Open Source Software Development

Homework assignment 3b

Exercise 1 Recap Resolve Merge Conflicts

Part 1: Repository Setup and Basic Workflow

1. Use the repository of homework assignment 3. Change to its working directory.
2. **Create a new branch** `feature-x`, make a change to `file.txt` and commit.
3. **Switch back to `main`**, modify the same part of `file.txt`, and commit.

Part 2: Merging with Conflicts

1. **Merge `feature-x` into `main`.**
2. Git will produce a **merge conflict**. Show how you resolved the conflict.
3. **Commit the merge resolution**.
4. Push your changes to the remote repository.

Exercise 2 Recovery Scenarios

Scenario A: `git checkout`

1. Make a **wrong change** to a `file.txt` on `main` and commit it.
2. Use `git checkout` to restore the file to its last correct state.
3. Show the command you used and the final file content.

Scenario B: `git reset`

1. Add and commit a change to `file2.txt`.
2. Use `git reset --soft HEAD~1` to undo the last commit but keep changes.
3. Use `git reset --hard HEAD~1` to completely remove the commit and changes.
4. Document your terminal commands and file status before and after.

Scenario C: `git revert`

1. Add a "bad" commit to `main` (e.g., deleting a line by mistake).
2. Use `git revert` to undo it with a new commit.
3. Show `git log` before and after the revert.

Deliverables for both exercises

- A short **report (PDF or markdown)** that includes:
  - A description of what you did in each step.
  - Git commands used (copy-paste from your terminal).
  - Screenshots or code excerpts for conflict resolution and recovery.