

## 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.

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### 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.

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#### 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