Agenda :   — VCS
               — Differeut Type of vcs
                   — Commit
                   — Branch
                           — merge
                           — reb

VCS: Version Controlling System.
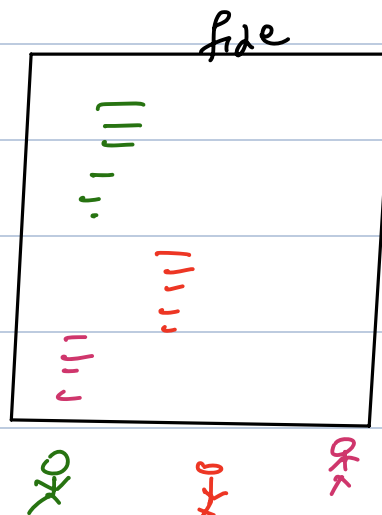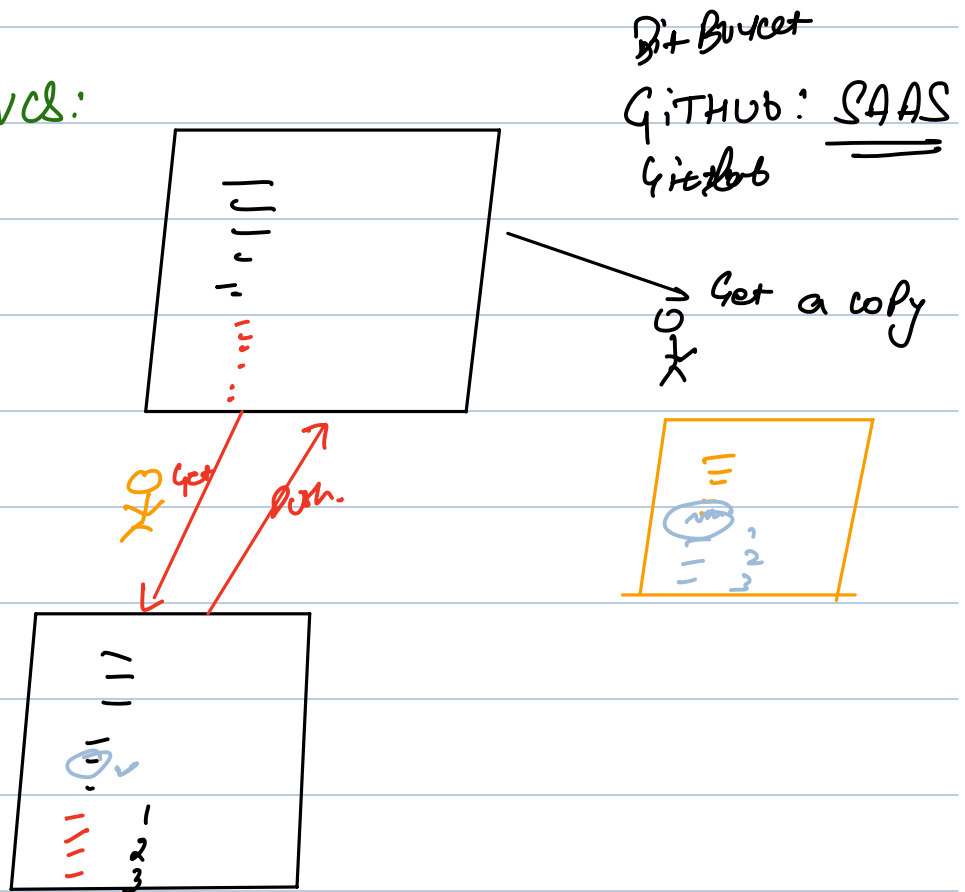
        — GIT
      Types of vcs
                   — Centeralized
                   —
                       de-centralized
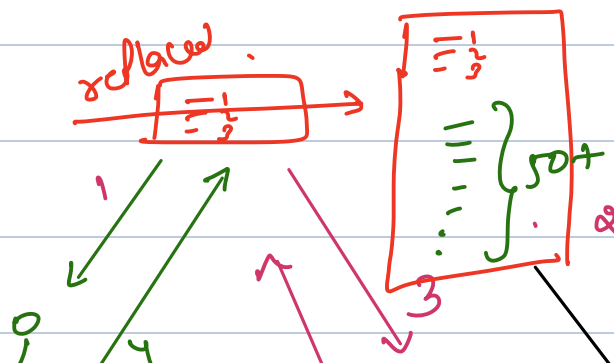
Centralized VCS :
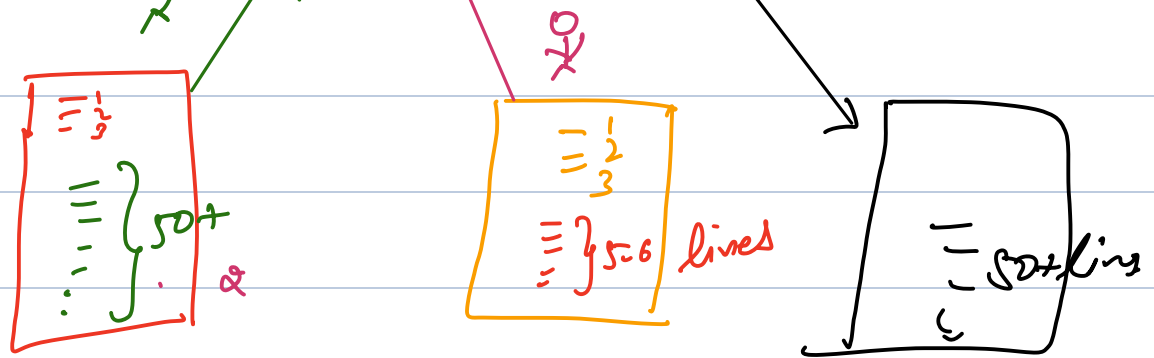
Cons:

