git

Git provides snapshots

others

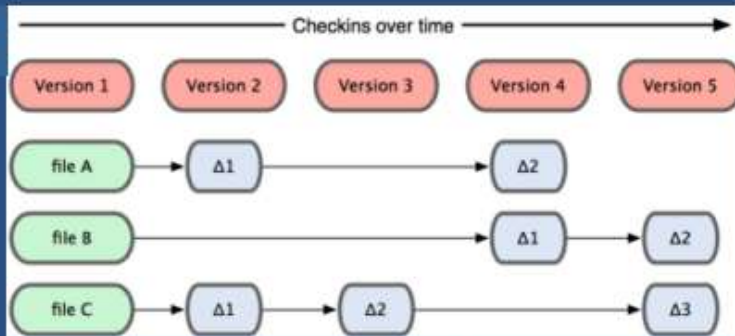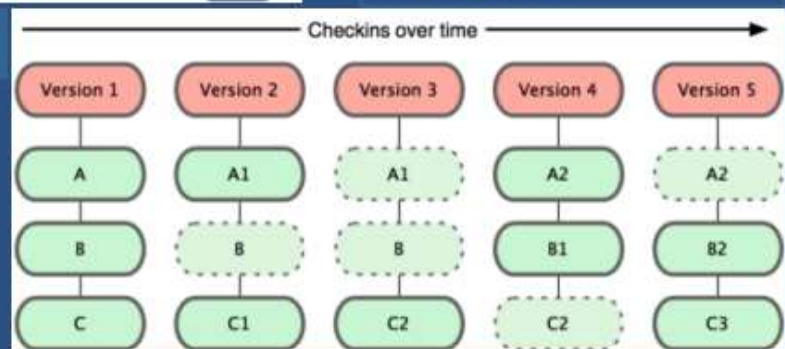| Checkins over time → |
| Version 1 | Version 2 | Version 3 | Version 4 | Version 5 |
| file A → Δ1 ————————→ Δ2 |
| file B ————————→ Δ1 → Δ2 |
| file C → Δ1 → Δ2 ————————→ Δ3 |

Other systems track changes in files, eg subversion, CVS, etc

Git stores data as snapshots, so a clone is the full backup of project

Git

| Checkins over time → |
Version 1	Version 2	Version 3	Version 4	Version 5
A	A1	A1	A2	A2
B	B	B	B1	B2
C	C1	C2	C2	C3

Git has three areas of operation

Local Operations

working directory   staging area   git directory (repository)

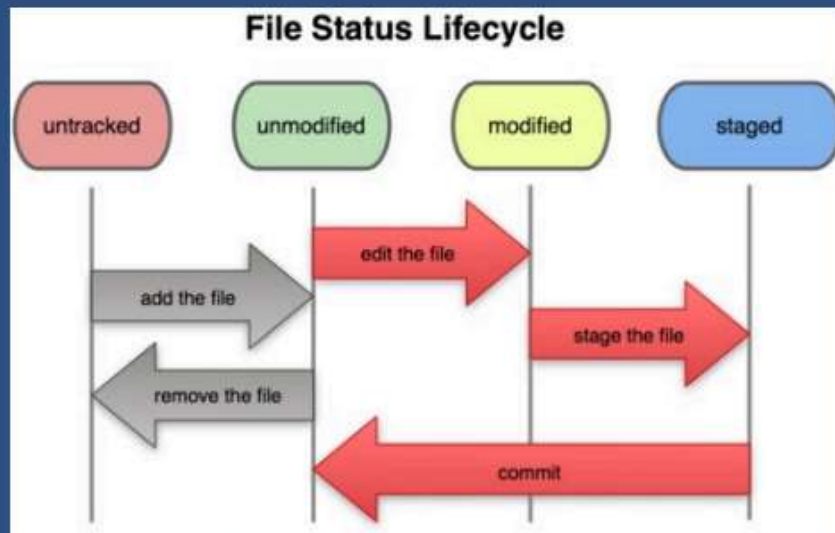← checkout the project

stage files →

commit →

Modified is changed, uncommitted file
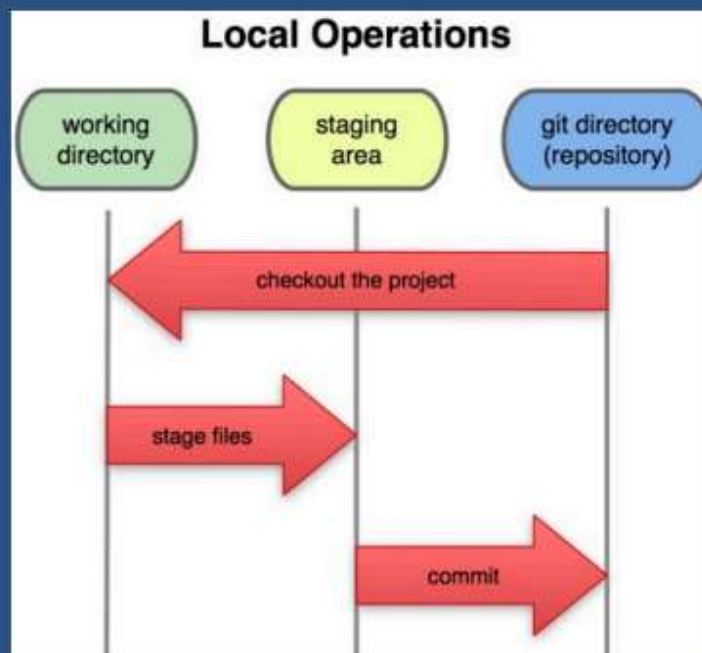
Committed means data is in repository

Staged is modified file marked to go into commit snapshot

Four file status options

File Status Lifecycle

untracked | unmodified | modified | staged

add the file
edit the file
stage the file
remove the file
commit

Untracked is ignored

Unmodified is unchanged

Modified is changed, but not added to stage for commit

Staged is what will be added to next commit