick brown fox ...</p>
<p class="line-through ...">The quick brown fox ...</p>
<p class="no-underline ...">The quick brown fox ...</p>
```

5.10 Text Decoration Color



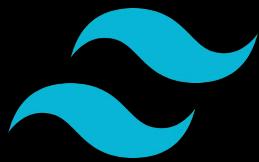
Setting the text decoration color

Use the `decoration-*` utilities to change the color of an element's text decoration.

I'm Derek, an astro-engineer based in
Tattooine. I like to build X-Wings at My
Company, Inc.. Outside of work, I like to watch
pod-racing and have light-saber fights.

```
<div>
  <p>
    I'm Derek, an astro-engineer based in Tattooine. I like to build X-Wings at
    <a class="underline decoration-sky-500">My Company, Inc</a>.
    Outside of work, I like to <a class="underline decoration-pink-500">watch
    pod-racing</a> and have <a class="underline decoration-indigo-500">light-saber</a>
  </p>
</div>
```

5.11 Text Decoration Style



Use the `decoration-*` utilities to change the style of an element's text decoration.

decoration-solid

The quick brown fox jumps over the lazy dog.

decoration-double

The quick brown fox jumps over the lazy dog.

decoration-dotted

.The quick brown fox jumps over the lazy dog.

decoration-dashed

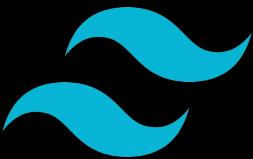
The quick brown fox jumps over the lazy dog.

decoration-wavy

The quick brown fox jumps over the lazy dog.

```
<p class="underline decoration-solid ...">The quick brown fox...</p>
<p class="underline decoration-double ...">The quick brown fox...</p>
<p class="underline decoration-dotted ...">The quick brown fox...</p>
<p class="underline decoration-dashed ...">The quick brown fox...</p>
<p class="underline decoration-wavy ...">The quick brown fox...</p>
```

5.12 Text Transform



normal-case

The quick brown fox jumps over the lazy dog.

uppercase

THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG.

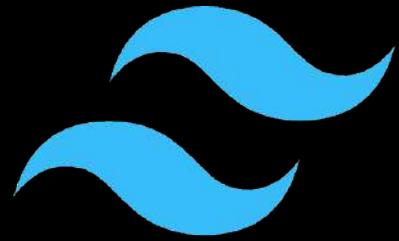
lowercase

the quick brown fox jumps over the lazy dog.

capitalize

The Quick Brown Fox Jumps Over The Lazy Dog.

```
<p class="normal-case ...">The quick brown fox ...</p>
<p class="uppercase ...">The quick brown fox ...</p>
<p class="lowercase ...">The quick brown fox ...</p>
<p class="capitalize ...">The quick brown fox ...</p>
```



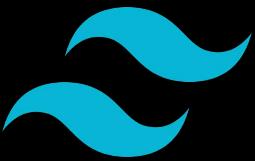
tailwindcss

LEARNING

6. *Sizing*

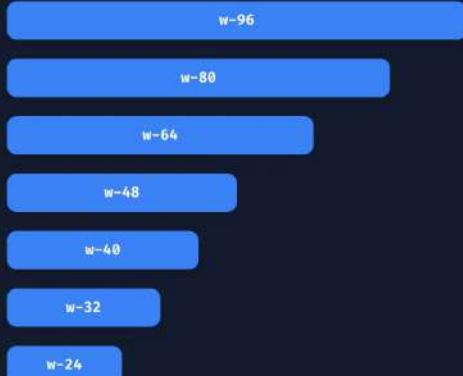


6.1 Width

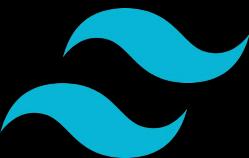


Fixed widths

Use utilities like `w-px`, `w-1`, and `w-64` to set an element to a fixed width.



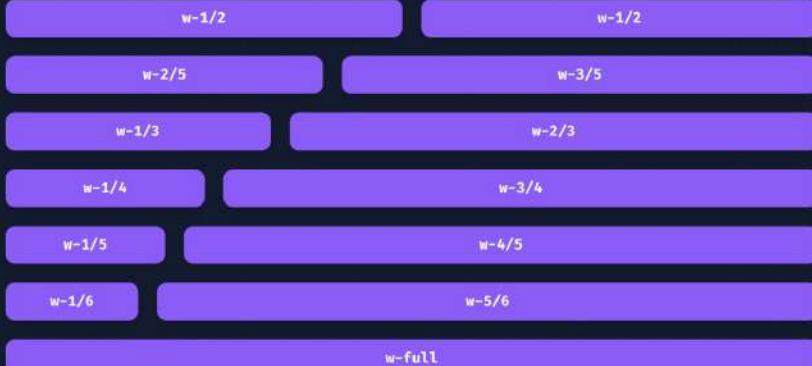
```
<div class="w-96 ...>w-96</div>
<div class="w-80 ...>w-80</div>
<div class="w-64 ...>w-64</div>
<div class="w-48 ...>w-48</div>
<div class="w-40 ...>w-40</div>
<div class="w-32 ...>w-32</div>
<div class="w-24 ...>w-24</div>
```



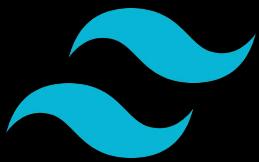
6.1 Width

Percentage widths

Use utilities like `w-full`, `w-1/2`, and `w-2/5` to set an element to a percentage based width.

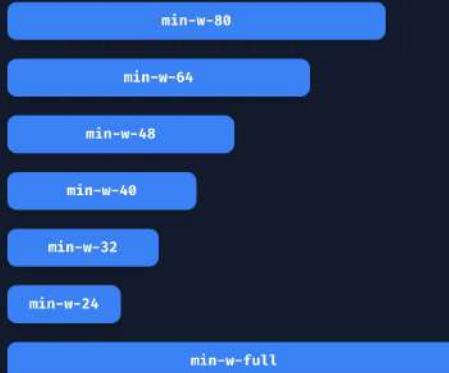


```
<div class="flex ...">
  <div class="w-1/2 ... ">w-1/2</div>
  <div class="w-1/2 ... ">w-1/2</div>
</div>
<div class="flex ...">
  <div class="w-2/5 ... ">w-2/5</div>
  <div class="w-3/5 ... ">w-3/5</div>
</div>
<div class="flex ...">
  <div class="w-1/3 ... ">w-1/3</div>
  <div class="w-2/3 ... ">w-2/3</div>
</div>
<div class="flex ...">
  <div class="w-1/4 ... ">w-1/4</div>
  <div class="w-3/4 ... ">w-3/4</div>
</div>
<div class="flex ...">
  <div class="w-1/5 ... ">w-1/5</div>
  <div class="w-4/5 ... ">w-4/5</div>
</div>
<div class="flex ...">
  <div class="w-1/6 ... ">w-1/6</div>
  <div class="w-full ... ">w-full</div>
</div>
```



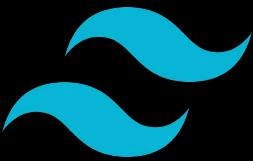
6.2 Min-Width

Set the minimum width of an element using `min-w-*` utilities.



```
<div class="w-96 ...>  
  <div class="min-w-80 ...>min-w-80</div>  
  <div class="min-w-64 ...>min-w-64</div>  
  <div class="min-w-48 ...>min-w-48</div>  
  <div class="min-w-40 ...>min-w-40</div>  
  <div class="min-w-32 ...>min-w-32</div>  
  <div class="min-w-24 ...>min-w-24</div>  
  <div class="min-w-full ...>min-w-full</div>  
</div>
```

6.3 Max-Width



Set the maximum width of an element using the `max-w-*` utilities.

max-w-96

max-w-80

max-w-64

max-w-48

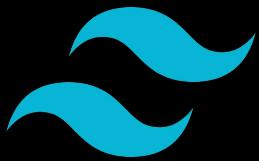
max-w-40

max-w-32

max-w-24

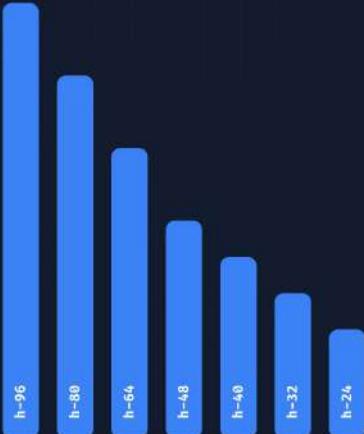
```
<div>
  <div class="w-full max-w-96 ...">max-w-96</div>
  <div class="w-full max-w-80 ...">max-w-80</div>
  <div class="w-full max-w-64 ...">max-w-64</div>
  <div class="w-full max-w-48 ...">max-w-48</div>
  <div class="w-full max-w-40 ...">max-w-40</div>
  <div class="w-full max-w-32 ...">max-w-32</div>
  <div class="w-full max-w-24 ...">max-w-24</div>
</div>
```

6.4 Height



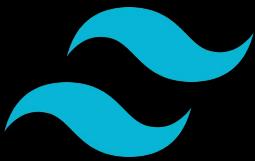
Fixed heights

Use utilities like `h-px`, `h-1`, and `h-64` to set an element to a fixed height.