- SPOF
- Data overridden

Distributed VCS:

Get a copy

→ 1. People can work independently

→ 2. No SPof + No override

CONS:

- Conflicts

- Sync Repo with hosted copy.

replaced

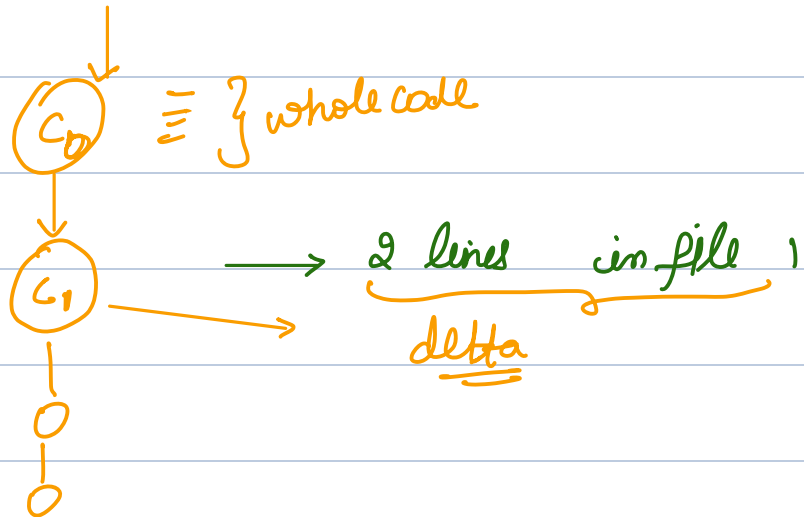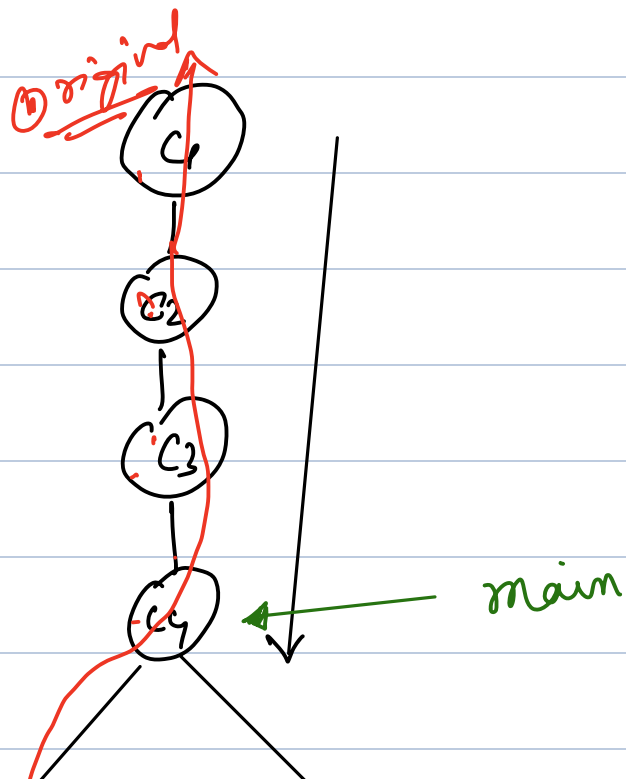Top diagram shows three boxes: red box with lines `=1/2`, green braces `50+`, labeled α; orange box with `=1/2/3`, `=} 5-6 lines`; black box `= 50+ lines`

