

Agenda →

→ what is Version Control System

what are the features of VCS

Different types of VCS

How Git helps in Development flow

V C S

↓  
Version Control System

↓  
something getting updated / upgraded

1939

2024/ 2025

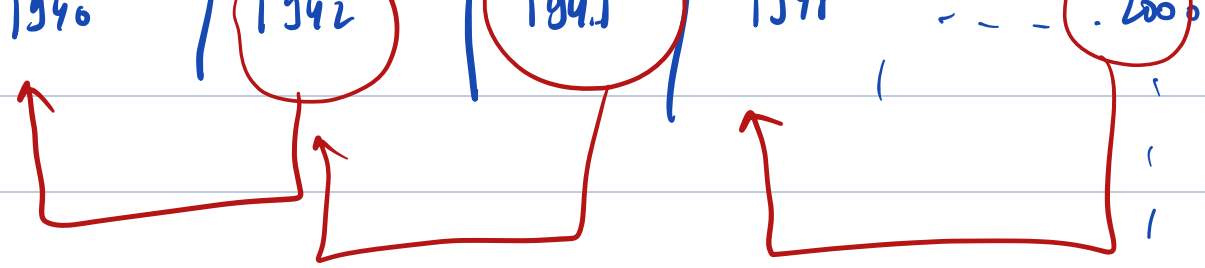


↳ Better Infotainment system

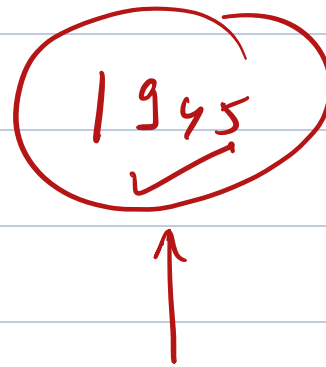
↳ Better Chassis/ wheels

⋮

1941 1945 1946 1947



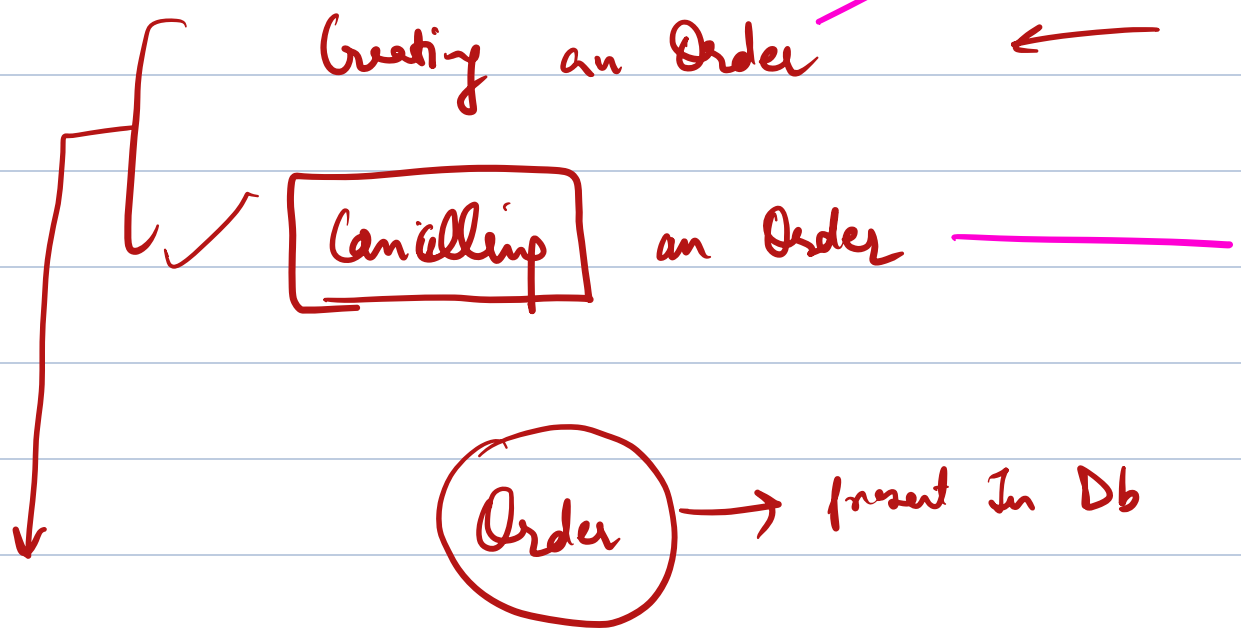
- Either it can contain a new feature
- It can contain fix of bug which went in prev release