```
<div class="h-96 ...">h-96</div>
<div class="h-80 ...">h-80</div>
<div class="h-64 ...">h-64</div>
<div class="h-48 ...">h-48</div>
<div class="h-40 ...">h-40</div>
<div class="h-32 ...">h-32</div>
<div class="h-24 ...">h-24</div>
```

6.4 Height



Full height

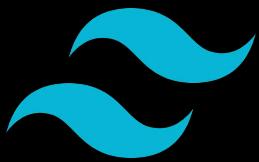
Use `h-full` to set an element's height to 100% of its parent, as long as the parent has a defined height.

```
<div class="h-48">  
  <div class="h-full ..." >  
    <!-- This element will have a height of `12rem` (h-48) --&gt;<br/>  </div>  
</div>
```

Viewport height

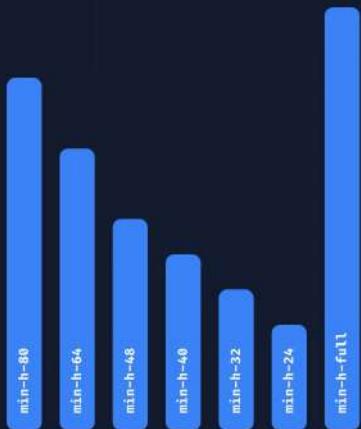
Use `h-screen` to make an element span the entire height of the viewport.

```
<div class="h-screen">  
  <!-- ... -->  
</div>
```

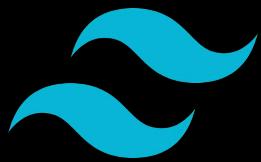


6.5 Min-Height

Set the minimum height of an element using `'min-h-*'` utilities.

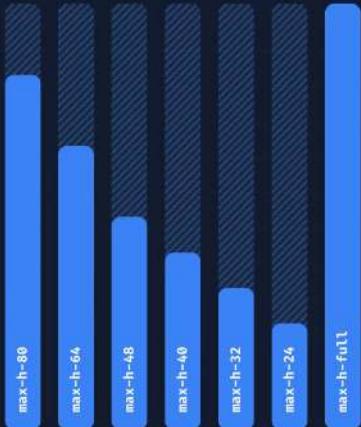


```
<div class="h-96 ...">  
  <div class="min-h-80 ...">min-h-80</div>  
  <div class="min-h-64 ...">min-h-64</div>  
  <div class="min-h-48 ...">min-h-48</div>  
  <div class="min-h-40 ...">min-h-40</div>  
  <div class="min-h-32 ...">min-h-32</div>  
  <div class="min-h-24 ...">min-h-24</div>  
  <div class="min-h-full ...">min-h-full</div>  
</div>
```



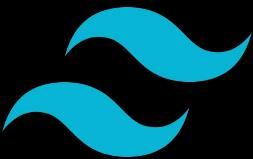
6.6 Max-Height

Set the maximum height of an element using `max-h-*` utilities.



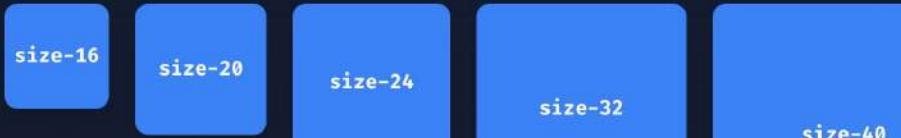
```
<div class="h-96 ...">
  <div class="h-full max-h-80 ...">max-h-80</div>
  <div class="h-full max-h-64 ...">max-h-64</div>
  <div class="h-full max-h-48 ...">max-h-48</div>
  <div class="h-full max-h-40 ...">max-h-40</div>
  <div class="h-full max-h-32 ...">max-h-32</div>
  <div class="h-full max-h-24 ...">max-h-24</div>
  <div class="h-full max-h-full ...">max-h-full</div>
</div>
```

6.7 Size



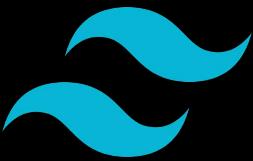
Fixed sizes

Use utilities like `size-px`, `size-1`, and `size-64` to set an element to a fixed width and height at the same time.



```
<div class="size-16 ...">size-16</div>
<div class="size-20 ...">size-20</div>
<div class="size-24 ...">size-24</div>
<div class="size-32 ...">size-32</div>
<div class="size-40 ...">size-40</div>
```

6.7 Size



Percentage sizes

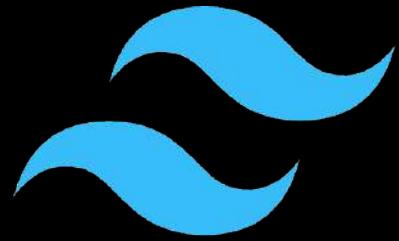
Use `size-full` to set an element's width and height to be 100% of the parent container's width and height.



size-full

A large, solid purple rectangular box with a thin black border, centered on a dark background. The text "size-full" is centered within this purple box.

```
<div class="h-56 p-2 ...">  
  <div class="size-full ...">size-full</div>  
</div>
```

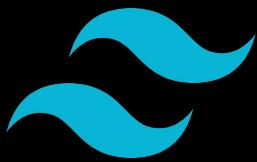


tailwindcss

LEARNING

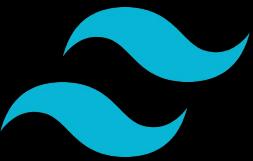
7. *Layouts*





7.1 Container

Class	Breakpoint	Properties
container	<i>None</i>	width: 100%;
	<i>sm (640px)</i>	max-width: 640px;
	<i>md (768px)</i>	max-width: 768px;
	<i>lg (1024px)</i>	max-width: 1024px;
	<i>xl (1280px)</i>	max-width: 1280px;
	<i>2xl (1536px)</i>	max-width: 1536px;



7.1 Container

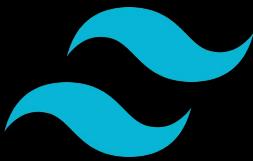
To center a container, use the `mx-auto` utility:

```
<div class="container mx-auto">  
  <!-- ... -->  
</div>
```

To add horizontal padding, use the `px-*` utilities:

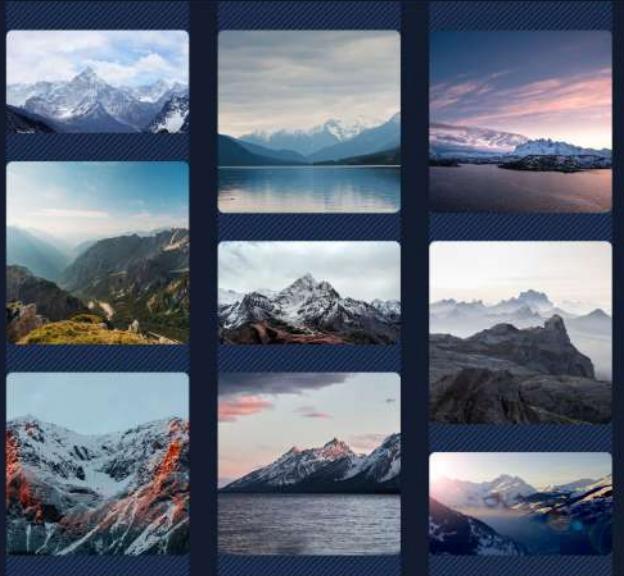
```
<div class="container mx-auto px-4">  
  <!-- ... -->  
</div>
```

7.2 Columns



Adding based on column count

Use utilities like `'columns-2'` and `'columns-3'` to set the number of columns that should be created for the content within an element. The column width will be automatically adjusted to accommodate that number.



```
<div class="columns-3 ...">
  
  
  <!-- ... -->
</div>
```

Adding based on column width

Use utilities like `'columns-xs'` and `'columns-sm'` to set the ideal column width for the content within an element, with the number of columns (the count) automatically adjusting to accommodate that value.

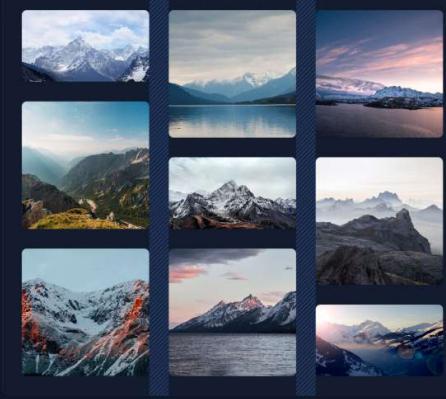
This "t-shirt" scale is the same as the `max-width` scale, with the addition of `'2xs'` and `'3xs'`, since smaller columns may be desirable.

👉 Resize the example to see the expected behaviour

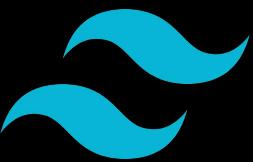


```
<div class="columns-2 ...">
  
  
  <!-- ... -->
</div>
```

To specify the width between columns, you can use the `gap-x` utilities:



```
div class="gap-8 columns-3 ...">
  
  
  <!-- ... -->
</div>
```



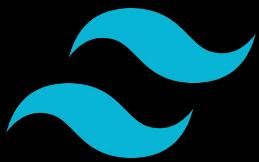
7.2 Columns

Adding based on column count

Use utilities like `'columns-2'` and `'columns-3'` to set the number of columns that should be created for the content within an element. The column width will be automatically adjusted to accommodate that number.

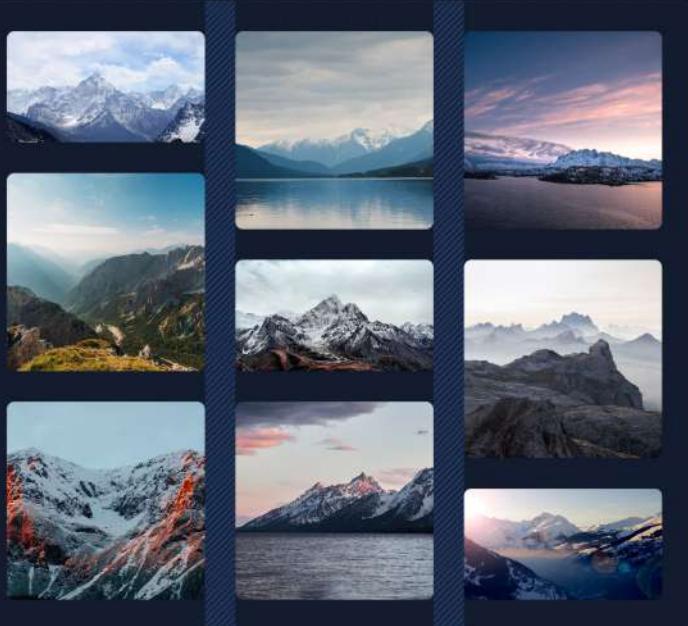


```
<div class="columns-3 ...>
  
  
  <!-- ... -->
</div>
```



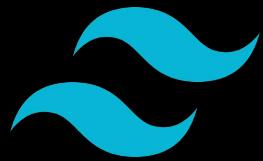
7.2 Columns

To specify the width between columns, you can use the `gap-x` utilities:



```
<div class="gap-8 columns-3 ...">
  
  
  <!-- ... -->
</div>
```

7.3 Box Sizing



Class

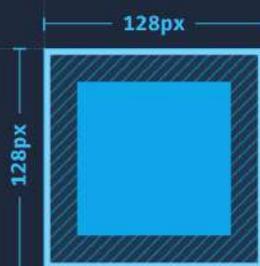
box-border

box-content

Properties

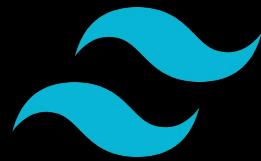
box-sizing: border-box;

box-sizing: content-box;



```
<div class="box-border h-32 w-32 p-4 border-4 ...>  
  <!-- ... -->  
</div>
```

7.4 Display



Use the `'inline'`, `'inline-block'`, and `'block'` utilities to control the flow of text and elements.

When controlling the flow of text, using the CSS property `display: inline` will cause the text inside the element to wrap normally.

While using the property `display: inline-block` will wrap the element to prevent the text inside from extending beyond its parent.

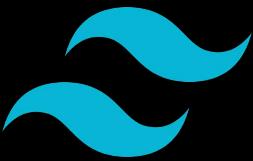
Lastly, using the property `display: block` will put the element on its own line and fill its parent.

```
<div>
  When controlling the flow of text, using the CSS property
  <span class="inline">display: inline</span>
  will cause the text inside the element to wrap normally.
```

```
  While using the property <span class="inline-block">display: inline-block</span>
  will wrap the element to prevent the text inside from extending beyond its parent.
```

```
  Lastly, using the property <span class="block">display: block</span>
  will put the element on its own line and fill its parent.
</div>
```

7.5 Float



Basic usage

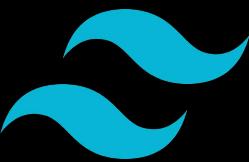
Floating elements to the right

Use the `float-right` utility to float an element to the right of its container.

Maybe we can live without libraries, people like you and me.
Maybe. Sure, we're too old to change the world, but what about that kid, sitting down, opening a book, right now, in a branch at the local library and finding drawings of pee-pees and wee-wees on the Cat in the Hat and the Five Chinese Brothers? Doesn't HE deserve better? Look. If you think this is about overdue fines and missing books, you'd better think again. This is about that kid's right to read a book without getting his mind warped! Or: maybe that turns you on, Seinfeld; maybe that's how y'get your kicks. You and your good-time buddies.



```
  
<p>Maybe we can live without libraries, people like you and me. ...</p>
```



7.6 Position

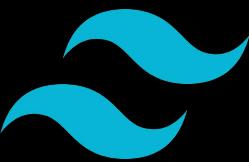
Use the ``static`` utility to position an element according to the normal flow of the document.

Any offsets will be ignored and the element will not act as a position reference for absolutely positioned children.

Static parent

Absolute child

```
<div class="static ...">
  <p>Static parent</p>
  <div class="absolute bottom-0 left-0 ...">
    <p>Absolute child</p>
  </div>
</div>
```



7.6 Position

With static positioning

Relative parent

Static parent

Static child

Static sibling

With absolute positioning

Relative parent

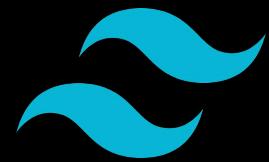
Absolute child

Static parent

Static sibling

```
<div class="static ...">
  <!-- Static parent -->
  <div class="static ..."><p>Static child</p></div>
  <div class="inline-block ..."><p>Static sibling</p></div>
  <!-- Static parent -->
  <div class="absolute ..."><p>Absolute child</p></div>
  <div class="inline-block ..."><p>Static sibling</p></div>
</div>
```

7.7 Top/Right/Bottom/Left



```
<!-- Pin to top left corner -->
<div class="relative h-32 w-32 ...">
  <div class="absolute left-0 top-0 h-16 w-16 ...>01</div>
</div>

<!-- Span top edge -->
<div class="relative h-32 w-32 ...">
  <div class="absolute inset-x-0 top-0 h-16 w-16 ...>02</div>
</div>

<!-- Pin to top right corner -->
<div class="relative h-32 w-32 ...">
  <div class="absolute top-0 right-0 h-16 w-16 ...>03</div>
</div>

<!-- Span left edge -->
<div class="relative h-32 w-32 ...">
  <div class="absolute inset-y-0 left-0 w-16 h-16 ...>04</div>
</div>

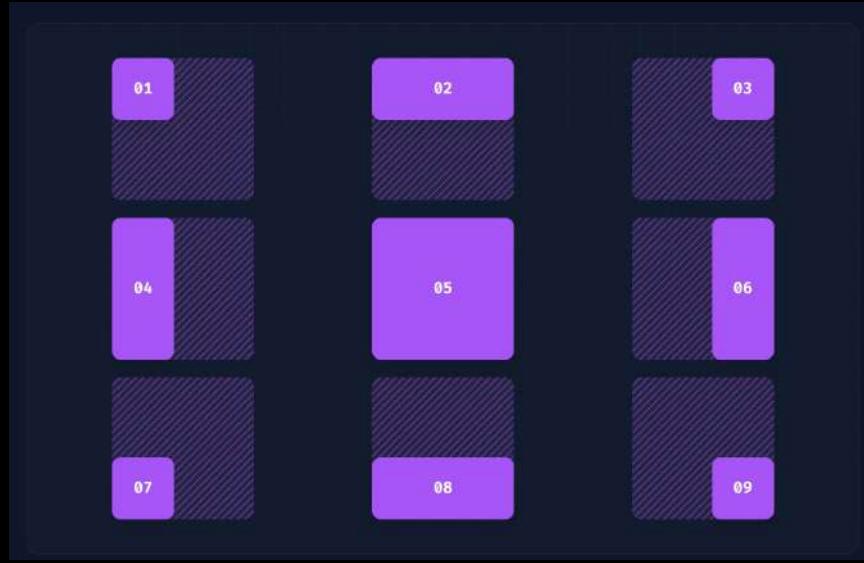
<!-- Fill entire parent -->
<div class="relative h-32 w-32 ...">
  <div class="absolute inset-0 ...>05</div>
</div>

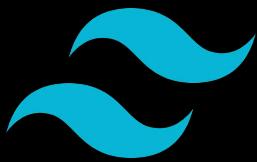
<!-- Span right edge -->
<div class="relative h-32 w-32 ...">
  <div class="absolute inset-y-0 right-0 w-16 h-16 ...>06</div>
</div>

<!-- Pin to bottom left corner -->
<div class="relative h-32 w-32 ...">
  <div class="absolute bottom-0 left-0 h-16 w-16 ...>07</div>
</div>

<!-- Span bottom edge -->
<div class="relative h-32 w-32 ...">
  <div class="absolute inset-x-0 bottom-0 h-16 w-16 ...>08</div>
</div>

<!-- Pin to bottom right corner -->
<div class="relative h-32 w-32 ...">
  <div class="absolute bottom-0 right-0 h-16 w-16 ...>09</div>
</div>
```





7.8 Overflow

Use the `overflow-visible` utility to prevent content within an element from being clipped. Note that any content that overflows the bounds of the element will then be visible.



Andrew Alfred
Technical advisor

```
<div class="overflow-visible ..."></div>
```

Hiding content that overflows

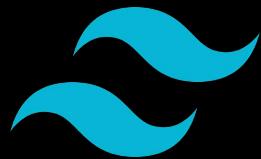
Use the `overflow-hidden` utility to clip any content within an element that overflows the bounds of that element.



Andrew Alfred
Technical advisor

```
<div class="overflow-hidden ..."></div>
```

7.9 Visibility

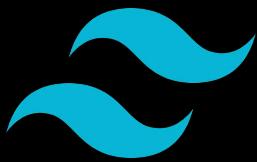


Use the `invisible` utility to hide an element, but still maintain its place in the DOM, affecting the layout of other elements (compare with `hidden` from the [display](#) documentation).

01

03

```
<div class="grid grid-cols-3 gap-4">
  <div>01</div>
  <div class="invisible ...">02</div>
  <div>03</div>
</div>
```



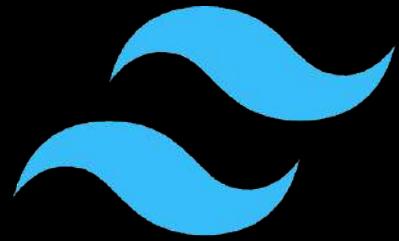
7.10 Z-Index

Setting the z-index

Use the `z-*` utilities to control the stack order (or three-dimensional positioning) of an element, regardless of order it has been displayed.



