

Git Practical Task – Version Control Fundamentals

Task Objective:

Apply the Git concepts explained in the lecture by creating and managing a local repository, tracking changes, fixing mistakes, and understanding Git recovery tools.

Part 1: Repository Setup

1. Create a new folder called:
git-task-project
 2. Navigate into the folder.
 3. Initialize a Git repository.
 4. Verify that the repository was created successfully.
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Part 2: First File and First Commit

5. Create a file named:
index.html
 6. Add basic HTML structure with a title and a heading.
 7. Check the repository status.
 8. Stage the file.
 9. Commit the file with a clear commit message.
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Part 3: Making Changes

10. Edit index.html and add a footer section.
 11. Check the repository status.
 12. Stage the updated file.
 13. Commit the changes.
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Part 4: Staging Mistake Simulation

14. Create a file named:

app.js

15. Stage the file.
 16. Realize it should not be included.
 17. Remove the file from the staging area only (do not delete it).
 18. Verify the repository status.
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Part 5: Amending the Last Commit

19. Add new content to index.html.
 20. Stage the changes.
 21. Update the last commit to include the new changes without changing the commit message.
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Part 6: Undoing Changes Safely

22. Display the commit history.
 23. Revert one previous commit using a safe method that keeps the project history intact.
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Part 7: Reset Practice

24. Make a new change to index.html.
 25. Commit the change.
 26. Undo the last commit while keeping the changes in the working directory.
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Part 8: Using .gitignore

27. Create a .gitignore file.
28. Configure it to ignore:
 - All .log files
 - node_modules folder

- .env file

29. Create test files and folders to confirm
they are ignored by Git.

Part 9: Verification

30. Display the full commit history.

31. Display the commit history in one-line format.

32. Identify:

- The latest commit
- The previous commit
- The commit pointed to by HEAD