Source Code Management

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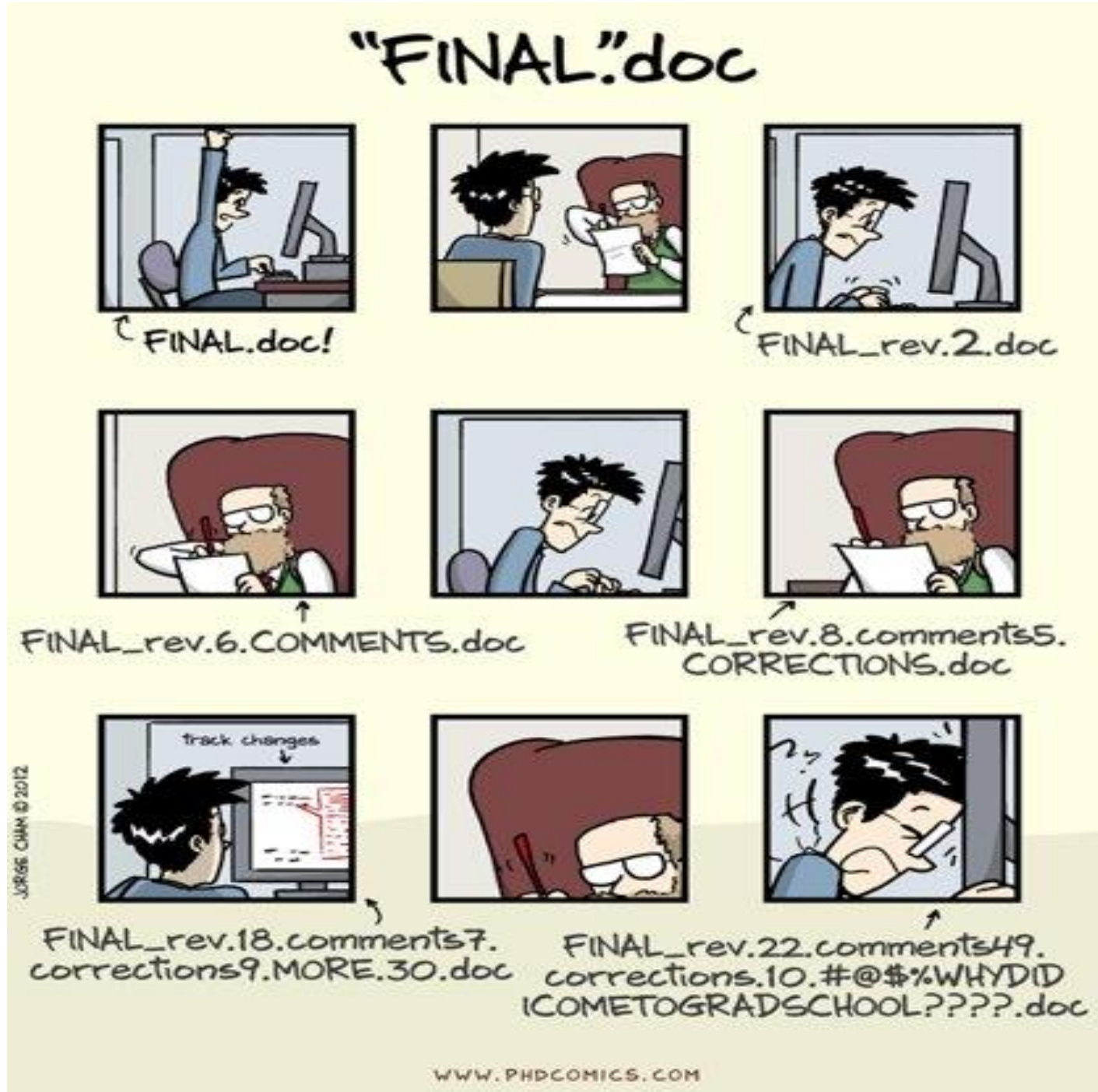
Objectives

- Version Control
- Git, Git repository
- Git vs Github
- Setup git environment
- Create a git repository (adding file, adding folder)
- Checkout different version/ignore files…
- Git tools


"FINAL".doc
FINAL.doc!
FINAL_rev.2.doc
FINAL_rev.6.COMMENTS.doc
FINAL_rev.8.comments5.
CORRECTIONS.doc
track changes
FINAL_rev.18.comments7.
corrections9.MORE.30.doc
FINAL_rev.22.comments49.
corrections.10.#@$%WHYDID
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Why Version Control?