```
<div class="z-40 ...>05</div>
<div class="z-30 ...>04</div>
<div class="z-20 ...>03</div>
<div class="z-10 ...>02</div>
<div class="z-0 ...>01</div>
```



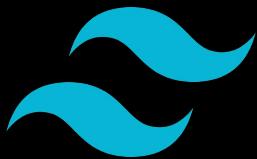
tailwindcss

LEARNING

8. Flex



8.1 Flex



Setting the flex basis

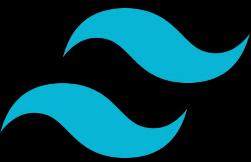
Use the `basis-*` utilities to set the initial size of flex items.

01

02

03

```
<div class="flex flex-row">
  <div class="basis-1/4">01</div>
  <div class="basis-1/4">02</div>
  <div class="basis-1/2">03</div>
</div>
```



8.2 Flex-Direction

Class

Properties

`flex-row`

`flex-direction: row;`

`flex-row-reverse`

`flex-direction: row-reverse;`

`flex-col`

`flex-direction: column;`

`flex-col-reverse`

`flex-direction: column-reverse;`

Basic usage

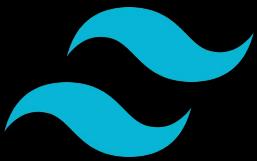
Row

Use `'flex-row'` to position flex items horizontally in the same direction as text:



```
<div class="flex flex-row ...">
  <div>01</div>
  <div>02</div>
  <div>03</div>
</div>
```

8.3 Flex-Wrap



Class

flex-wrap

Properties

flex-wrap: wrap;

flex-wrap-reverse

flex-wrap: wrap-reverse;

flexnowrap

flex-wrap: nowrap;

Wrap normally

Use `flex-wrap` to allow flex items to wrap:

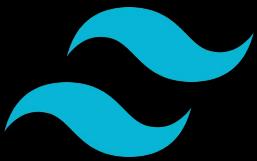
01

02

03

```
<div class="flex flex-wrap">
  <div>01</div>
  <div>02</div>
  <div>03</div>
</div>
```

8.4 Flex-Grow



Class

Properties

grow

flex-grow: 1;

grow-0

flex-grow: 0;

Basic usage

Grow

Use `grow` to allow a flex item to grow to fill any available space:

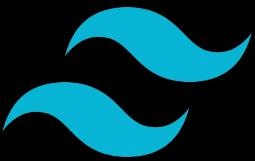
01

02

03

```
<div class="flex ...">
  <div class="flex-none w-14 h-14 ...">
    01
  </div>
  <div class="grow h-14 ...">
    02
  </div>
  <div class="flex-none w-14 h-14 ...">
    03
  </div>
</div>
```

8.5 Flex-Shrink



Class

Properties

shrink	flex-shrink: 1;
shrink-0	flex-shrink: 0;

Basic usage

Shrink

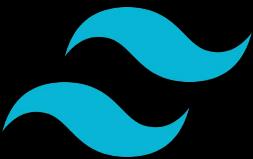
Use `shrink` to allow a flex item to shrink if needed:

01 02 03

A visual representation of three items labeled 01, 02, and 03 arranged horizontally. Item 02 is significantly smaller than items 01 and 03, demonstrating its ability to shrink within a flex container.

```
<div class="flex ...">
  <div class="flex-none w-14 h-14 ...">
    01
  </div>
  <div class="shrink w-64 h-14 ...">
    02
  </div>
  <div class="flex-none w-14 h-14 ...">
    03
  </div>
</div>
```

8.6 Flex

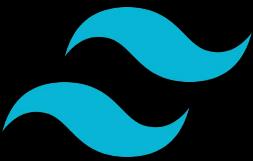


Flex

Utilities for controlling how flex items both grow and shrink.

Class	Properties
flex-1	flex: 1 1 0%;
flex-auto	flex: 1 1 auto;
flex-initial	flex: 0 1 auto;
flex-none	flex: none;

8.6 Flex

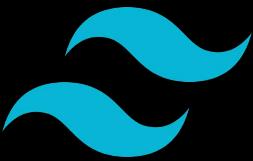


Use `flex-initial` to allow a flex item to shrink but not grow, taking into account its initial size:



```
<div class="flex">
  <div class="flex-none w-14 ...">
    01
  </div>
  <div class="flex-initial w-64 ...">
    02
  </div>
  <div class="flex-initial w-32 ...">
    03
  </div>
</div>
```

8.6 Flex



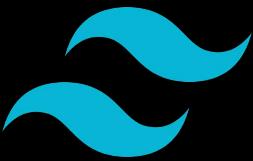
Flex 1

Use `flex-1` to allow a flex item to grow and shrink as needed, ignoring its initial size:



```
<div class="flex">
  <div class="flex-none w-14 ...">
    01
  </div>
  <div class="flex-1 w-64 ...">
    02
  </div>
  <div class="flex-1 w-32 ...">
    03
  </div>
</div>
```

8.6 Flex



Auto

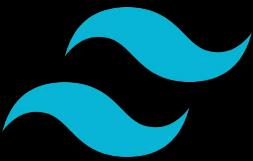
Use `flex-auto` to allow a flex item to grow and shrink, taking into account its initial size:

A horizontal row of three purple rectangular boxes. Each box contains a white number: '01' in the first, '02' in the second, and '03' in the third. The boxes are separated by thin vertical lines and are set against a dark background with a light gray rounded rectangle behind them.

01 02 03

```
<div class="flex ...>
  <div class="flex-none w-14 ...>
    01
  </div>
  <div class="flex-auto w-64 ...>
    02
  </div>
  <div class="flex-auto w-32 ...>
    03
  </div>
</div>
```

8.6 Flex



None

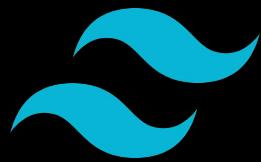
Use `flex-none` to prevent a flex item from growing or shrinking:

A horizontal row of three blue rounded rectangular boxes. The first two boxes contain the numbers "01" and "02" respectively. The third box is longer and contains the number "03".

01 02 03

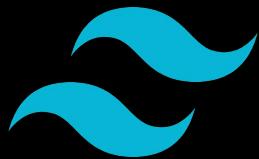
```
<div class="flex ...">
  <div class="flex-none w-14 ...">
    01
  </div>
  <div class="flex-none w-32 ...">
    02
  </div>
  <div class="flex-1 ...">
    03
  </div>
</div>
```

8.7 Justify-Content



Class	Properties
justify-normal	justify-content: normal;
justify-start	justify-content: flex-start;
justify-end	justify-content: flex-end;
justify-center	justify-content: center;
justify-between	justify-content: space-between;
justify-around	justify-content: space-around;
justify-evenly	justify-content: space-evenly;
justify-stretch	justify-content: stretch;

8.7 Justify-Content



Start

Use `justify-start` to justify items against the start of the container's main axis:



```
<div class="flex justify-start ...">
  <div>01</div>
  <div>02</div>
  <div>03</div>
</div>
```

Center

Use `justify-center` to justify items along the center of the container's main axis:



```
<div class="flex justify-center ...">
  <div>01</div>
  <div>02</div>
  <div>03</div>
</div>
```

End

Use `justify-end` to justify items against the end of the container's main axis:



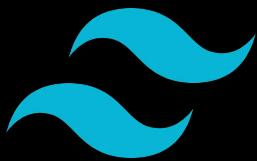
```
<div class="flex justify-end ...">
  <div>01</div>
  <div>02</div>
  <div>03</div>
</div>
```

Space between

Use `justify-between` to justify items along the container's main axis such that there is an equal amount of space between each item:



```
<div class="flex justify-between ...">
  <div>01</div>
  <div>02</div>
  <div>03</div>
</div>
```



8.8 Align-Items

Class

Properties

`items-start`

`align-items: flex-start;`

`items-end`

`align-items: flex-end;`

`items-center`

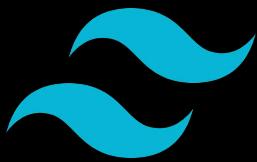
`align-items: center;`

`items-baseline`

`align-items: baseline;`

`items-stretch`

`align-items: stretch;`



8.8 Align-Items

Stretch

Use `'items-stretch'` to stretch items to fill the container's cross axis:

Three teal rounded rectangular boxes are arranged horizontally. Each box contains a white number: '01' in the first, '02' in the second, and '03' in the third. The boxes are separated by thin black vertical borders. The background behind the boxes is dark gray.

01 02 03

```
<div class="flex items-stretch ...">
  <div class="py-4">01</div>
  <div class="py-12">02</div>
  <div class="py-8">03</div>
</div>
```

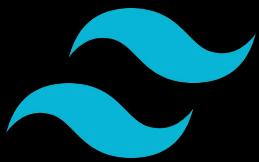
Start

Use `'items-start'` to align items to the start of the container's cross axis:

Three pink rounded rectangular boxes are arranged horizontally. Each box contains a white number: '01' in the first, '02' in the second, and '03' in the third. The boxes are separated by thin black vertical borders. The background behind the boxes is dark gray.

01 02 03

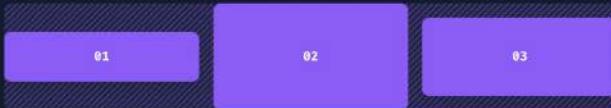
```
<div class="flex items-start ...">
  <div class="py-4">01</div>
  <div class="py-12">02</div>
  <div class="py-8">03</div>
</div>
```



8.8 Align-Items

Center

Use `'items-center'` to align items along the center of the container's cross axis:



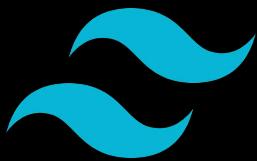
```
<div class="flex items-center ...">
  <div class="py-4">01</div>
  <div class="py-12">02</div>
  <div class="py-8">03</div>
</div>
```

End

Use `'items-end'` to align items to the end of the container's cross axis:



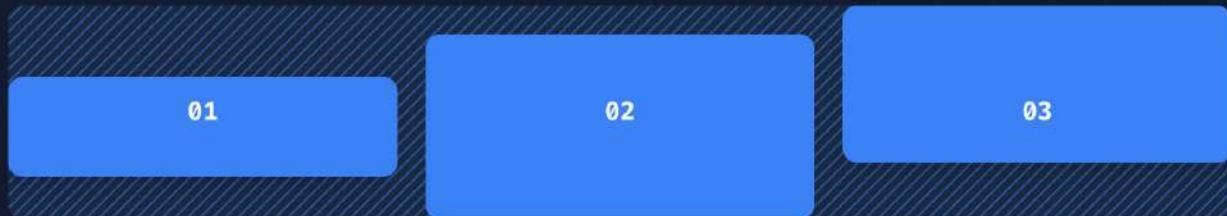
```
<div class="flex items-end ...">
  <div class="py-4">01</div>
  <div class="py-12">02</div>
  <div class="py-8">03</div>
</div>
```



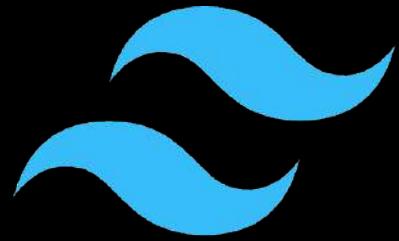
8.8 Align-Items

Baseline

Use `items-baseline` to align items along the container's cross axis such that all of their baselines align:



```
<div class="flex items-baseline ...">
  <div class="pt-2 pb-6">01</div>
  <div class="pt-8 pb-12">02</div>
  <div class="pt-12 pb-4">03</div>
</div>
```



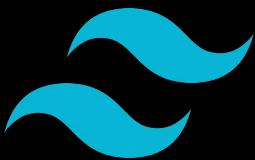
tailwindcss

LEARNING

9. *Grid*

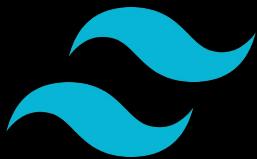


9.1 Grid Template Column



Class	Properties
grid-cols-1	grid-template-columns: repeat(1, minmax(0, 1fr));
grid-cols-2	grid-template-columns: repeat(2, minmax(0, 1fr));
grid-cols-3	grid-template-columns: repeat(3, minmax(0, 1fr));
grid-cols-4	grid-template-columns: repeat(4, minmax(0, 1fr));
grid-cols-5	grid-template-columns: repeat(5, minmax(0, 1fr));
grid-cols-6	grid-template-columns: repeat(6, minmax(0, 1fr));
grid-cols-7	grid-template-columns: repeat(7, minmax(0, 1fr));
grid-cols-8	grid-template-columns: repeat(8, minmax(0, 1fr));
grid-cols-9	grid-template-columns: repeat(9, minmax(0, 1fr));
grid-cols-10	grid-template-columns: repeat(10, minmax(0, 1fr));
grid-cols-11	grid-template-columns: repeat(11, minmax(0, 1fr));
grid-cols-12	grid-template-columns: repeat(12, minmax(0, 1fr));
grid-cols-none	grid-template-columns: none;
grid-cols-subgrid	grid-template-columns: subgrid;

9.1 Grid Template Column



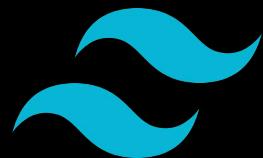
Specifying the columns in a grid

Use the `grid-cols-*` utilities to create grids with n equally sized columns.



```
<div class="grid grid-cols-4 gap-4">
  <div>01</div>
  <!-- ... -->
  <div>09</div>
</div>
```

9.1 Grid Template Column



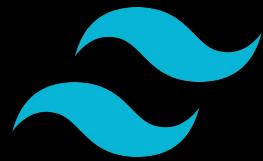
Applying conditionally

Hover, focus, and other states

Tailwind lets you conditionally apply utility classes in different states using variant modifiers. For example, use `hover:grid-cols-6` to only apply the `grid-cols-6` utility on hover.

```
<div class="grid grid-cols-1 hover:grid-cols-6">  
  <!-- ... -->  
</div>
```

9.2 Grid Column Start / End



Spanning columns

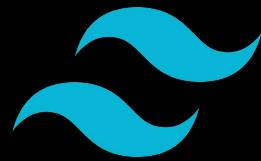
Use the `col-span-*` utilities to make an element span n columns.

A grid layout with 7 columns. Columns 01, 02, and 03 are single columns. Column 04 spans 2 columns, so it covers columns 04 and 05. Column 06 spans 2 columns, so it covers columns 06 and 07. All columns have rounded corners and a slight shadow.

01	02	03				
			04	05		
					06	07

```
<div class="grid grid-cols-3 gap-4">
  <div class="...">01</div>
  <div class="...">02</div>
  <div class="...">03</div>
  <div class="col-span-2 ...">04</div>
  <div class="...">05</div>
  <div class="...">06</div>
  <div class="col-span-2 ...">07</div>
</div>
```

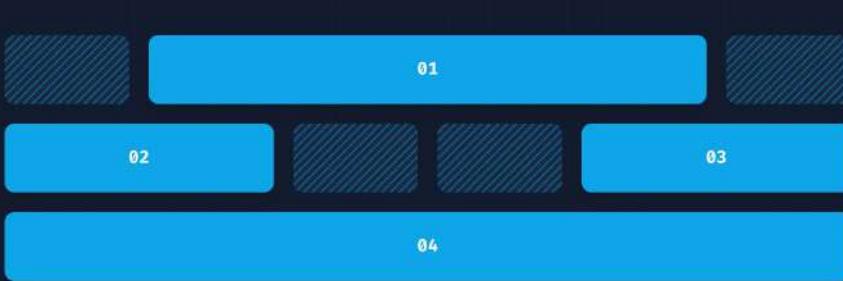
9.2 Grid Column Start / End



Starting and ending lines

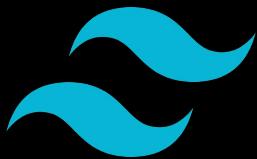
Use the `'col-start-*'` and `'col-end-*'` utilities to make an element start or end at the *nth* grid line. These can also be combined with the `'col-span-*'` utilities to span a specific number of columns.

Note that CSS grid lines start at 1, not 0, so a full-width element in a 6-column grid would start at line 1 and end at line 7.



```
<div class="grid grid-cols-6 gap-4">
  <div class="col-start-2 col-span-4 ...">01</div>
  <div class="col-start-1 col-end-3 ...">02</div>
  <div class="col-end-7 col-span-2 ...">03</div>
  <div class="col-start-1 col-end-7 ...">04</div>
</div>
```

9.3 Grid Template Rows



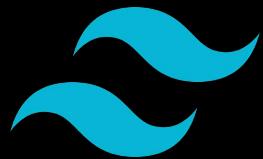
Specifying the rows in a grid

Use the `grid-rows-*` utilities to create grids with n equally sized rows.



