

QUESTION 1 — Git Mistakes & Recovery Challenge

(Fixing Real-World Git Problems)

Simulate several common Git mistakes and fix them using correct Git commands.

Task Requirements

1. Create a new Git repository.
2. Create a file named notes.txt and make an initial commit.
3. Make a **wrong commit** (any incorrect change).
4. Fix that commit using:
5. git commit --amend
6. Create **two more commits** with any changes you like.
7. Now assume the **second commit** contains incorrect work.
Undo it using:
8. git revert <commit-hash>
9. Create another mistake:
 - o Delete a file
 - o Stage the deletion
 - o Commit it
10. Realize it was incorrect. Restore the file using one of the following:
11. git reset --soft HEAD~1
or
git restore <filename>
12. Push the repository to GitHub.
13. Add your teammates as collaborators.

QUESTION 2 — Git Versioning & Release Tags

Simulate the versioning workflow for a small project with multiple files.

Task Requirements

1. Start a new Git repository.
 2. Add **five files** to the project and make the first commit (Version 1).
 3. Create **Version 2**:
 - o Modify two files
 - o Add one new file
 - o Remove one file
 - o Commit these changes
 4. Create **Version 3**:
 - o Rename one file
 - o Make additional changes to other files
 - o Commit again
 5. Tag each version:
 6. v1.0
 7. v2.0
 8. v3.0
 9. Push everything to GitHub.
 10. Add your teammates as collaborators.
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 **QUESTION 3 — Git Workflow Simulation (Git Flow Model)**

(Feature Branching + Release Flow)

Follow a simplified version of the Git Flow branching model.

Task Requirements

1. Create a GitHub repository and clone it locally.
2. Create a branch named:
3. develop
4. Create **three feature branches**:
 - o feature/login

- feature/register
 - feature/profile
5. In each feature branch:
 - Add a unique file
 - Make at least one commit
 6. Merge each feature branch into develop.
 7. Create a release branch:
 8. release/v1.0
 9. Inside the release branch:
 - Add a file named VERSION.txt
 - Write "Version 1.0" inside it
 - Commit the change
 10. Merge the release branch into main.
 11. Tag the release commit as:
 12. v1.0
 13. Push all branches and tags to GitHub.
 14. Add your teammates as collaborators.