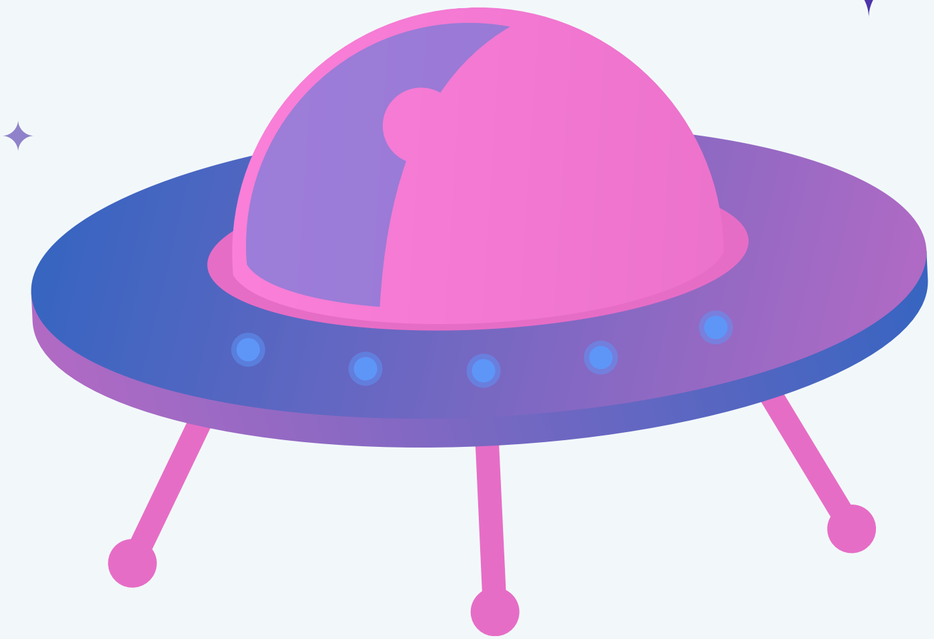
GIT AND GITHUB

CONTENTS

- What is Git?
- What is Github?
- Difference between Git & Github.