```
<div class="grid grid-rows-4 grid-flow-col gap-4">
  <div>01</div>
  <!-- ... -->
  <div>09</div>
</div>
```

9.4 Grid Row Start/End



Basic usage

Spanning rows

Use the `row-span-*` utilities to make an element span n rows.

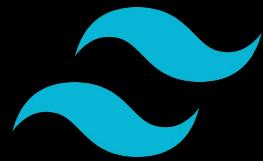
01

02

03

```
<div class="grid grid-rows-3 grid-flow-col gap-4">
  <div class="row-span-3 ...">01</div>
  <div class="col-span-2 ...">02</div>
  <div class="row-span-2 col-span-2 ...">03</div>
</div>
```

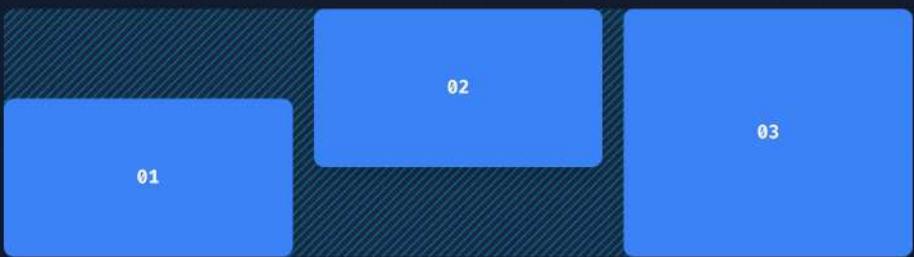
9.4 Grid Row Start/End



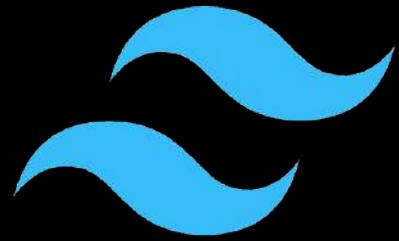
Starting and ending lines

Use the `row-start-*` and `row-end-*` utilities to make an element start or end at the *n*th grid line. These can also be combined with the `row-span-*` utilities to span a specific number of rows.

Note that CSS grid lines start at 1, not 0, so a full-height element in a 3-row grid would start at line 1 and end at line 4.



```
<div class="grid grid-rows-3 grid-flow-col gap-4">
  <div class="row-start-2 row-span-2 ...">01</div>
  <div class="row-end-3 row-span-2 ...">02</div>
  <div class="row-start-1 row-end-4 ...">03</div>
</div>
```



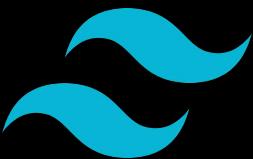
tailwindcss

LEARNING

10. *Border*



10.1 Border Radius



Rounded corners

Use utilities like `'rounded-sm'`, `'rounded'`, or `'rounded-lg'` to apply different border radius sizes to an element.

rounded



rounded-md



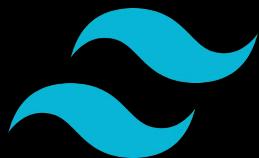
rounded-lg



rounded-full



```
<div class="rounded ..."></div>
<div class="rounded-md ..."></div>
<div class="rounded-lg ..."></div>
<div class="rounded-full ..."></div>
```



10.2 Border Width

Use the `border`, `border-0`, `border-2`, `border-4`, or `border-8` utilities to set the border width for all sides of an element.

border



border-2



border-4

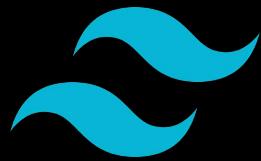


border-8



```
<div class="border border-sky-500"></div>
<div class="border-2 border-sky-500"></div>
<div class="border-4 border-sky-500"></div>
<div class="border-8 border-sky-500"></div>
```

10.3 Border Color



Setting the border color

Use the ``border-*`` utilities to control the border color of an element.

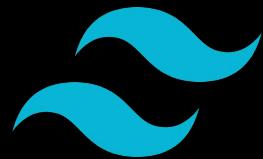
Email address

jane@example.com

This field is required.

```
<input class="border-2 border-rose-500 ..." >
```

10.3 Border Color



Changing the opacity

Use the color opacity modifier to control the opacity of an element's border color.

border-indigo-500/100



border-indigo-500/75

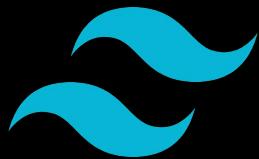


border-indigo-500/50



```
<div class="border-4 border-indigo-500/100 ..." ></div>
<div class="border-4 border-indigo-500/75 ..." ></div>
<div class="border-4 border-indigo-500/50 ..." ></div>
```

10.4 Border Style



Setting the border style

Use `border-*` to control an element's border style.

border-solid

Button A

border-dashed

Button A

border-dotted

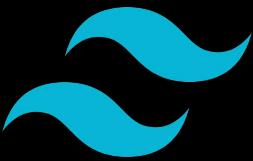
Button A

border-double

Button A

```
<div class="border-solid border-2 border-sky-500 ..."></div>
<div class="border-dashed border-2 border-sky-500 ..."></div>
<div class="border-dotted border-2 border-sky-500 ..."></div>
<div class="border-double border-4 border-sky-500 ..."></div>
```

10.5 Divide Width



Add borders between horizontal children

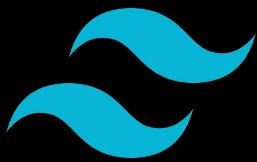
Use the `divide-x-*` utilities to add borders between horizontal elements.

01

02

03

```
<div class="grid grid-cols-3 divide-x">
  <div>01</div>
  <div>02</div>
  <div>03</div>
</div>
```



10.5 Divide Width

Add borders between stacked children

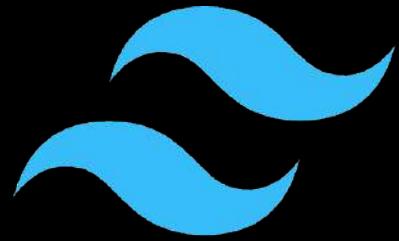
Use the `divide-y-*` utilities to add borders between stacked elements.

01

02

03

```
<div class="grid grid-cols-1 divide-y">
  <div>01</div>
  <div>02</div>
  <div>03</div>
</div>
```

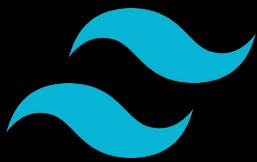


tailwindcss

LEARNING

11. Effects

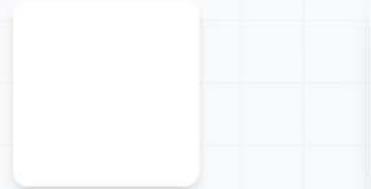




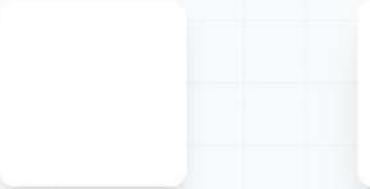
11.1 Box Shadow

Use the `shadow-sm`, `shadow`, `shadow-md`, `shadow-lg`, `shadow-xl`, or `shadow-2xl` utilities to apply different sized outer box shadows to an element.

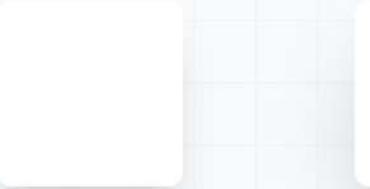
shadow-md



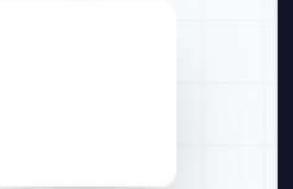
shadow-lg



shadow-xl

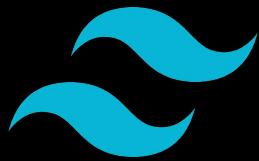


shadow-2xl



```
<div class="shadow-md ..."></div>
<div class="shadow-lg ..."></div>
<div class="shadow-xl ..."></div>
<div class="shadow-2xl ..."></div>
```

11.1 Box Shadow



Adding an inner shadow

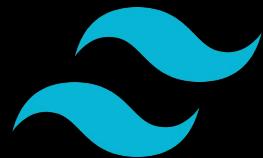
Use the ``shadow-inner`` utility to apply a subtle inset box shadow to an element. This can be useful for things like form controls or wells.

shadow-inner



```
<div class="shadow-inner ..."></div>
```

11.2 Box Shadow Color



Basic usage

Setting the box shadow color

Use the `shadow-*` utilities to change the color of an existing box shadow. By default colored shadows have an opacity of 100%, but you can adjust this using the opacity modifier.

shadow-cyan-500/50

Subscribe

shadow-blue-500/50

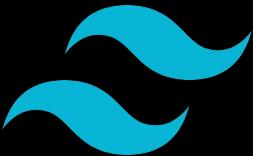
Subscribe

shadow-indigo-500/50

Subscribe

```
<button class="bg-cyan-500 shadow-lg shadow-cyan-500/50 ..." >Subscribe</button>
<button class="bg-blue-500 shadow-lg shadow-blue-500/50 ..." >Subscribe</button>
<button class="bg-indigo-500 shadow-lg shadow-indigo-500/50 ..." >Subscribe</button>
```

11.3 Opacity



Basic usage

Changing an element's opacity

Use the `opacity-*` utilities to control the opacity of an element.

opacity-100

opacity-75

opacity-50

opacity-25

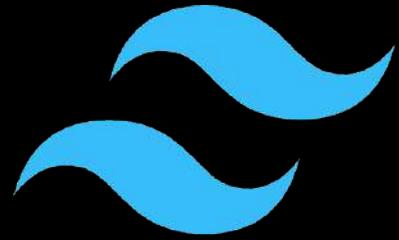
Button A

Button B

Button C

Button D

