



Git Complete

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Why Source Control

- Backup / Archive
- Versioning / History
- Undo Changes
- Comparing
- Collaboration / Teamwork
- Isolation of changes



Source Control Options

→ Two Main Types

- ◆ Centralized
- ◆ Decentralized / Distributed

→ Centralized

- ◆ Free: Subversion, CVS
- ◆ Commercial: ClearCase, Perforce, Team Foundation Server
- ◆ Requires connection to central server for most operations



Source Control Options

→ Distributed

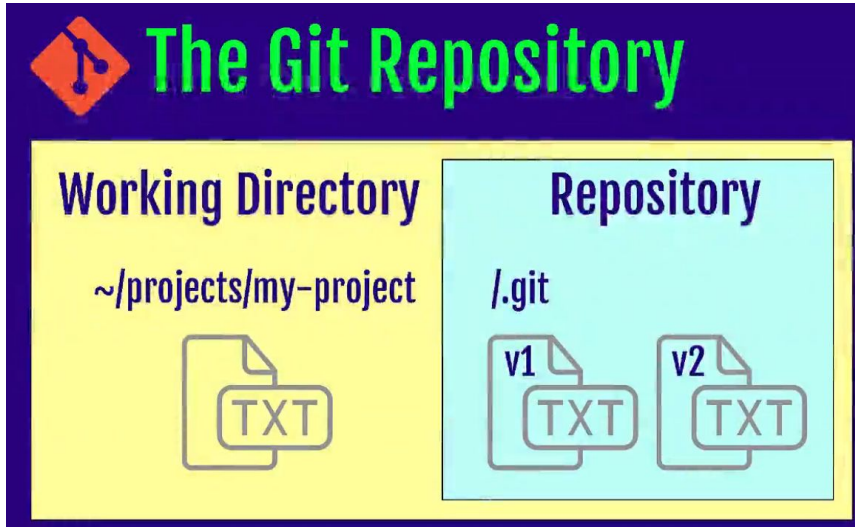
- ◆ Git
- ◆ Mercurial (Hg)
- ◆ Most operations are local
- ◆ Central server not required



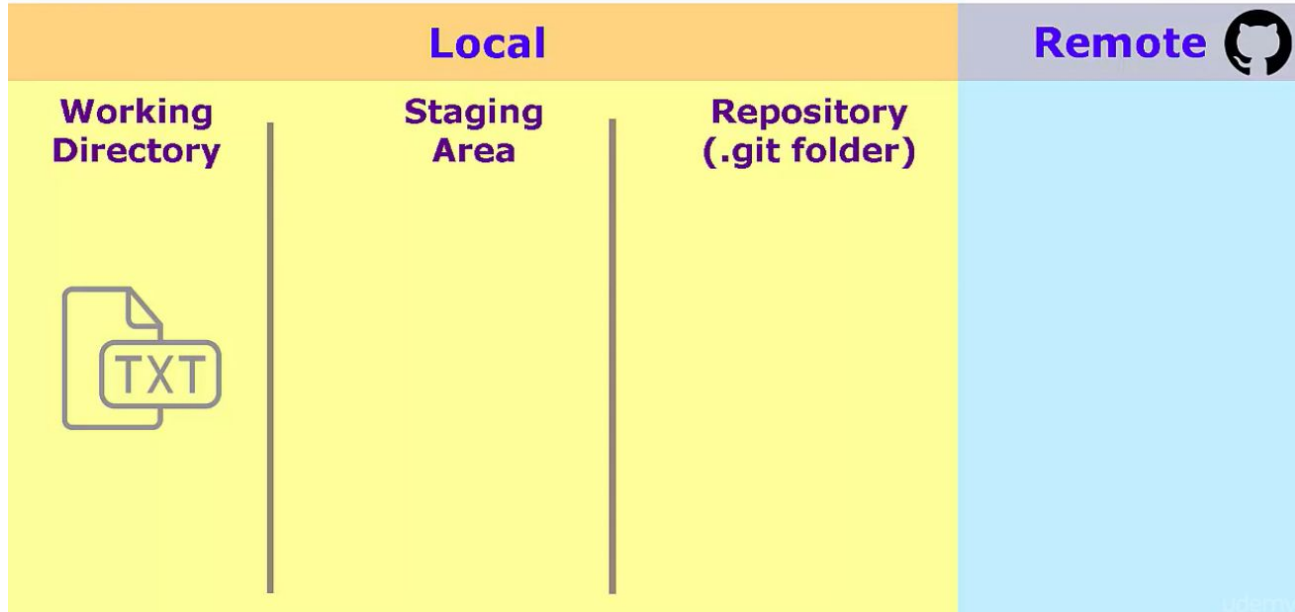
Why Git?

