

CS 200

SOFTWARE TOOLS & TECHNOLOGIES LAB II

Session 2

GIT Basic Usage

Instructor
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- ▶ `echo "iitbh" > file1`
- ▶ `git add file1`
- ▶ `git commit -m "file1" file1`
- ▶ `git graph`
- ▶ `echo "iitbhrocks" > file2`
- ▶ `git add file2`
- ▶ `git commit -m "file2" file2`
- ▶ `git graph`
- ▶ `cp file2 file3`
- ▶ `git add file3`
- ▶ `git commit -m "file3" file3`
- ▶ `git graph`
- ▶ `echo "iitbhrockssss" > file3`
- ▶ `git add file3`
- ▶ `git commit -m "file3" file3`
- ▶ `git graph`

Git Config

the config file

```
$ git config --global user.name "IIT Bhilai"  
$ git config --global user.email "cs200@iitbhilai.ac.in"
```

```
~/.gitconfig
```

```
[user]
```

```
    name = IIT Bhilai
```

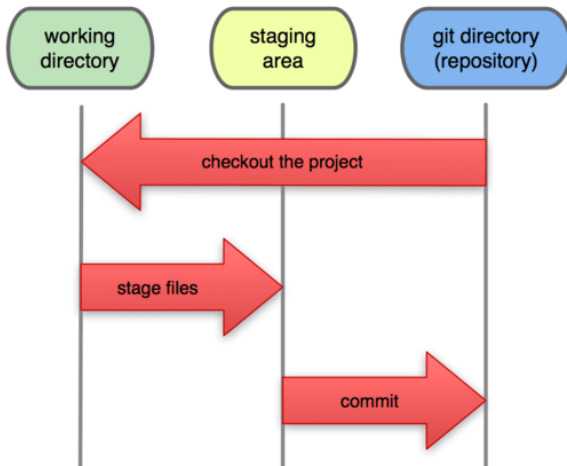
```
    email = cs200@iitbhilai.ac.in
```

Whats up with --global ?

What if you want some local configuration?

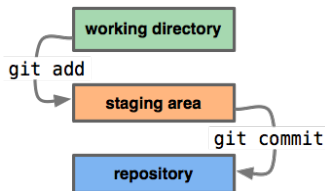
Ans: .git/config file in your project's root directory

Local Operations



Git has three main **states** that your files can reside in:

- ▶ modified
- ▶ staged, and
- ▶ committed



- ▶ **Modified** means that you have changed the file but have not committed it to your database yet.
- ▶ **Staged** means that you have marked a modified file in its current version to go into your next commit snapshot.
- ▶ **Committed** means that the data is safely stored in your local database.

What content has been committed for the newFile file?

Case-A or Case-B

```
echo "iitbhilai" >> newFile #Case-A
git add newFile
echo "iitbhilairocks" > newFile #Case-B
git commit -m "done"
```

What content has been committed for the newFile file?

Case-A or Case-B

```
echo "iitbhilai" >> newFile #Case-A  
git add newFile  
echo "iitbhilairocks" > newFile #Case-B  
git commit -m "done"
```

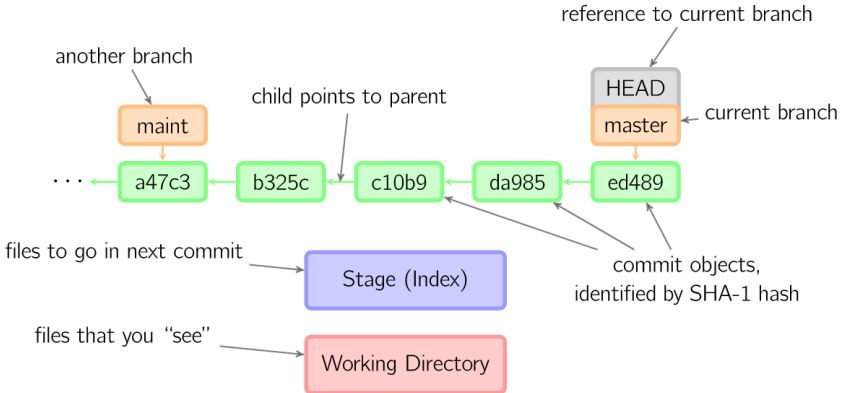
Ans: Case-A

Major difference with VCS like svn

The Idea of Branching in Version Control

GIT Branches

The Head Pointer



<https://learngitbranching.js.org/>