```
<button class="bg-indigo-500 opacity-100 ..." ></button>
<button class="bg-indigo-500 opacity-75 ..." ></button>
<button class="bg-indigo-500 opacity-50 ..." ></button>
<button class="bg-indigo-500 opacity-25 ..." ></button>
```

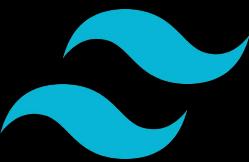


tailwindcss

LEARNING

12. Filters





12.1 Blur

Use the `blur-*` utilities to blur an element.

blur-none



blur-sm



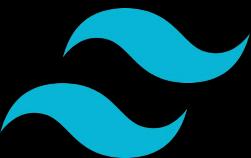
blur-lg



blur-2xl



```
<div class="blur-none ...">  
  <!-- ... -->  
</div>  
<div class="blur-sm ...">  
  <!-- ... -->  
</div>  
<div class="blur-lg ...">  
  <!-- ... -->  
</div>  
<div class="blur-2xl ...">  
  <!-- ... -->  
</div>
```



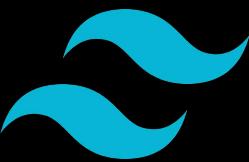
12.1 Blur

Removing filters

To remove all of the filters on an element at once, use the ``filter-none`` utility:

```
<div class="blur-md invert brightness-150 md:filter-none">  
  <!-- ... -->  
</div>
```

This can be useful when you want to remove filters conditionally, such as on hover or at a particular breakpoint.



12.2 Brightness

Use the `brightness-*` utilities to control an element's brightness.

brightness-50



brightness-100



brightness-125

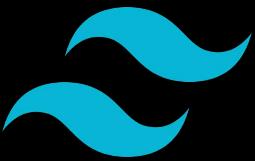


brightness-200



```
<div class="brightness-50 ...">  
  <!-- ... -->  
</div>  
<div class="brightness-100 ...">  
  <!-- ... -->  
</div>  
<div class="brightness-125 ...">  
  <!-- ... -->  
</div>  
<div class="brightness-200 ...">  
  <!-- ... -->  
</div>
```

12.3 Contrast



Use the `~contrast-*`` utilities to control an element's contrast.

contrast-50



contrast-100



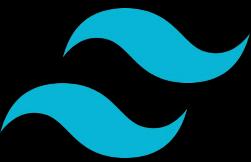
contrast-125



contrast-200



```
<div class="contrast-50 ..." >
  <!-- ... -->
</div>
<div class="contrast-100 ..." >
  <!-- ... -->
</div>
<div class="contrast-125 ..." >
  <!-- ... -->
</div>
<div class="contrast-200 ..." >
  <!-- ... -->
</div>
```



12.4 Drop Shadow

Use the `drop-shadow-*` utilities to add a drop shadow to an element.

`drop-shadow-md`



`drop-shadow-lg`



`drop-shadow-xl`

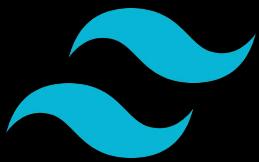


`drop-shadow-2xl`



```
<div class="drop-shadow-md ...">
  <!-- ... -->
</div>
<div class="drop-shadow-lg ...">
  <!-- ... -->
</div>
<div class="drop-shadow-xl ...">
  <!-- ... -->
</div>
<div class="drop-shadow-2xl ...">
  <!-- ... -->
</div>
```

This is useful for applying shadows to irregular shapes, like text and SVG elements. For applying shadows to regular elements, you probably want to use box shadow instead.



12.5 Grayscale

Use the `grayscale` and `grayscale-0` utilities to control whether an element should be rendered as grayscale or in full color.

grayscale-0

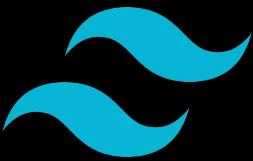


grayscale



```
<div class="grayscale-0 ...">  
  <!-- ... -->  
</div>  
<div class="grayscale ...">  
  <!-- ... -->  
</div>
```

12.6 Invert



Use the `invert` and `invert-0` utilities to control whether an element should be rendered with inverted colors or normally.

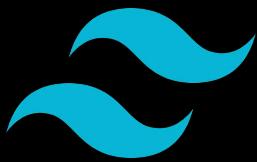
invert-0



invert



```
<div class="invert-0 ...">  
  <!-- ... -->  
</div>  
<div class="invert ...">  
  <!-- ... -->  
</div>
```



12.7 Sepia

Use the `sepia` and `sepia-0` utilities to control whether an element should be rendered as sepia or in full color.

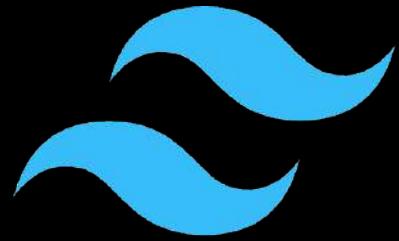
sepia-0



sepia



```
<div class="sepia-0 ...">  
  <!-- ... -->  
</div>  
<div class="sepia ...">  
  <!-- ... -->  
</div>
```



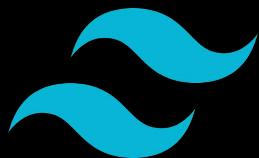
tailwindcss

LEARNING

13. *Animations*



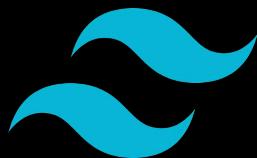
13.1 Transition Property



Save Changes

```
<button class="transition ease-in-out delay-150 bg-blue-500  
hover:-translate-y-1 hover:scale-110 hover:bg-indigo-500  
duration-300">  
  Save Changes  
</button>
```

13.2 Transition Duration



Use the `duration-*` utilities to control an element's transition-duration.

👉 Hover each button to see the expected behaviour

duration-150

Button A

duration-300

Button B

duration-700

Button C

```
<button class="transition duration-150 ease-in-out ...">Button A</button>
<button class="transition duration-300 ease-in-out ...">Button B</button>
<button class="transition duration-700 ease-in-out ...">Button C</button>
```

13.3 Transition Timing Function



Use the `ease-*` utilities to control an element's easing curve.

💡 Hover each button to see the expected behaviour

ease-in

Button A

ease-out

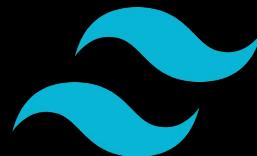
Button B

ease-in-out

Button C

```
<button class="ease-in duration-300 ...">Button A</button>
<button class="ease-out duration-300 ...">Button B</button>
<button class="ease-in-out duration-300 ...">Button C</button>
```

13.4 Transition Delay



Use the `delay-*` utilities to control an element's transition-delay.

👉 Hover each button to see the expected behaviour

delay-150

Button A

delay-300

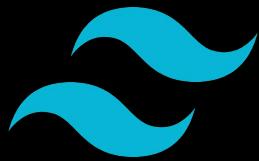
Button B

delay-700

Button C

```
<button class="transition delay-150 duration-300 ease-in-out ...">Button A</button>
<button class="transition delay-300 duration-300 ease-in-out ...">Button B</button>
<button class="transition delay-700 duration-300 ease-in-out ...">Button C</button>
```

13.5 Animation



Spin

Add the `'animate-spin'` utility to add a linear spin animation to elements like loading indicators.

 Processing...

```
<button type="button" class="bg-indigo-500 ..." disabled>
  <svg class="animate-spin h-5 w-5 mr-3 ..." viewBox="0 0 24 24">
    <!-- ... -->
  </svg>
  Processing...
</button>
```

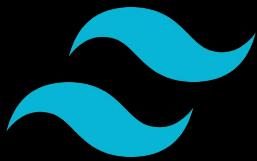
Ping

Add the `'animate-ping'` utility to make an element scale and fade like a radar ping or ripple of water — useful for things like notification badges.

Transactions 

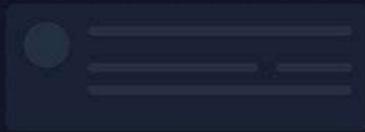
```
<span class="relative flex h-3 w-3">
  <span class="animate-ping absolute inline-flex h-full w-full rounded-full bg-sky-400"></span>
  <span class="relative inline-flex rounded-full h-3 w-3 bg-sky-500"></span>
```

13.5 Animation



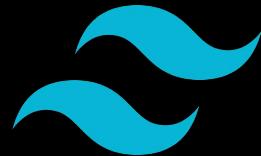
Pulse

Add the `animate-pulse` utility to make an element gently fade in and out — useful for things like skeleton loaders.



```
<div class="border border-blue-300 shadow rounded-md p-4 max-w-sm w-full mx-auto">
  <div class="animate-pulse flex space-x-4">
    <div class="rounded-full bg-slate-700 h-10 w-10"></div>
    <div class="flex-1 space-y-6 py-1">
      <div class="h-2 bg-slate-700 rounded"></div>
      <div class="space-y-3">
        <div class="grid grid-cols-3 gap-4">
          <div class="h-2 bg-slate-700 rounded col-span-2"></div>
          <div class="h-2 bg-slate-700 rounded col-span-1"></div>
        </div>
        <div class="h-2 bg-slate-700 rounded"></div>
      </div>
    </div>
  </div>
</div>
```

13.5 Animation



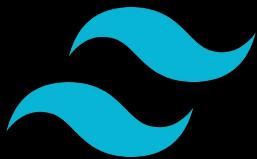
Bounce

Add the `animate-bounce` utility to make an element bounce up and down — useful for things like "scroll down" indicators.