1946  
X

✓ A system which is known as VCS  
(Version Control System) to store  
info about what all features/  
bug fixes gone in particular  
release/version.

Features of VCS →



VCS

VCS allow teams/dev to do tasks independently

---

Staging Vs Production



Prod Server

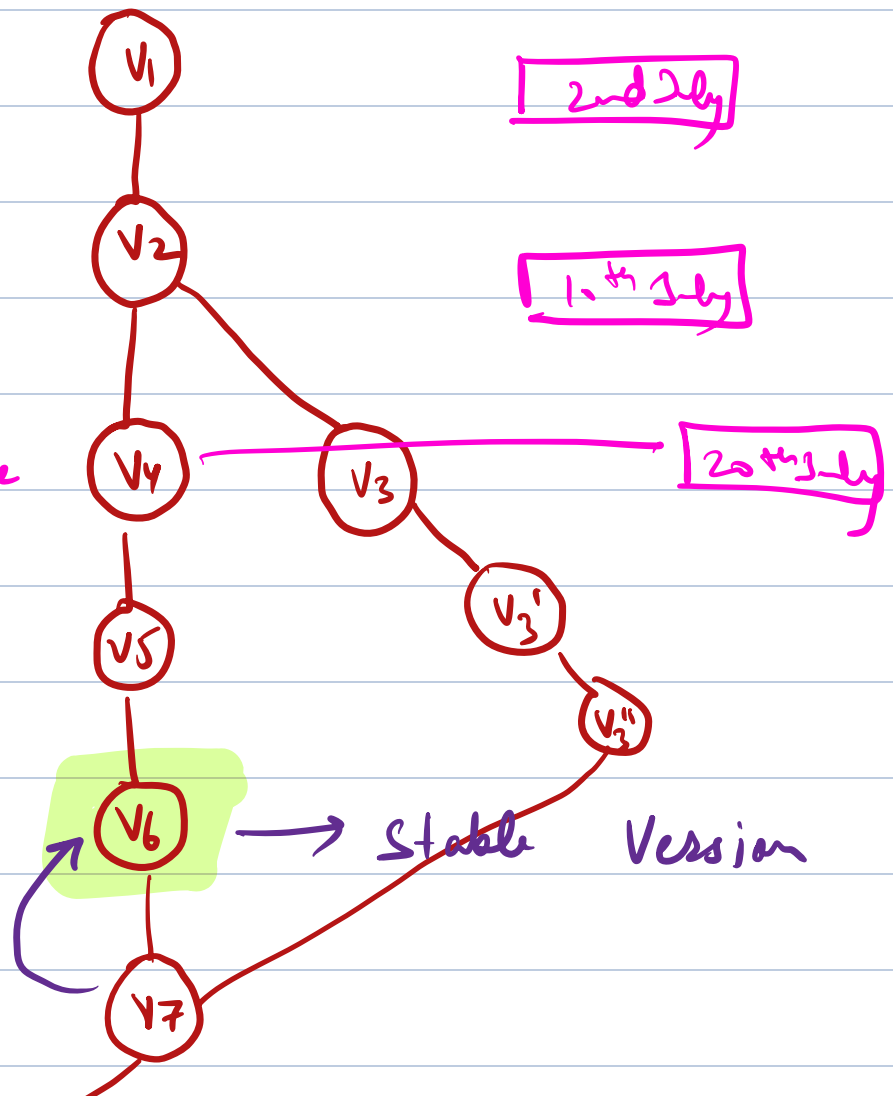


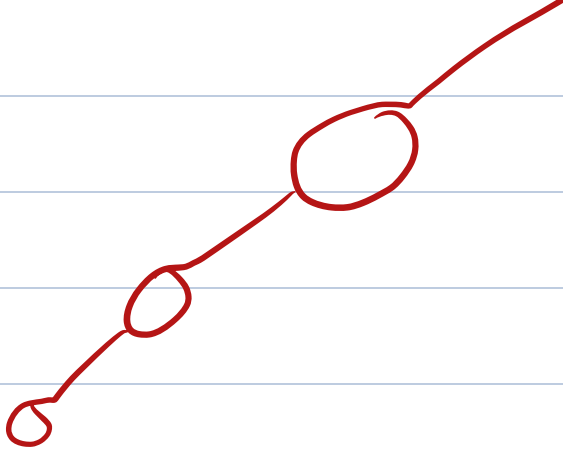
Not facing  
[ High Traffic ]

[ Test / UAT / Pre Prod ]

Staging

✓ VCS also helps  
in tracking state  
of code base





→ (who) has made change

→ (why) was change made

→ (when) was change made