WHAT IS A VERSION CONTROL

A WAY TO MANAGE MULTIPLE VERSIONS OF FILES, DOCUMENTS AND DIRECTORIES BETWEEN MULTIPLE AUTHORS

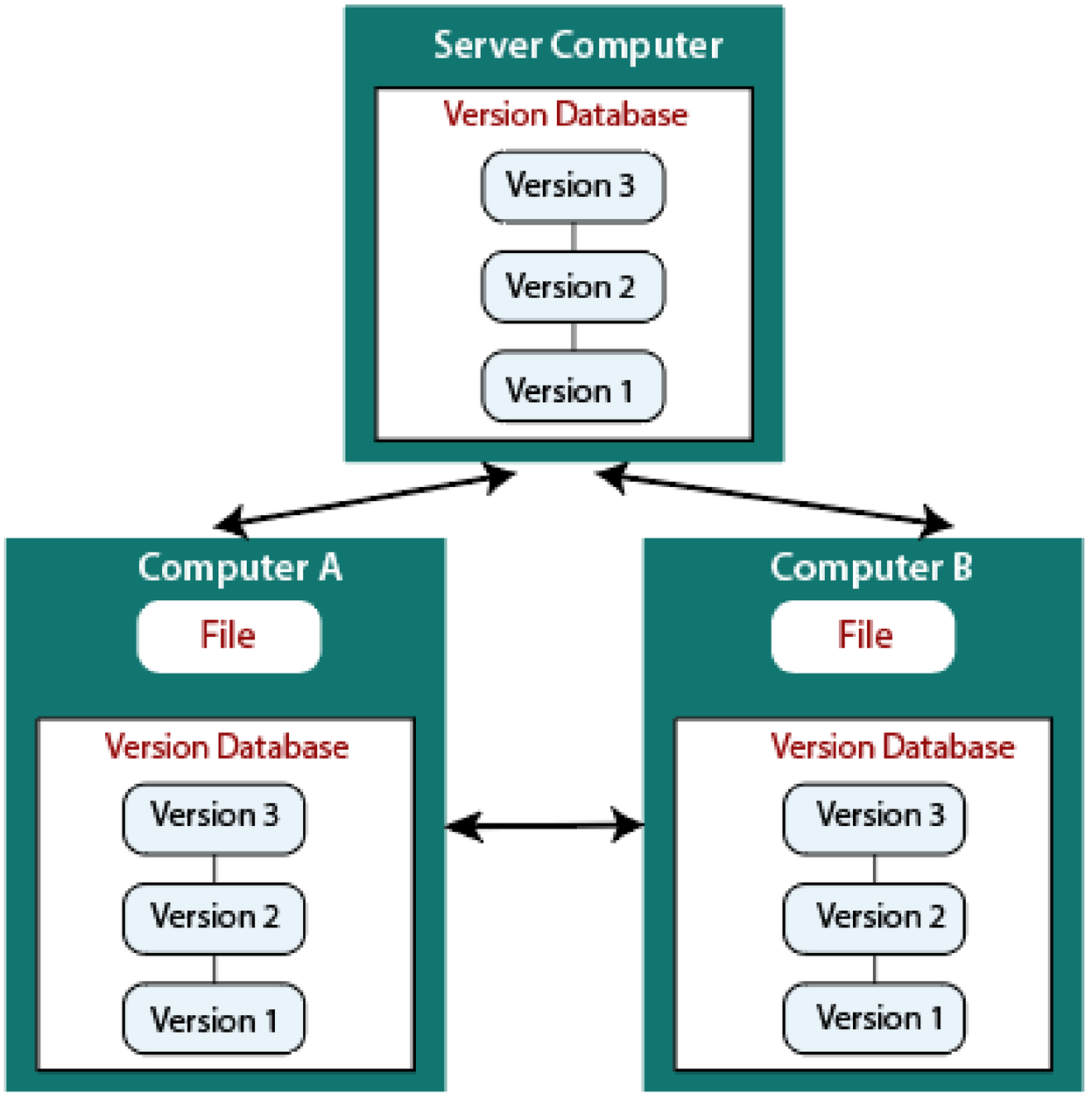
A RECORD OF WH DID WHAT WHEN AND WHY

TRACK CHANGES OVER TIME

RECALL SPECIFIC PREVIOUS VERSIONS LATER

IF AN ERROR IS CREATED, DEVELOPERS WILL FLIP BACK THE CLOCK AND COMPARE EARLIER VERSIONS OF THE CODE TO ASSIST, FIX THE ERROR WHEREAS MINIMIZING DISRUPTION AND TIME LOST TO ALL OR ANY TEAM MEMBERS.

git is a distributed vcs server has the master repo but you have a copy(clone) of the repo in your machine



GIT :

AN OPEN SOURCE VCS DESIGNED FOR SPEED AND EFFICIENCY + FREE.

YOUR CAN USE GIT IN YOUR MACHINE WITHOUT BEING CONNECTED TO THE INTERNET.

THE NEXT TIME YOU CONNECET TO THE INTERNET, PUSH YOUR CHANGES TO A REMOTE REPOSITORY TO SHARE THEM & BACK THEM UP OFFSITE & OFF YOUR COMPUTER.

REVISIONS(COMMITS) YOU MAKE TO YOUR LOCAL REPOSITORY ARE AVAILABLE TO YOU ONLY. + NO NEED TO CONNECT TO CENTRAL SERVER.

SPEED + ABLE TO HANDLE LARGE PROJECTS.