GIT :

1) Commits
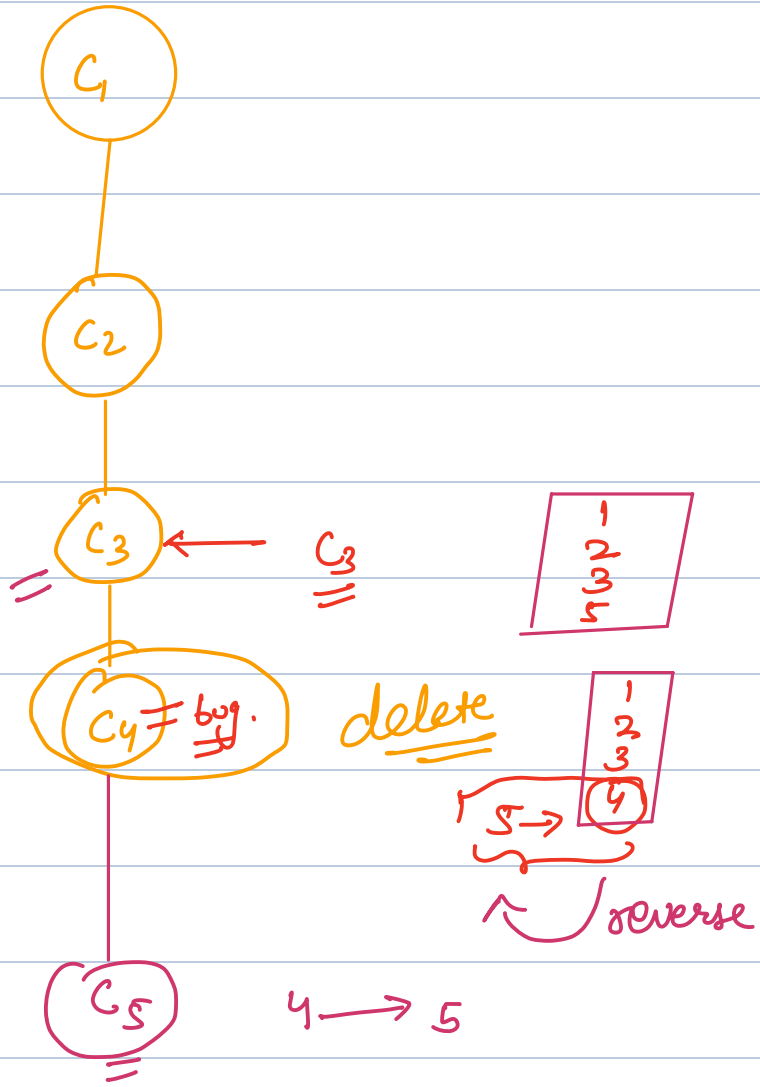
· empty file

C_0 $= \}$ whole code