→ (what) was changed

Mitigation →

↳ Rollback

✓ VCS will help us with rollback

— x —

---

Type of VCS →

Centralised

Distributed



Contains all Versions

↳ SLoF

↳ Stay connected online

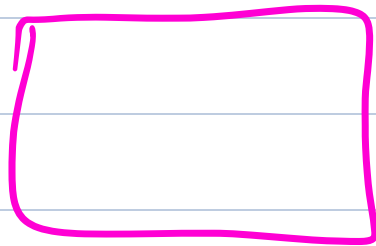
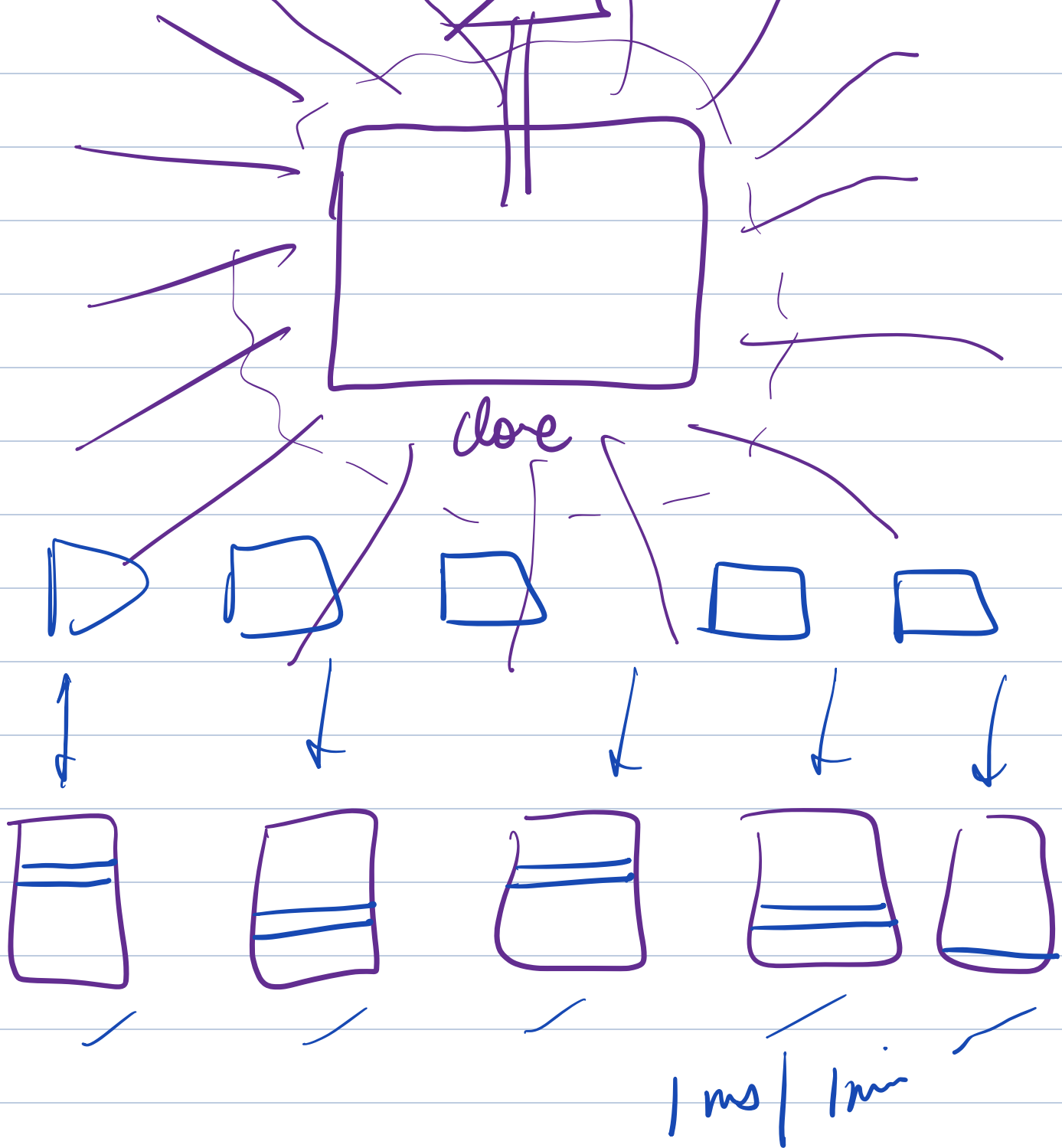
↳ Latency