- **Collaboration**
- **Versioning**
- **Rolling Back**
- **Understanding**

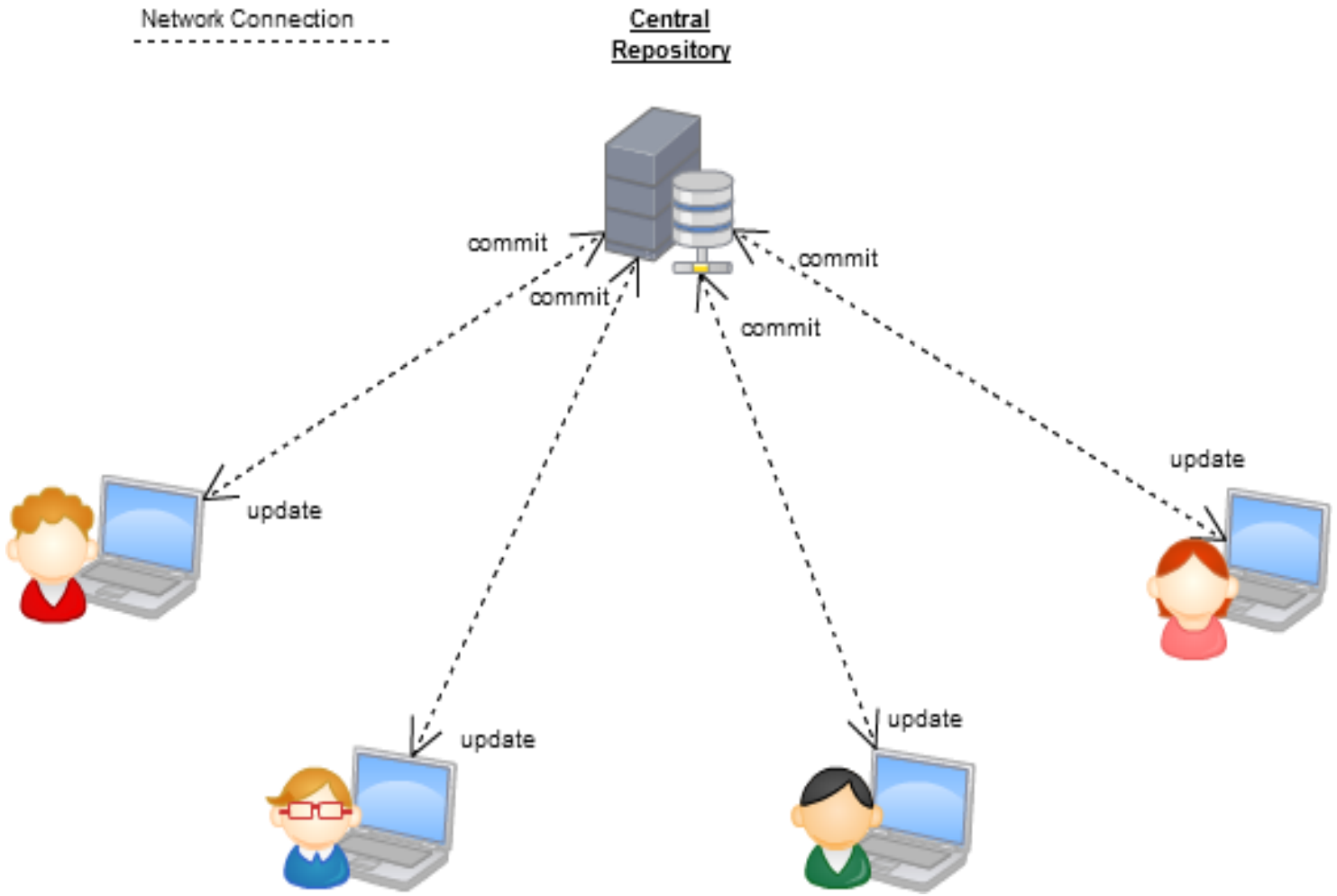
Scenario : Multiple students are doing a project together

Question: Why not Google drive & One drive ????

