AeroAspire -SDE Intern Training

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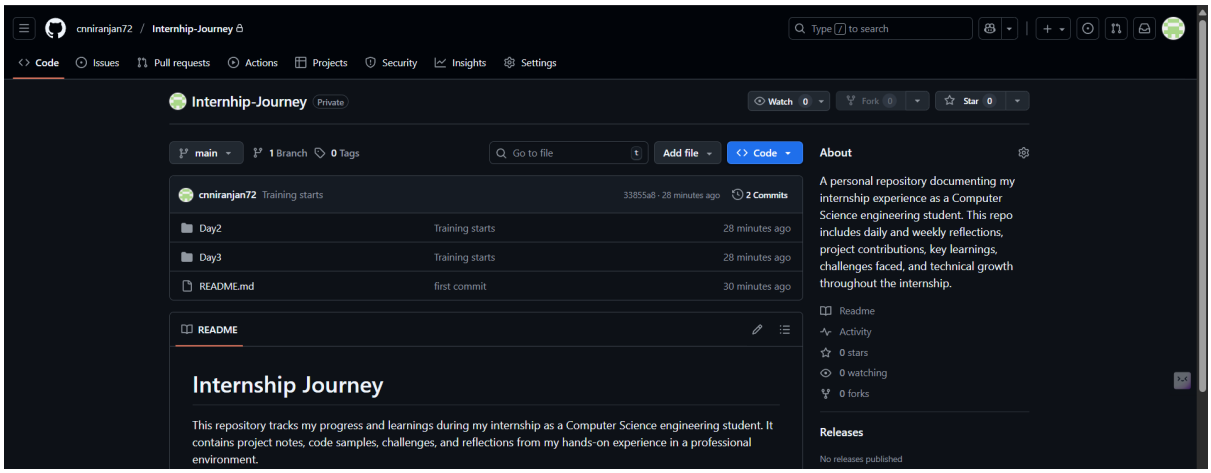
Day 3-Sep 24



Steps:

For Commit in a new repository

- Create repository
- Name repository
- Initialize files and folders (git init)
- Add files to be pushed (git add ./filename)
- Add a commit message (git commit -m “Message”)
- Add a url to act on(git remote add origin https://github.com/reponame.git)
- Push Files(git push -u origin main)

For creating branch:

- Check main branch status(git checkout main)
- Pull for any changes(git pull)
- Check for conflicts
- Create and switch to a new feature branch(git checkout -b feature-branch-name)
- Work on new branch
- Push files from new branch(git push -u branch-name)
- Check for main branch(git checkout main)
- Pull for any changes(git pull)
- Solve merge conflicts in merge editor
- Check for incoming and current data in files locally

- Merge changes(git merge branch-name)
- Finally push(git push)

Questions

1. What is the workflow from making changes → staging → commit → push?
    a. Edit files in project folder
    b. Use git add <files> to include what all files needs to be pushed
    c. Use git commit -m "message" to commit the push like contribute in repository
    d. Use git push to push the files or folders to the git repository
2. What is a merge conflict: what causes it, and how do you resolve?
    a. Merge conflict is a kind of warning that occurs when there are multiple branches and the changes in particular files are different from each other
    b. These changes need to be combined to obtain the complete file but the conflict occurs due to code similarity, repetitive blocks, additional code etc.
    c. Here Git cant decide itself what content to retain and what not so a merge conflict occurs which has to be solved manually
    d. We resolve it manually like I mentioned checking for incoming and current code
    e. Accept what part of the code to retain on the local file
    f. And then overcome merge conflict by pushing it finally
    g. Merge conflict occurs not only due to multiple branches but also when multiple collaborators commit to a particular repository
3. Describe what happens under the hood with git commit: what objects are stored? (briefly)
    a. Git reads the files, checks for any changes in files at the local device and saves changes as a new commit along with a commit message
    b. It also holds time stamps, push information
    c. It also holds commit history as a temporary store