Eg → Perforce, Subversion

↓  
Google



- Git is an eg of distributed VCS
- There would be multiple copies of Code/Versions present at Multiple places
- No latency
- Work in offline fashion





Git →

Git stores Version History in form of commits

Repo is a fancy Name given to folder containing all files corresponding to a project



Calculator

↳ src

Adder.java

Multiplicar.java

Main.java  
tst

AdderTest.java  
MultiplierTest.java

```
public static void main {
```

```
    Adder a = Adder();
```

```
    a.add(1,2);
```

```
    Multiplier m = new Multiplier();
```

```
    m.multiply(2,3);
```

```
}
```

src | Subtractor.java

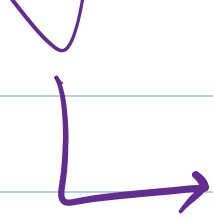
New File

tst | SubtractorTest.java

New File

src | main.java

updated



# Subtractor Functionality

struct



structure

without any  
fn

struct s {

int

string

float

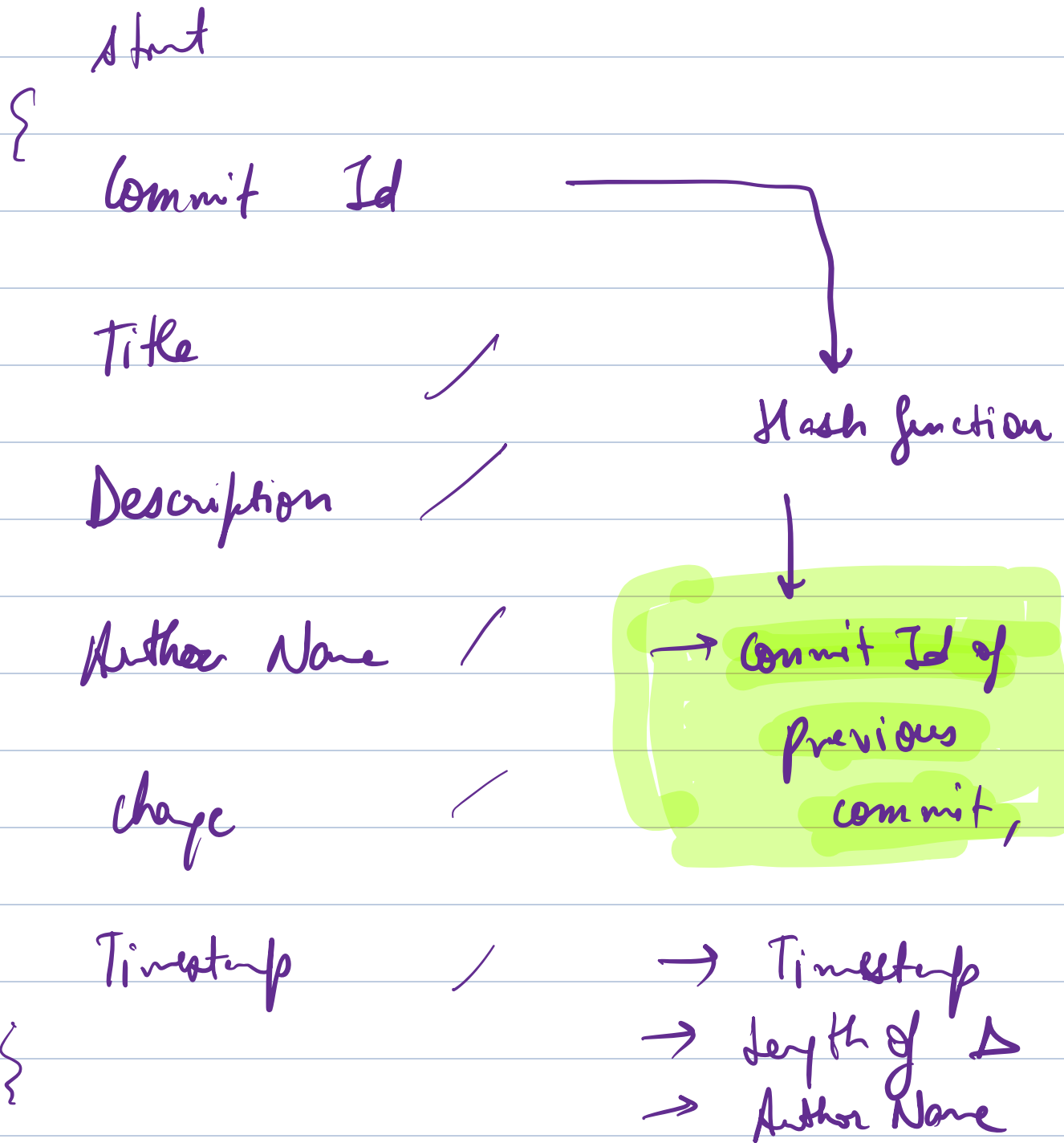
double

;