- Distributed Source Control System
- Massively scales
- Open source
- Most operations are local
- Very fast
- Active community

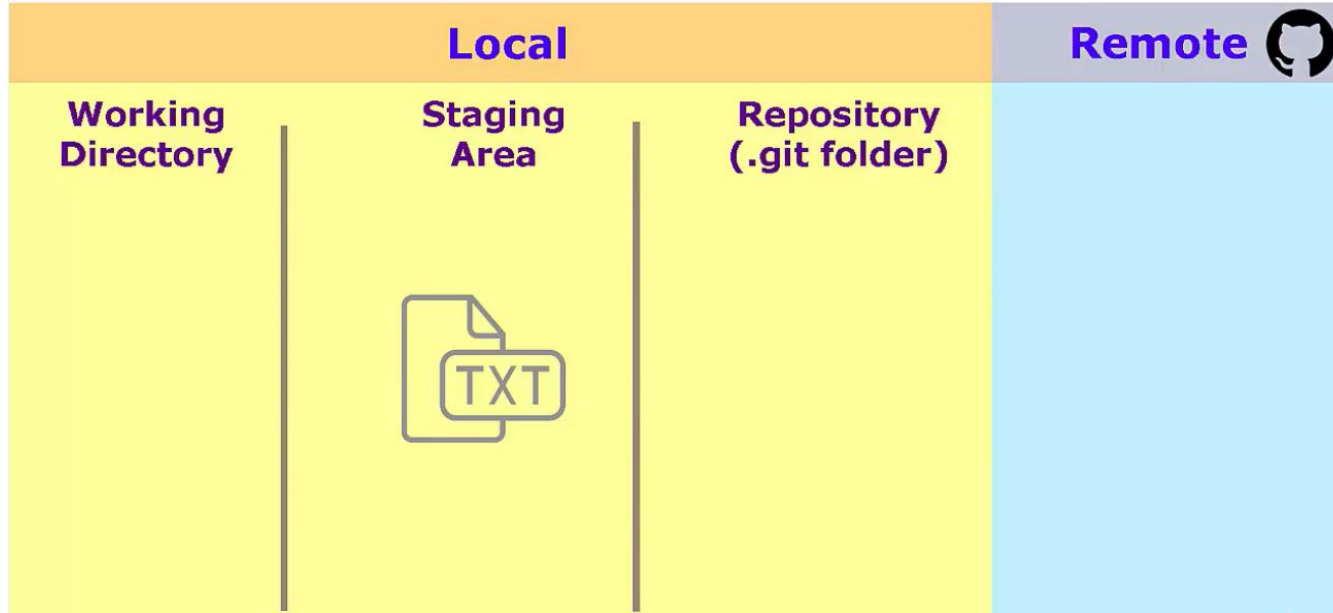
Basic Git Workflow Life Cycle



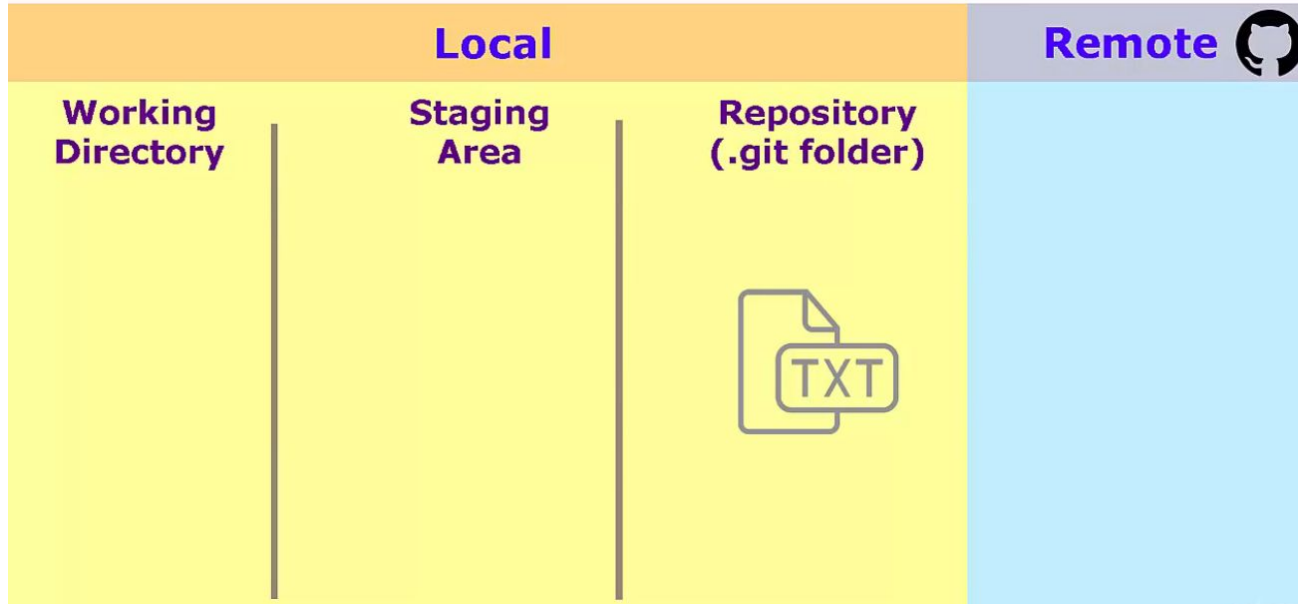
Basic Git Workflow Life Cycle



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Basic Git Workflow Life Cycle





Git config

`git init`

`git config --global user.name "learntechpuzz"`

`git config --global user.email learntechpuzz@gmail.com`

`git config --list`

`git config --global core.editor code`



Commit

code sample.txt

git status

git add sample.txt

git commit -m "initial commit"

git log

git log --oneline --graph --decorate --all



Branching and Merging

```
git checkout -b feature1
```

```
git merge feature1
```

```
git checkout -- <file name>
```

```
git reset HEAD    <file name>
```



Rebasing

`git rebase master`



Stashing

`git stash`

`git stash pop`

`git statsh list`



Tagging



Cherry Pick

`git cherry-pick <commit id>`