C_1 $\longrightarrow$ 2 lines in file 1

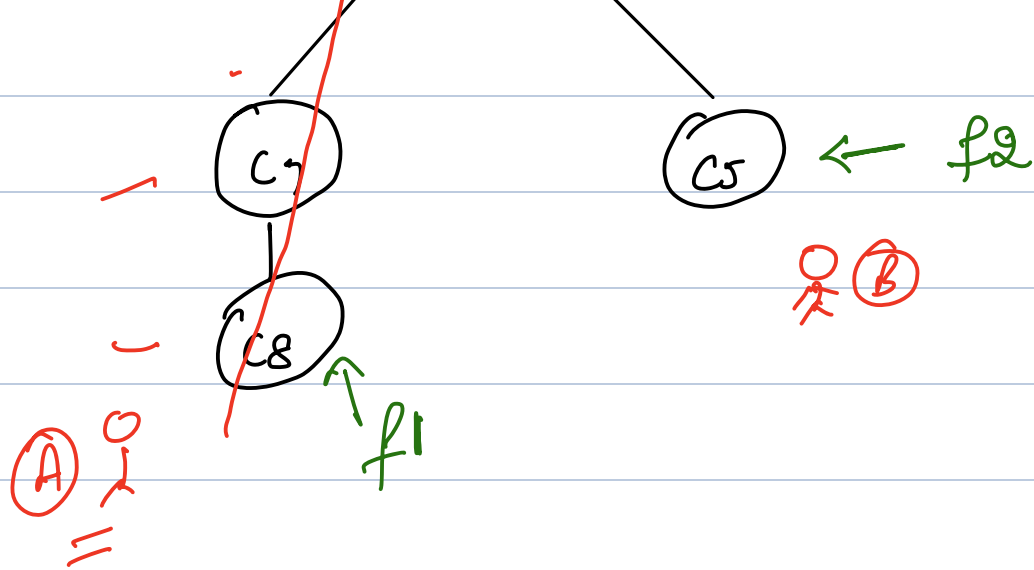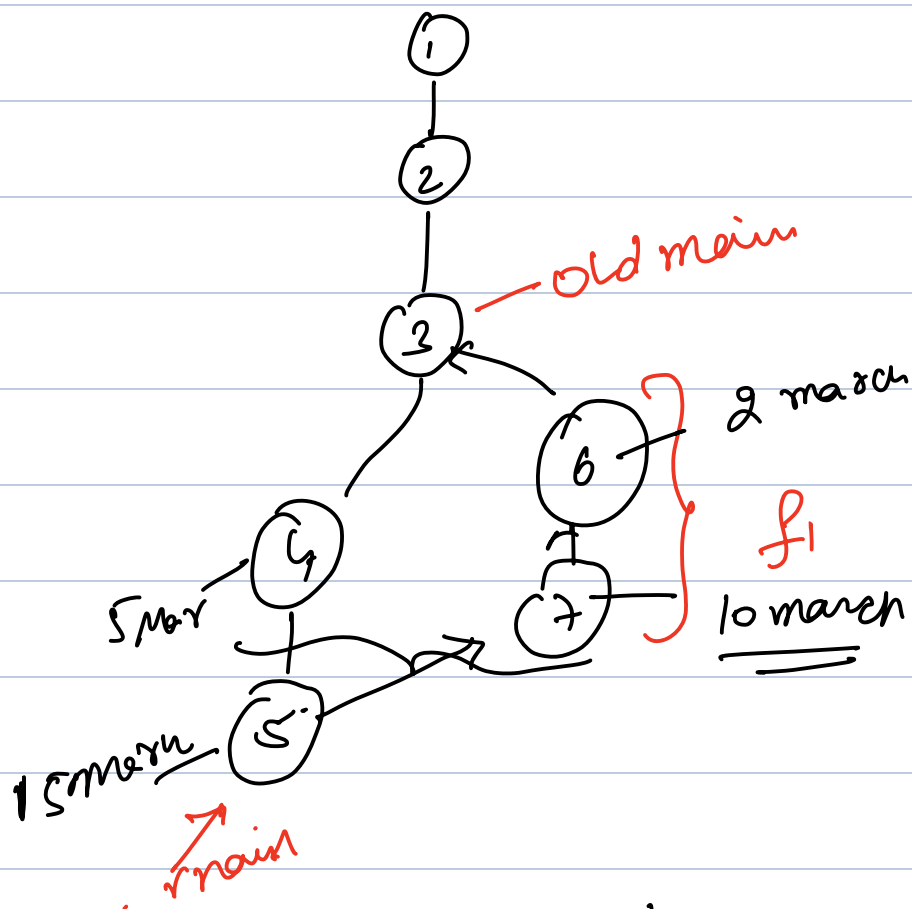delta