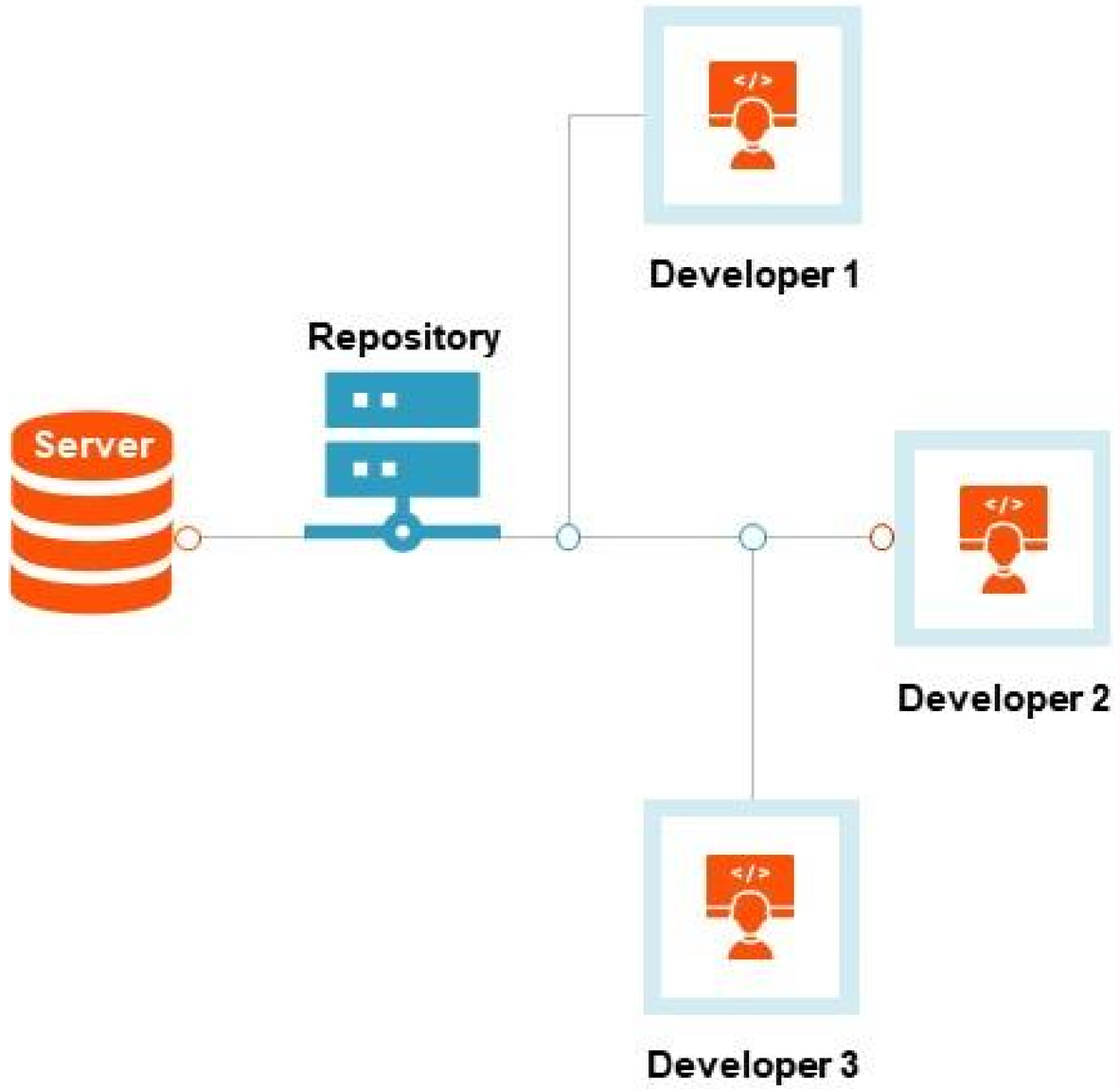
NON LINEAR DEVELOPEMENT

NO SINGLE FAILURE POINT.

