



GIT

# GIT

## What is Version Control System & its benefits...

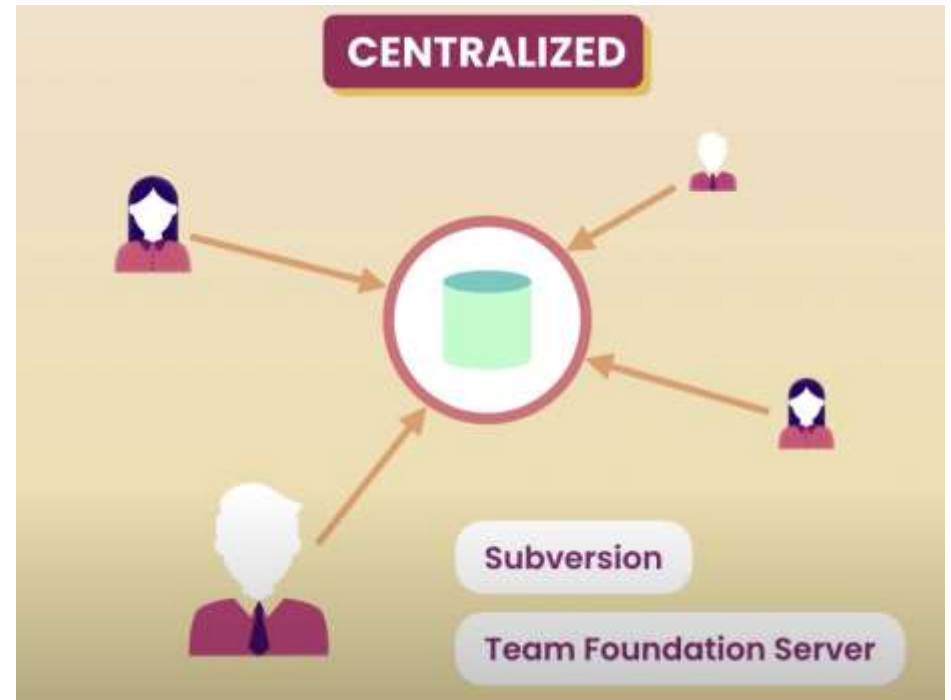
- Process of tracking & managing changes to software code.
- Tracks changes in code in a special DB called repository.
- Easier collaboration between developers.



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## Centralized Version Control System...

- Comprise of Single repository.
- Examples CVS, SVN, Preforce



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## Distributed Version Control System...

- Does not rely on single server.
- Every team member has a copy of the project in their local machine.



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## **Git Introduction...**

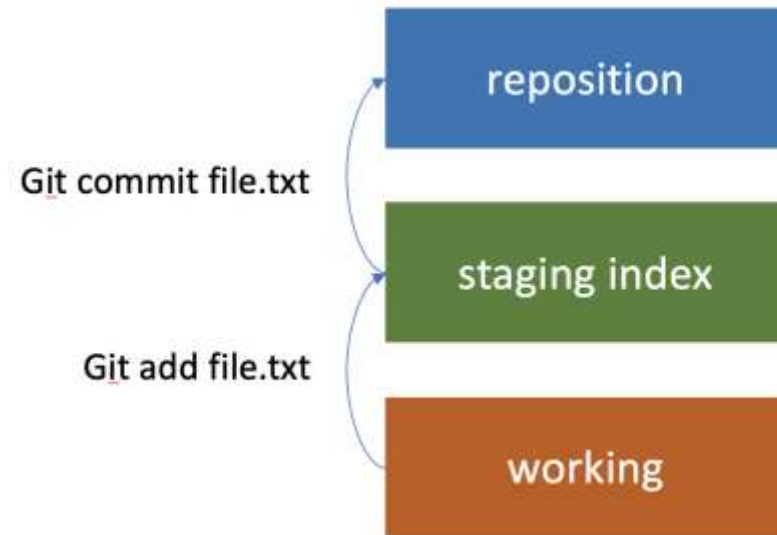
- Most popular Distributed Version Control system.
- Git is a free and open-source distributed version control system
- Source project originally developed in 2005 by Linus Torvalds



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## How Git Works...