{

}

}



Commits are immutable

---

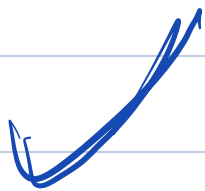
Development Flow

Reviews

## Reviews Displayer

1. (setup) Download this Repo on my system

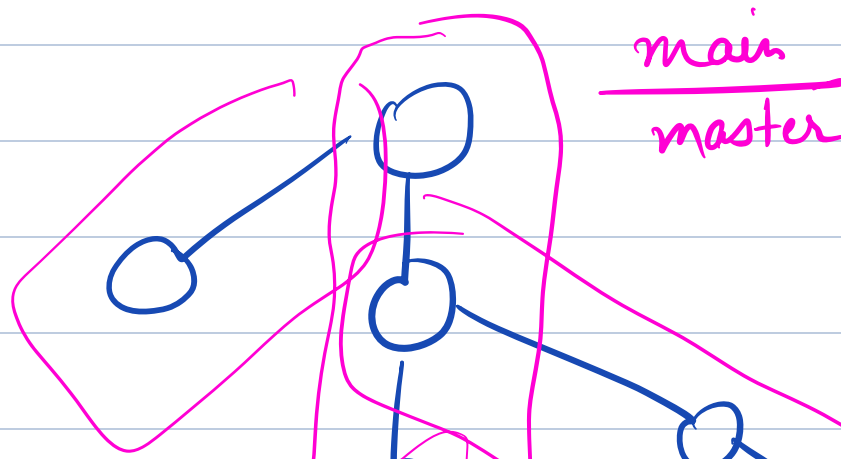
git clone

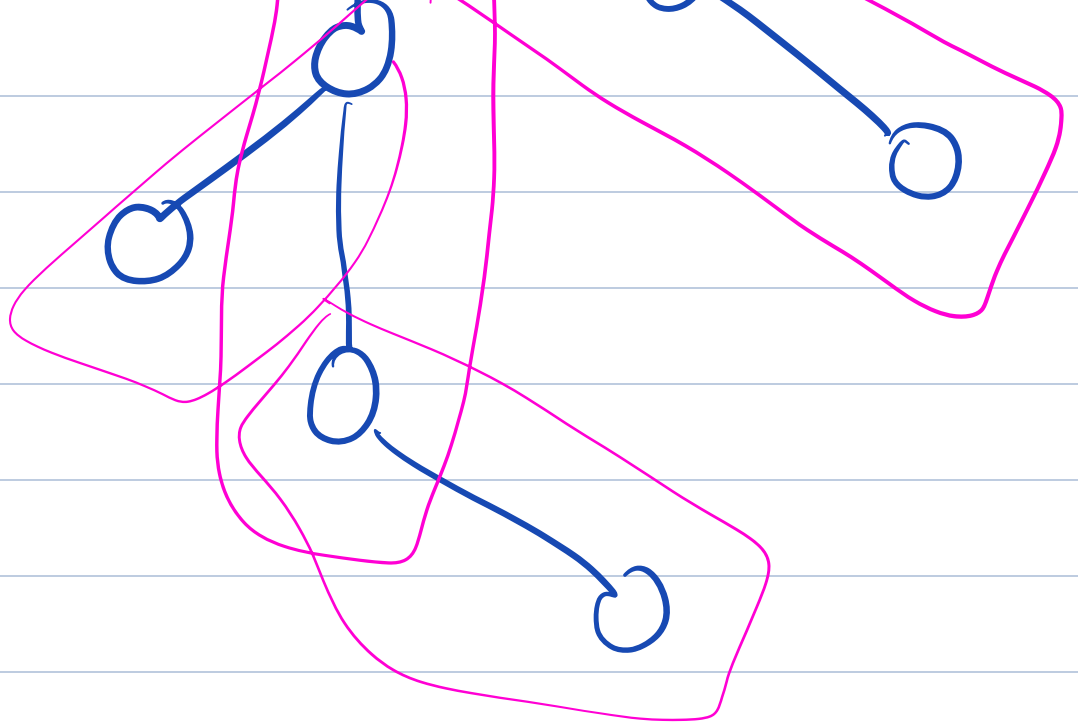


git clone Reviews Displayer - git

2.