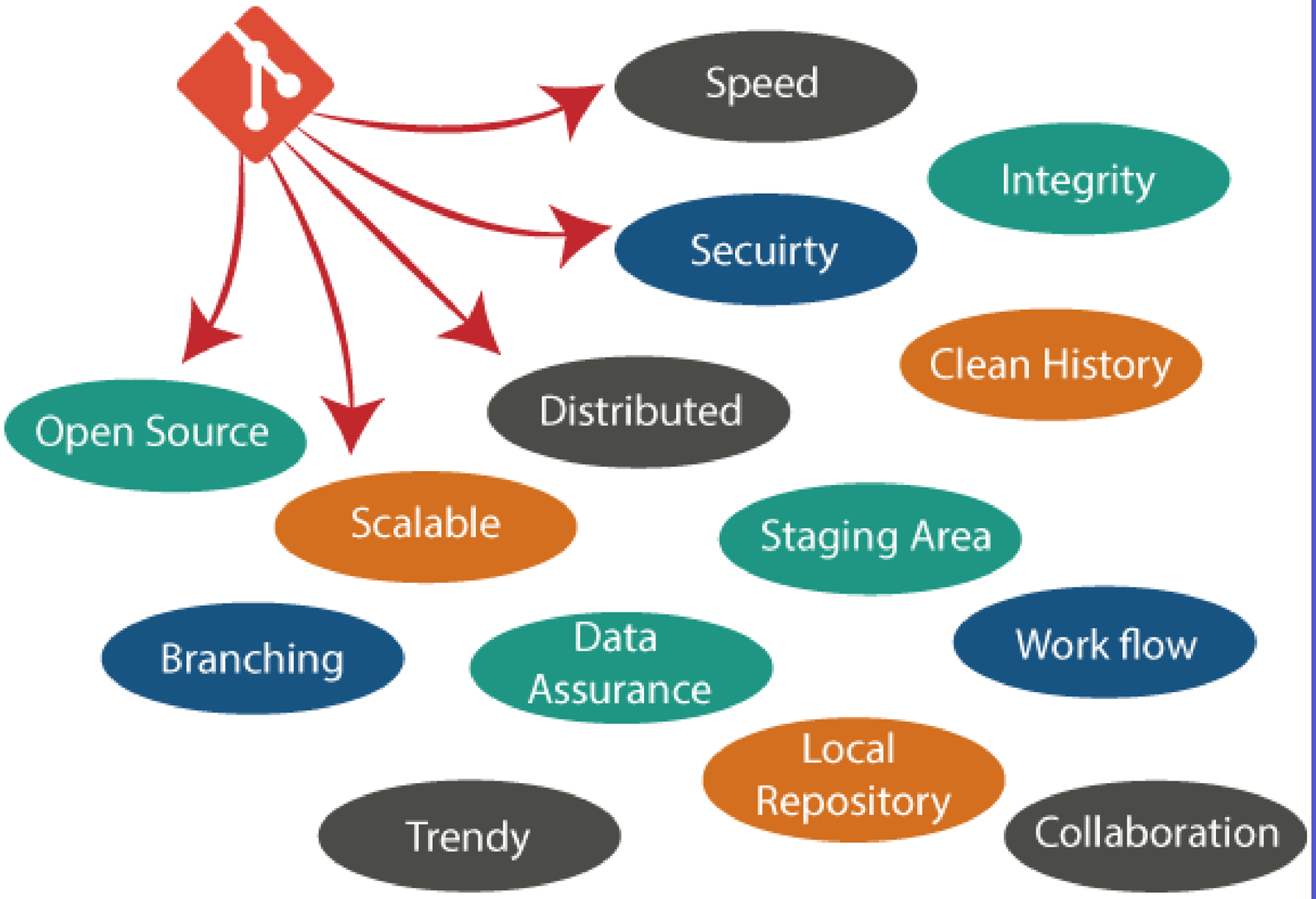
GIT TRACKS CHANGES , NOT VERSIOONS !

EVERY COPY OF A GIT REPOSITORY CAN SERVE EITHEER AS THE SERVEROR AS A CLIENT.

- Performance
- Security
- Flexibility
- Wide Acceptance
- Speed
- Resilience



Why Git?


Speed
Integrity
Securirty
Clean History
Distributed
Open Source
Scalable
Staging Area
Branching
Data Assurance
Work flow
Local Repository
Trendy
Collaboration

IS GIT FOR ME ?

People primarily working with code source.

Anyone wanting to track edits (especially changes to text files)

Anyone not afraid of command line tools.

Git Cheat Sheet

Git Cheat Sheet

Git: configurations

```
$ git config --global user.name "FirstName LastName"
$ git config --global user.email "your-email@email-provider.com"
$ git config --global color.ui true
$ git config --list
```

