

Day 2 Internship Work

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Day: 2

Topic: Git and GitHub – Branching and Merging

What I Learned Today

Today was my second day of internship. In this session, I learned about **Git and GitHub branching and merging**.

Git Branching

Branching means creating a separate copy of the main code so that we can work freely. If something goes wrong, the main code will not be affected.

Uses of branching:

- To add new features
- To fix bugs
- To test code safely
- To work in a team

The main branch usually contains the final and correct code.

Commands Practiced

Some basic commands that I learned and practiced today are:

- To create a branch:

```
git branch branch-name
```

- To move to another branch:

```
git checkout branch-name
```

- To create and switch branch at the same time:

```
git checkout -b branch-name
```

Git Merging

Merging means joining the changes of one branch into another branch. After completing work on a branch, we merge it with the main branch.

Command used for merging:

```
git checkout main
```

```
git merge branch-name
```

Merge Conflicts

Sometimes merging creates problems called merge conflicts. This happens when the same line of code is changed in two branches. In that case, we need to fix it manually.

GitHub Usage

I also learned how GitHub helps in branching and merging using **Pull Requests**. Pull requests are used to review code before merging it into the main branch.

Practical Work Done

Today, I worked on a **Todo App** as practical work. I created a separate branch and added new features to the Todo application. After completing the work, I pushed the changes to GitHub.

Then, I created a **Pull Request** from my feature branch to the main branch. After reviewing the changes, the pull request was merged successfully into the main branch. This helped me understand the real-time use of branching, merging, and pull requests in GitHub.

Conclusion

Today's session helped me understand how developers manage code using Git and GitHub. Branching and merging are very useful for teamwork and safe coding. I found this topic very interesting and helpful.