every commit is a delta to
it's previous version

Commits are immutable : once committed
it can't be changed.

C_1

C_2

C_3 ← C_3 ||

$\begin{array}{|c|} \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline \end{array}$

$C_4 \ne$ bug.

delete

$\begin{array}{|c|} \hline 1 \\ 2 \\ 3 \\ \boxed{4} \\ \hline \end{array}$

$5 \to$

reverse

C_5

$4 \longrightarrow 5$

① original

C_1

C_2

C_3

C_4 ← main

C7

C5 ← f2

🏃B

C8 ↑f1

A 👤
=

BRANCH : Pointer

(1)
|
(2)
|
(3) — old main
/ \
(4)   (6) ⎫ 2 march
/ | |
5 nov | f1
| (7) — 10 march
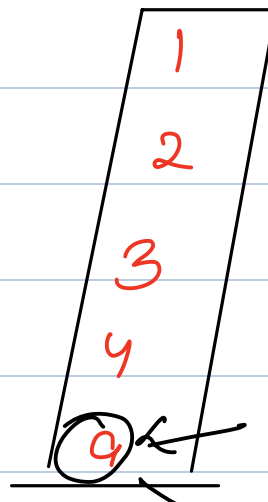(5)
15 morn
↗ main
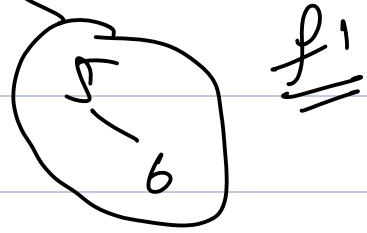.

Created Time Stamp

main

$$5 - 7 - 4 - 6 - 3 - 2 - 1$$

f1

f1

Too much random.

GIT log

Git rebase

$$f_1$$

5
6
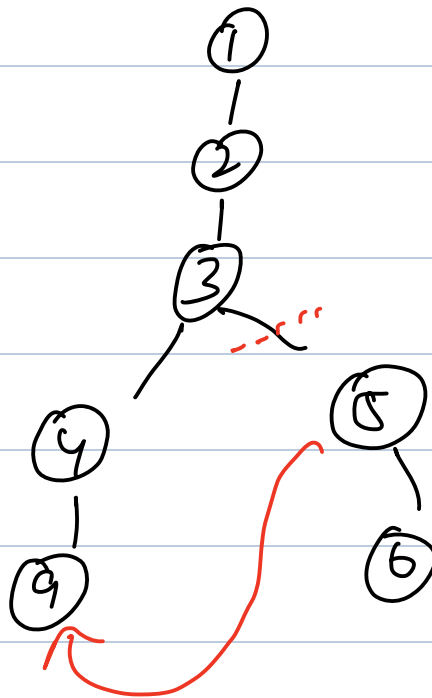
Head : A special Pointer , Pointing always Towards latest commit of active branch