- Git has a three-layer tier architecture.
- The three layers are Working directory, Staging area and Local repository.



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## Git directory...

- .git
  - HEAD – A pointer to the current branch
  - Config – Contains all configuration preferences
  - Description – description of the project
  - Index – staging area between working directory and repo
  - Logs – keeps record to changes that are made in ref
  - Objects – all data (commits, trees, tags) are stored here
  - Hooks – shell script that are invoked after executing a command
  - Refs – holds your local branch remote branch and tags





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## **Git commands...**

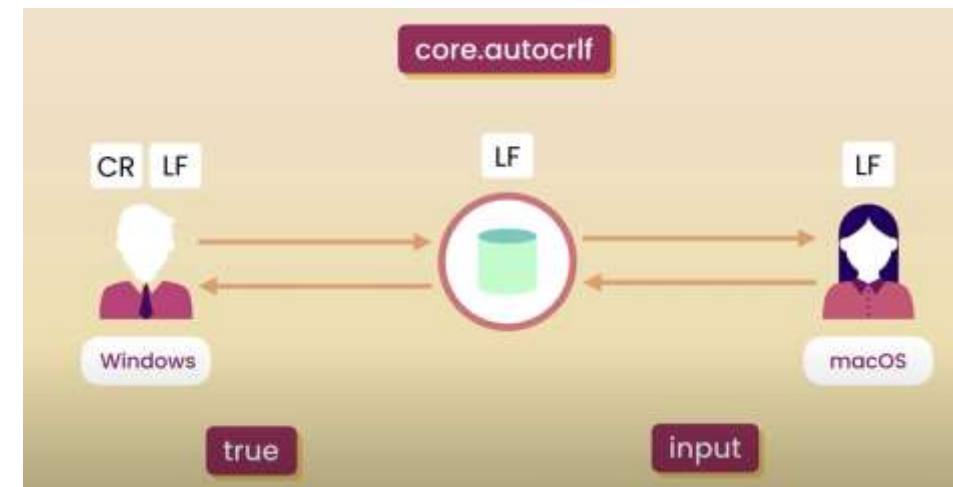
- git config, git init, git clone
- git status, git add, git commit
- git branch, git checkout, git remote
- git fetch, git merge, git pull, git push, git log
- git rebase, git blame, git bisect, git reset, git cherry-pick
- git tag, git clean, git diff



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```
git config <--global | --system | --local >  
$ git config --global user.name "Your name"  
$ git config --global user.email "Your email"  
$ git config --global core.editor "code --wait"  
$ git config --global -e  
$ git config --global core.autorlf <input | true>
```

<b>SYSTEM</b>	All users
<b>GLOBAL</b>	All repositories of the current user
<b>LOCAL</b>	The current repository



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```
~/Desktop/trial-projects/jaycee-sample on feature/product-description !13
> git status
On branch feature/product-description
Your branch is up to date with 'origin/feature/product-description'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
    modified:   src/common/styles.js
    modified:   src/components/ProductElements.jsx
    modified:   src/components/ProductSlider.jsx
    modified:   src/components/ViewCategoryLists.jsx
    modified:   src/components/ViewProductDetails.jsx
    modified:   src/pages/index.js
    modified:   src/pages/products.js
    modified:   src/styles/common.js
    modified:   src/styles/footer.js
    modified:   src/styles/home/common.js
    modified:   src/styles/home/elements.js
    modified:   src/styles/navbar.js
    modified:   src/styles/products.js

no changes added to commit (use "git add" and/or "git commit -a")
```

```
~/Desktop/trial-projects/jaycee-sample on feature/product-description +13
> git status
On branch feature/product-description
Your branch is up to date with 'origin/feature/product-description'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   src/common/styles.js
    modified:   src/components/ProductElements.jsx
    modified:   src/components/ProductSlider.jsx
    modified:   src/components/ViewCategoryLists.jsx
    modified:   src/components/ViewProductDetails.jsx
    modified:   src/pages/index.js
    modified:   src/pages/products.js
    modified:   src/styles/common.js
    modified:   src/styles/footer.js
    modified:   src/styles/home/common.js
    modified:   src/styles/home/elements.js
    modified:   src/styles/navbar.js
    modified:   src/styles/products.js
```







