

# Roll Back

## 1. `git revert <commit-hash>`

- **Effect:**

- This creates a **new commit** that undoes the changes introduced by the specified commit.
- The original commit and its history remain intact.
- Safe for shared branches since history is preserved and no force-push is required.
- **Use Case:** When you want to undo a commit but keep a clear history of what was undone.

## 2. `git reset --soft <commit-hash>`

- **Effect:**

- Moves the `HEAD` pointer to the specified commit.
- Changes made in commits after the target commit are **kept staged** (in the index).
- Does not touch your working directory or the content of the files.
- **Use Case:** When you want to uncommit but keep changes ready to be re-committed.

## 3. `git reset --hard <commit-hash>`

- **Effect:**

- Moves the `HEAD` pointer to the specified commit.
- Discards all changes made in commits after the target commit.
- **Working directory and staging area are wiped clean**, matching the state of the target commit.
- **Use Case:** When you want to completely discard commits and their changes.

**git reflog for recovery**