## Branches





Create a child branch of main/  
master

main  
└─> git branch << test >>

main ←

test

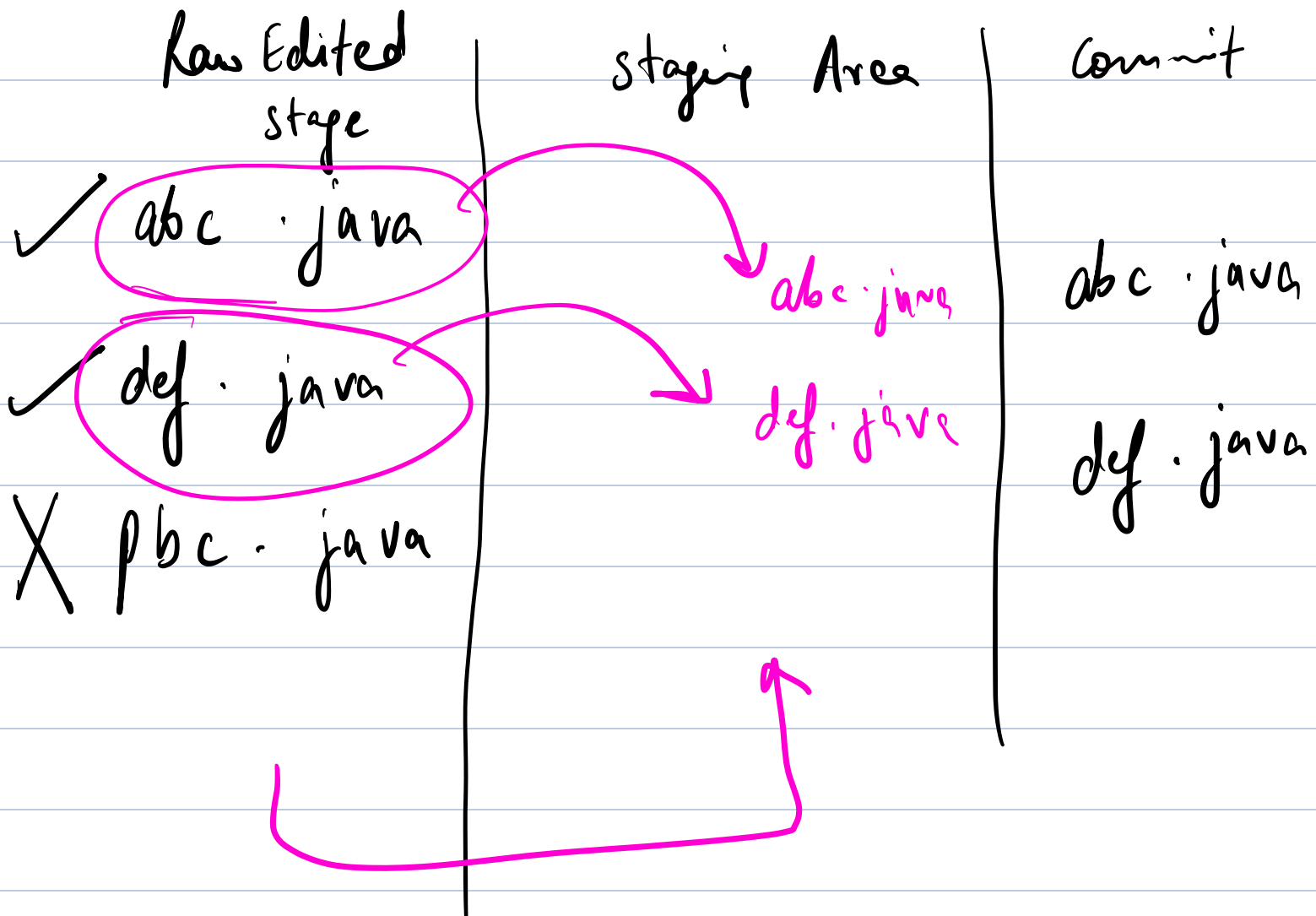
└─> git checkout test

Switching branch

git checkout -b test

3 Do code changes

4.



✓ git add abc.java

✓ git add def.java

git add .



this will move  
everything from raw edited  
stage to staging Area

[git restore --staged filename]

5 Create a commit



git commit -m ~~4~~

6 git push



✓ git push --set-upstream branchname

7. Deploy branch on Test Env &  
test those changes

8. Create a pull request / Code Review

9. Complete pull request button