new C ←

head move to new commit

Pointer of Branch goes to head.
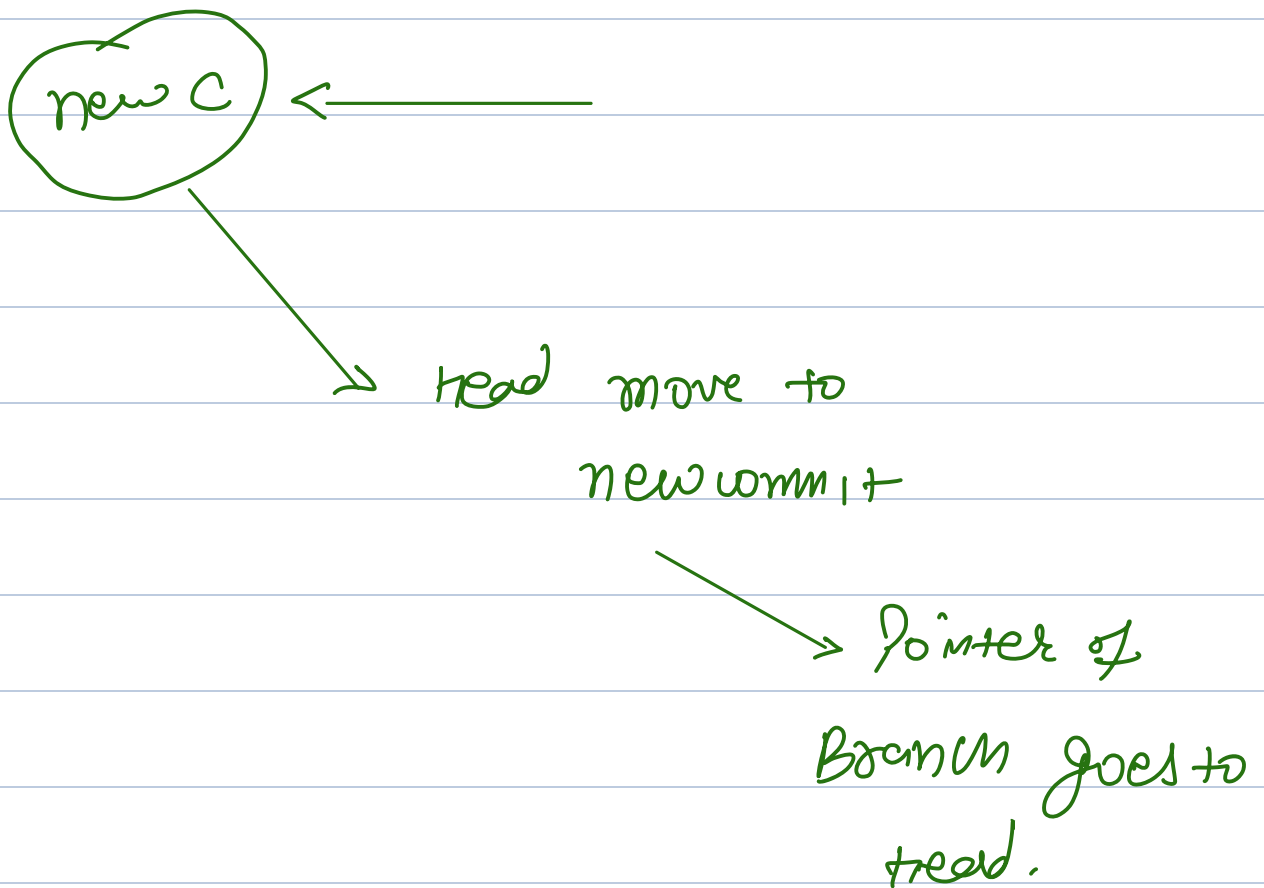
If you move head to specific commit it will be in detach State.