- source code management vs file storage management

Version Control Systems

- Some well-known version control systems are CVS, Subversion, Mercurial, and Git



Git vs. GitHub

Git

First developed in 2005

Git is installed and maintained on your local system (rather than in the cloud)

One thing that really sets Git apart is its branching model

Git is a high quality version control system

GitHub

GitHub is designed as a Git repository hosting service

GitHub is exclusively cloud-based

You can share your code with others, giving them the power to make revisions or edits

GitHub is a cloud-based hosting service

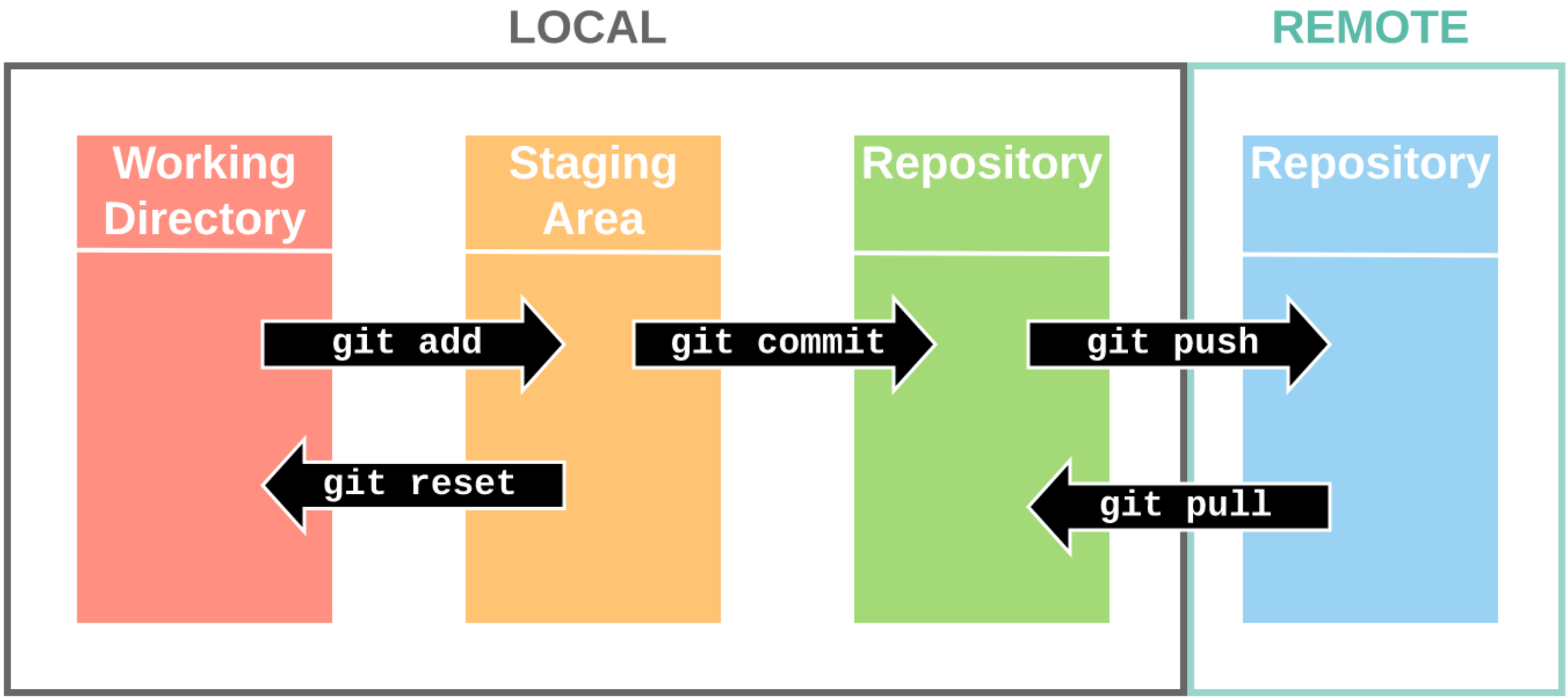
- **Download and install**
  yum install git

- **Configure**
  - Generating a pair of ssh keys:

    ssh-keygen -t rsa –C Vikas_Verma1@epam.com

  - Username and email settings:

```
git config --global user.name "Vikas Verma"
git config --global user.email "Vikas_Verma1@epam.com"
```


LOCAL
REMOTE
Working Directory
Staging Area
Repository
Repository
git add
git commit
git push
git reset
git pull

Commands

git clone

git init

git add

git commit

git push

git show -s commit {commitSHA1}

git ls-tree {treeSHA}

git show {blobSHA}

Commands

git remote set-url origin {ssh/https}

git checkout –b {branchname}

git pull

git checkout {branchname}

Steps:

Sudo su

yum install git

git config --global user.name "XYZ"

git config --global user.email "XYZ@abc.com"

ssh-keygen

Add public key in settings->ssh and gpg on github account

git clone https://github.com/.... [git hub repository]

cd folder [repository folder]

Steps:

git init

git remote set-url origin [ssh repository]

Now you can create files, add, commit and push on git hub repository

Any Questions?