Git: starting a repository

```
$ git init
$ git status
```

Git: staging files

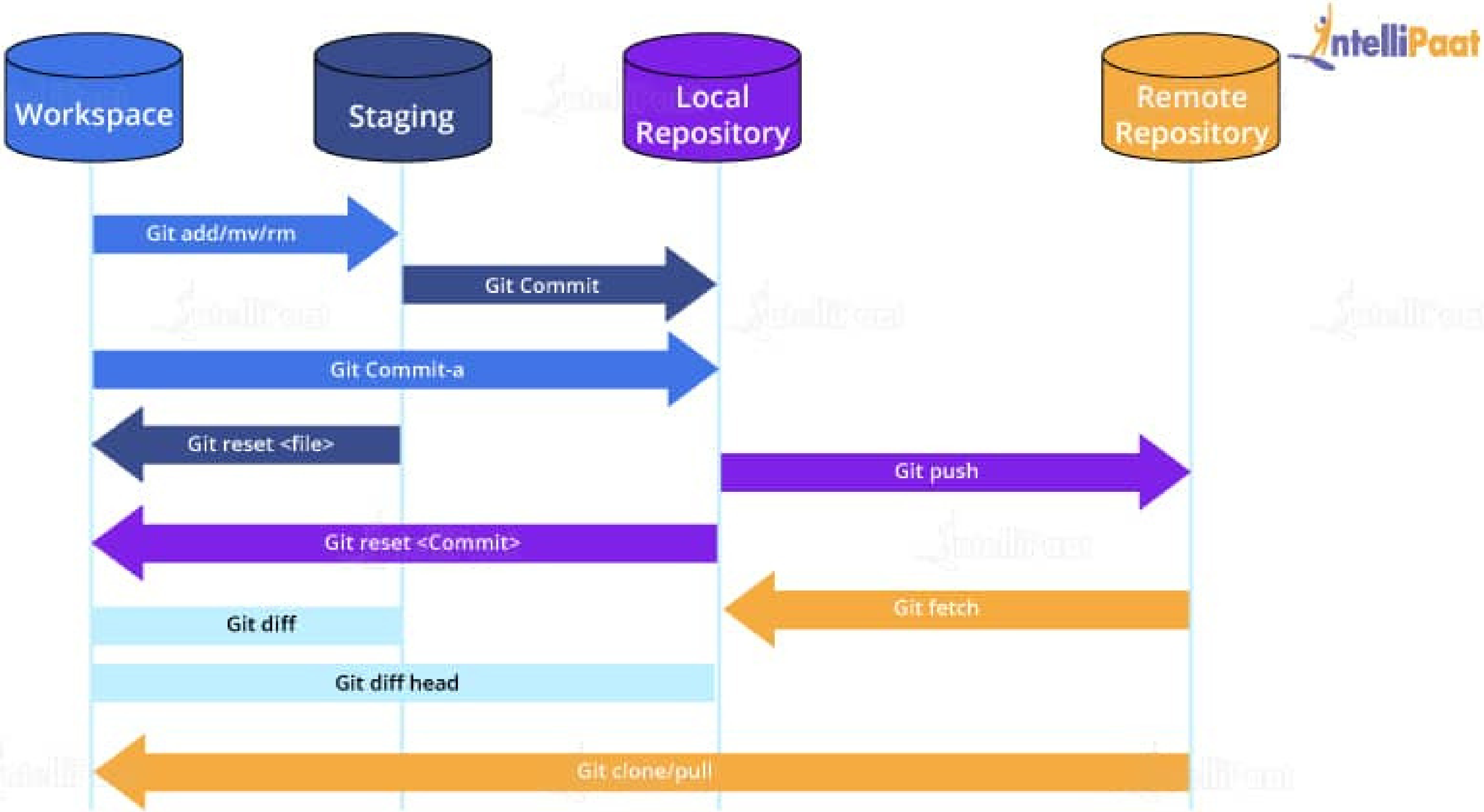
```
$ git add <file-name>
$ git add <file-name> <another-file-name> <yet-another-file-name>
$ git add .
$ git add --all
$ git add -A
$ git rm --cached <file-name>
$ git reset <file-name>
```

Git: committing to a repository

```
$ git commit -m "Add three files"
$ git reset --soft HEAD^
$ git commit --amend -m <enter your message>
```