```
<svg class="animate-bounce w-6 h-6 ...">  
  <!-- -->  
</svg>
```

13.6 Scale



Scaling an element

Use the `scale-*`, `scale-x-*`, and `scale-y-*` utilities to scale an element.

scale-75



scale-100

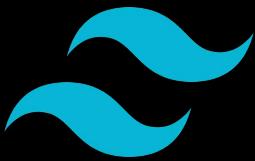


scale-125



```
<img class="scale-75 ...">  
<img class="scale-100 ...">  
<img class="scale-125 ...">
```

13.7 Rotate



Rotating an element

Use the `rotate-*` utilities to rotate an element.

rotate-0



rotate-45



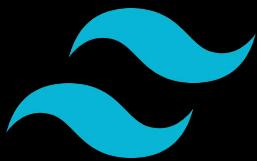
rotate-90



rotate-180



```
<img class="rotate-0 ...">
<img class="rotate-45 ...">
<img class="rotate-90 ...">
<img class="rotate-180 ...">
```



13.8 Translate

Translating an element

Use the `translate-x-*` and `translate-y-*` utilities to translate an element.

translate-y-6



-translate-y-6

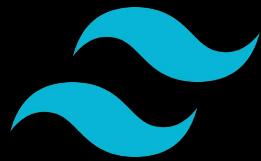


translate-x-6



```
<img class="translate-y-6 ...">  
<img class="-translate-y-6 ...">  
<img class="translate-x-6 ...">
```

13.9 Skew



Use the `skew-x-*` and `skew-y-*` utilities to skew an element.

skew-y-0



skew-y-3



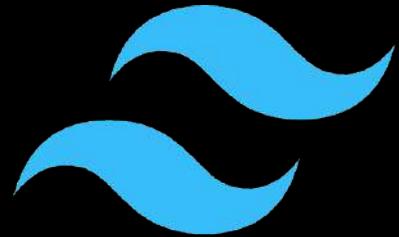
skew-y-6



skew-y-12



```
<img class="skew-y-0 ..." >  
<img class="skew-y-3 ..." >  
<img class="skew-y-6 ..." >  
<img class="skew-y-12 ..." >
```

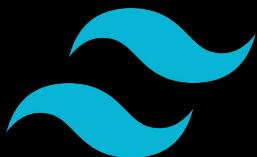


tailwindcss

LEARNING

14. Advance Concepts





14.1 Reusing Styles

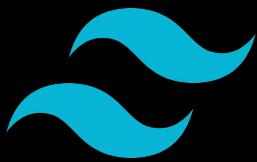
Multi-cursor editing

When duplication is localized to a group of elements in a single file, the easiest way to deal with it is to use **multi-cursor editing** to quickly select and edit the class list for each element at once:

Home Team Projects Reports

```
<nav class="flex justify-center space-x-4">
  <a href="/dashboard" class="font-medium px-3 py-2 text-slate-700 rounded-lg hover:b
  <a href="/team" class="font-medium px-3 py-2 text-slate-700 rounded-lg hover:bg-sla
  <a href="/projects" class="font-medium px-3 py-2 text-slate-700 rounded-lg hover:bg-
  <a href="/reports" class="font-medium px-3 py-2 text-slate-700 rounded-lg hover:bg-
</nav>
```

You'd be surprised at how often this ends up being the best solution. If you can quickly edit all of the duplicated class lists simultaneously, there's no benefit to introducing any additional abstraction.



14.1 Reusing Styles

Loops

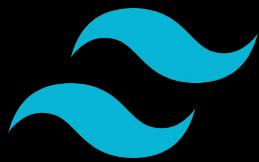
Before you assume you're going to need to extract a component or create a custom class for something, make sure you're *actually* using it more than once in your template.

A lot of the time a design element that shows up more than once in the rendered page is only actually authored once because the actual markup is rendered in a loop.

For example, the duplicate avatars at the beginning of this guide would almost certainly be rendered in a loop in a real project:



```
<div>
  <div class="flex items-center space-x-2 text-base">
    <h4 class="font-semibold text-slate-900">Contributors</h4>
    <span class="rounded-full bg-slate-100 px-2 py-1 text-xs font-semibold text-slate-900">204</span>
  </div>
  <div class="mt-3 flex -space-x-2 overflow-hidden">
    {#each contributors as user}
      
    {/each}
  </div>
  <div class="mt-3 text-sm font-medium">
    <a href="#" class="text-blue-500">+ 198 others</a>
  </div>
</div>
```



14.1 Reusing Styles

Extracting components and partials

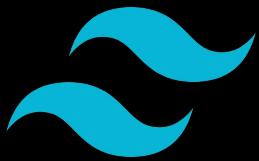
If you need to reuse some styles across multiple files, the best strategy is to create a *component* if you're using a front-end framework like React, Svelte, or Vue, or a *template partial* if you're using a templating language like Blade, ERB, Twig, or Nunjucks.



PRIVATE VILLA
Relaxing All-Inclusive Resort in
Cancun

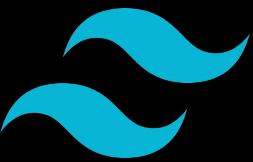
\$299 USD per night

14.2 Adding Custom Styles



tailwind.config.js

```
/** @type {import('tailwindcss').Config} */
module.exports = {
  theme: {
    screens: {
      sm: '480px',
      md: '768px',
      lg: '976px',
      xl: '1440px',
    },
    colors: {
      'blue': '#1fb6ff',
      'pink': '#ff49db',
      'orange': '#ff7849',
      'green': '#13ce66',
      'gray-dark': '#273444',
      'gray': '#8492a6',
      'gray-light': '#d3dce6',
    },
    fontFamily: {
      sans: ['Graphik', 'sans-serif'],
      serif: ['Merriweather', 'serif'],
    },
    extend: {
      spacing: {
        '128': '32rem',
        '144': '36rem',
      },
      borderRadius: {
        '4xl': '2rem',
      }
    }
}
```



14.3 Directives

@layer

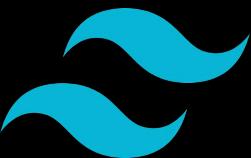
Use the `@layer` directive to tell Tailwind which "bucket" a set of custom styles belong to. Valid layers are `base`, `components`, and `utilities`.

```
@tailwind base;
@tailwind components;
@tailwind utilities;

@layer base {
  h1 {
    @apply text-2xl;
  }
  h2 {
    @apply text-xl;
  }
}

@layer components {
  .btn-blue {
    @apply bg-blue-500 hover:bg-blue-700 text-white font-bold py-2 px-4 rounded;
  }
}

@layer utilities {
  .filter-none {
    filter: none;
  }
  .filter-grayscale {
    filter: grayscale(100%);
  }
}
```



14.3 Directives

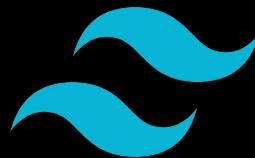
@apply

Use `@apply` to inline any existing utility classes into your own custom CSS.

This is useful when you need to write custom CSS (like to override the styles in a third-party library) but still want to work with your design tokens and use the same syntax you're used to using in your HTML.

```
.select2-dropdown {  
  @apply rounded-b-lg shadow-md;  
}  
.select2-search {  
  @apply border border-gray-300 rounded;  
}  
.select2-results__group {  
  @apply text-lg font-bold text-gray-900;  
}
```

Project: Personal Portfolio



John Doe
Full Stack Developer



About Me

I'm a passionate full stack developer with 5 years of experience in building web applications. I love creating efficient, scalable, and user-friendly solutions to complex problems.

Projects

E-commerce Platform

Developed a fully-functional e-commerce platform with user authentication, product management, and payment integration.

React Node.js MongoDB Stripe

Social Media Dashboard

Created a responsive dashboard for social media analytics, featuring real-time data visualization and reporting.

Vue.js D3.js Express PostgreSQL

Skills

JavaScript React Node.js Python SQL Git AWS Docker

Education

Bachelor of Science in Computer Science

University of Technology, 2015-2019

Full Stack Web Development Bootcamp

Code Academy, 2020

Hobbies & Interests

- Photography
- Hiking
- Playing guitar
- Reading sci-fi novels

Extracurricular Activities

- Volunteer at local coding bootcamp for underprivileged youth
- Organizer of city-wide hackathon event
- Member of the University Chess Club

Contact & Social Media

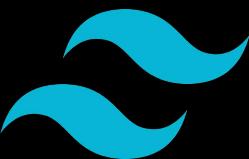
Email: john.doe@example.com

Phone: (123) 456-7890

 LinkedIn

 GitHub

 Twitter

A black and white photograph of a man wearing glasses, a suit, and a tie. He is standing in front of a window with a grid pattern. The image is framed by a thick black border, resembling a television screen. The man's hands are clasped in front of him.

*The
End*