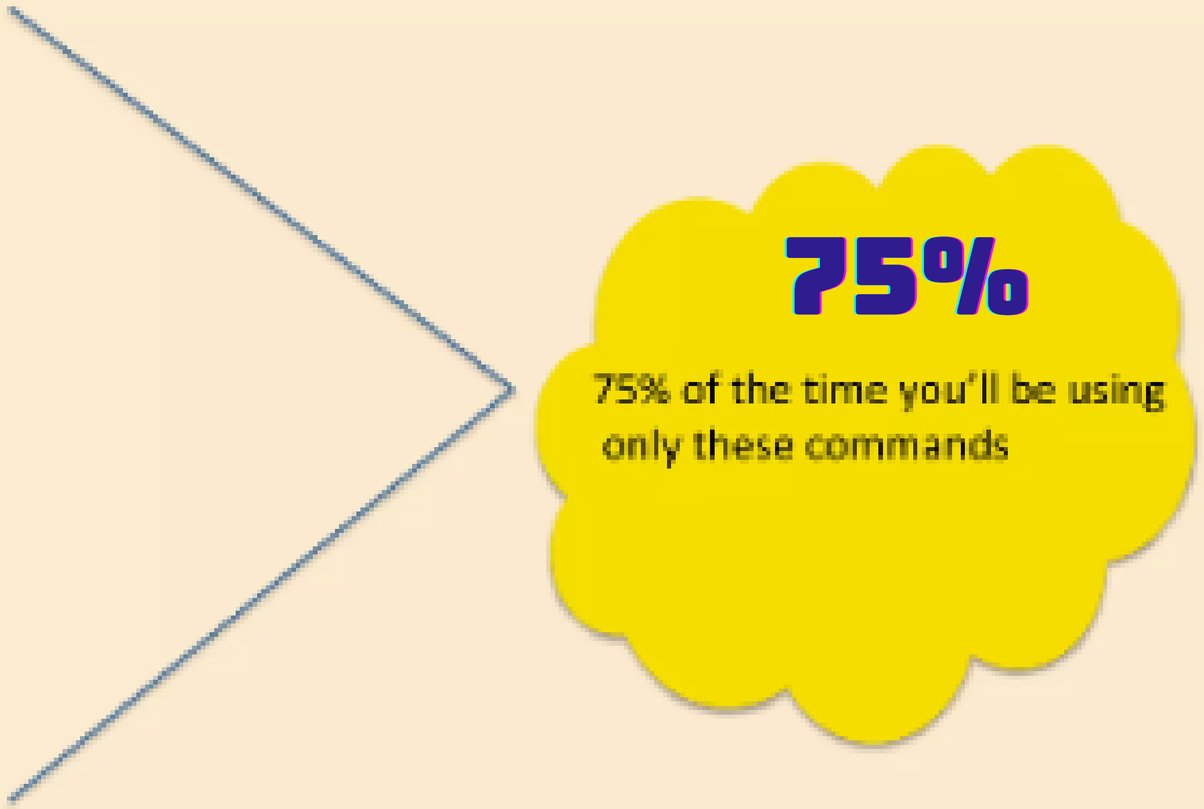
Git: pulling and pushing from and to repositories

```
$ git remote add origin <link>
$ git push -u origin master
$ git clone <clone>
$ git pull
```


Workspace
Staging
Local Repository
Remote Repository
Git add/mv/rm
Git Commit
Git Commit-a
Git reset <file>
Git push
Git reset <Commit>
Git fetch
Git diff
Git diff head
Git clone/pull

GOOD NEWS

git init
git status
git log
git add
git commit
git diff
git rm
git mv



MOST USED COMMANDES

Git init

The git init command creates a new Git repository

Git status

The git status command displays the state of the working directory and the staging area. It lets you see which changes have been staged, which haven't, and which files aren't being tracked by Git

Git add

The git add command adds a change in the working directory to the staging area.

Git log

The git log command is Git's basic tool for exploring a repository's history.

Git commit

The "commit" command is used to save your changes to the local repository.

MOST USED COMMANDS

Git dif

The git diff command helps you see, compare, and understand changes in your project.

Git mv

We use the git mv command in git to rename and move files. We only use the command for convenience. It does not rename or move the actual file, but rather deletes the existing file and creates a new file with a new name or in another folder.

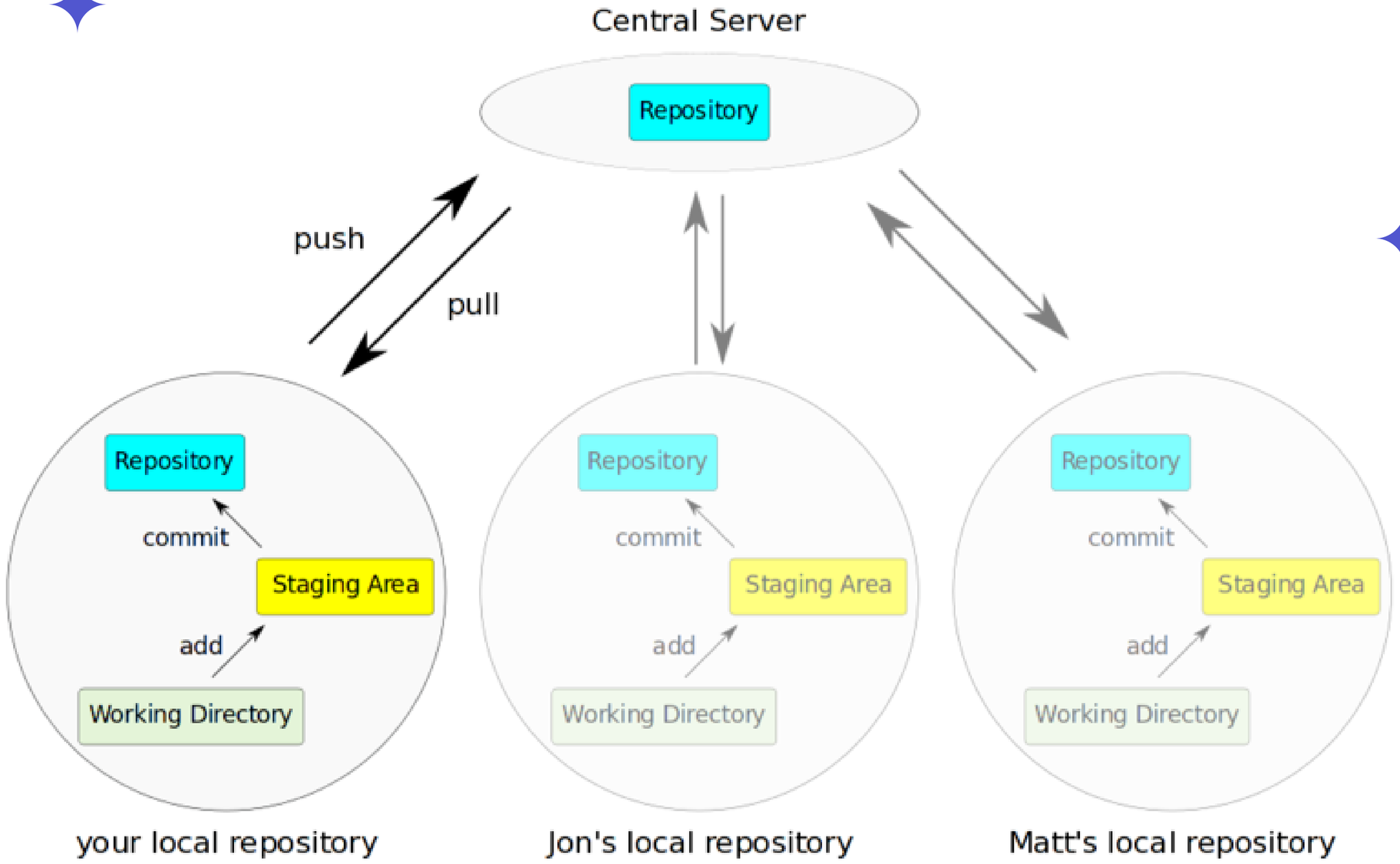
Git rm

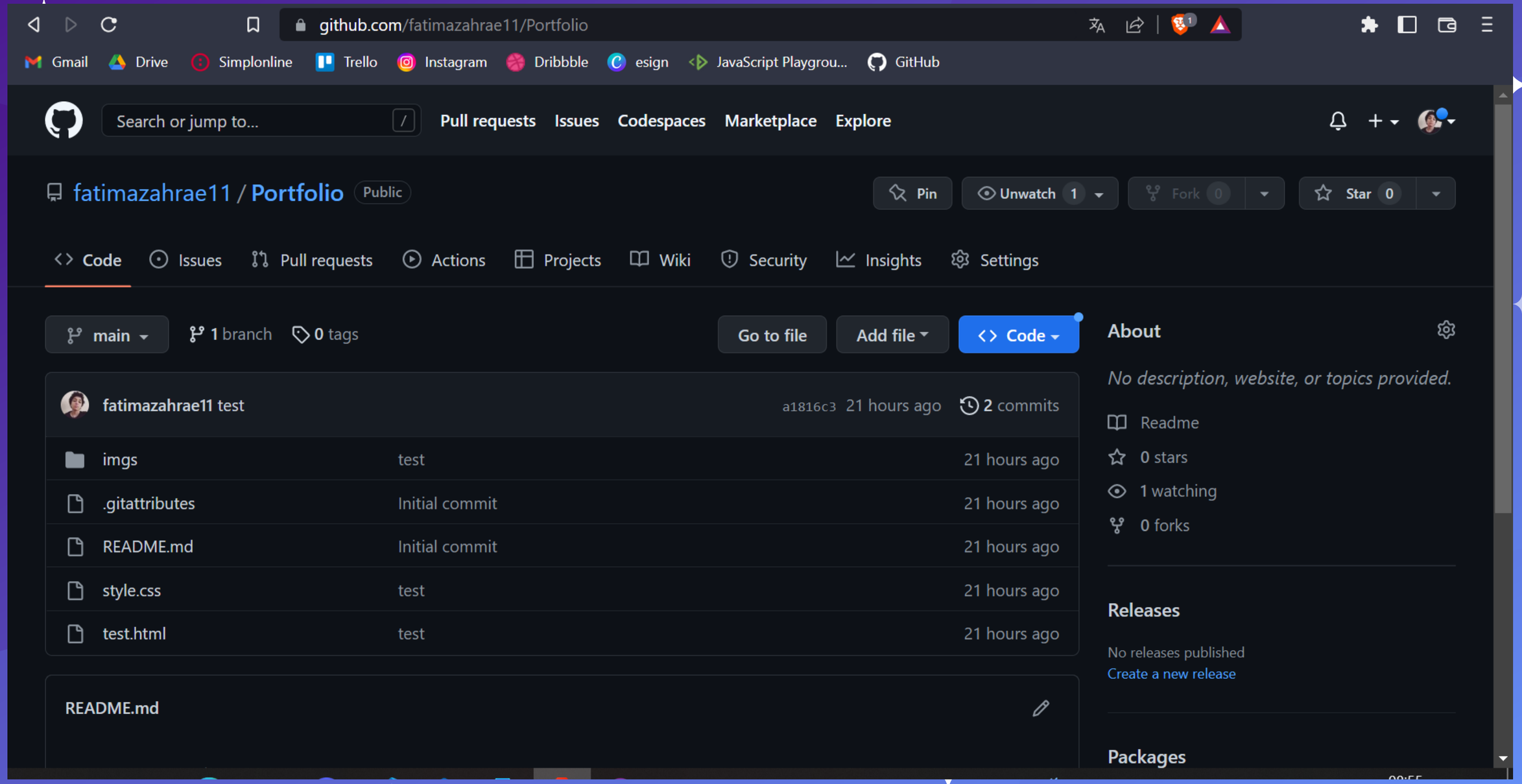
The git rm command can be used to remove individual files or a collection of files.

GITHUB?

GitHub is a Git repository hosting service that provides a web-based graphical interface. It is the world's largest coding community. Putting a code or a project into GitHub brings it increased, widespread exposure. Programmers can find source codes in many different languages and use the command-line interface, Git, to make and keep track of any changes.

GitHub helps every team member work together on a project from any location while facilitating collaboration. You can also review previous versions created at an earlier point in time.


Central Server
Repository
push
pull
Repository
commit
Staging Area
add
Working Directory
your local repository
Repository
commit
Staging Area
add
Working Directory
Jon's local repository
Repository
commit
Staging Area
add
Working Directory
Matt's local repository


github.com/fatimazahrae11/Portfolio
Gmail
Drive
Simplonline
Trello
Instagram
Dribbble
esign
JavaScript Playgrou...
GitHub
Search or jump to...
Pull requests
Issues
Codespaces
Marketplace
Explore
fatimazahrae11 / Portfolio
Public
Pin
Unwatch 1
Fork 0
Star 0
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
main
1 branch
0 tags
Go to file
Add file
Code
fatimazahrae11 test
a1816c3 21 hours ago
2 commits
imgs test 21 hours ago
.gitattributes Initial commit 21 hours ago
README.md Initial commit 21 hours ago
style.css test 21 hours ago
test.html test 21 hours ago
README.md
About
No description, website, or topics provided.
Readme
0 stars
1 watching
0 forks
Releases
No releases published
Create a new release
Packages

WHAT ARE GITHUB'S FEATURES?

- Easy Project Management
- Increased Safety With Packages
- Effective Team Management
- Improved Code Writing
- Increased Code Safety
- Easy Code Hosting

DIFFERENCE BETWEEN GIT & GITHUB

GITHUB	VS	GIT
1 GitHub is a service.		1 Git is a software.
2 GitHub is a graphical user interface		2 Git is a command-line tool
3 GitHub is hosted on the web		3 Git is installed locally on the system
4 GitHub is maintained by Microsoft.		4 Git is maintained by linux.
5 GitHub is focused on centralized source code hosting.		5 Git is focused on version control and code sharing.
6 GitHub is a hosting service for Git repositories.		6 Git is a version control system to manage source code history.

THANK YOU