EXPERIMENT -1
Git Version Control

Introduction to Git

Git is a distributed version control system that helps you track changes in your codebase. It allows multiple people to collaborate on a project without overwriting each other's work. Git keeps a complete history of changes and enables you to revert to previous versions, compare code, and merge different versions of files.

Basic Git Commands

Initializing a Git Repository

To start using Git, navigate to your project directory and initialize a Git repository.

cd /path/to/your/project

git init

Checking the Status

To see the current state of your working directory, including changes not yet staged for commit:

git status

Adding Files to Staging

Before committing changes, add files to the staging area:

git add <file-name> # Add a specific file

git add .   # Add all files

Committing Changes

After staging your changes, commit them with a descriptive message:

git commit -m "Your commit message here"

Viewing Commit History

To view the commit history of your project:

git log

Creating a Branch

Branches allow you to work on different features or bug fixes without affecting the main codebase. To create a new branch:

git checkout -b <branch-name>

Switching Branches

To switch to an existing branch:

git checkout <branch-name>

Merging Branches

Once you've made changes on a branch, you may want to merge it into the main branch (or another branch). First, switch to the branch you want to merge into (e.g., main):

git checkout main

Then merge the changes:

git merge <branch-name>

Deleting a Branch

After a branch has been merged, you can delete it:

git branch -d <branch-name>

Collaboration with Git

Pulling Changes from a Remote Repository

To fetch and merge changes from a remote repository:

git pull origin main

Resolving Merge Conflicts

If there are conflicting changes between branches, Git will notify you, and you'll need to manually resolve the conflicts by editing the affected files. After resolving, mark them as resolved:

git add <resolved-file>

git commit -m "Resolved merge conflict"

OUTPUT:

```
EXPLORER                ...        PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS                                              +
∨ EXPE-1
  J  HelloWorld.java                [bug-fix 3396eba] Fixed bug in main.java
  ≡  notes.txt                       1 file changed, 1 insertion(+)

                                    C:\Users\JAINI VIKRAM\OneDrive\Pictures\Documents - Copy\2nd Year\2nd year Second
                                    Sem\FSAD\expe-1>git checkout main
                                    Switched to branch 'main'
                                    Your branch is up to date with 'origin/main'.

                                    C:\Users\JAINI VIKRAM\OneDrive\Pictures\Documents - Copy\2nd Year\2nd year Second
                                    Sem\FSAD\expe-1>git merge feature-update
                                    Updating 4045b44..d5d4aea
                                    Fast-forward
                                     notes.txt | 4 +++-
                                     1 file changed, 3 insertions(+), 1 deletion(-)

                                    C:\Users\JAINI VIKRAM\OneDrive\Pictures\Documents - Copy\2nd Year\2nd year Second
                                    Sem\FSAD\expe-1>git merge bug-fix
                                    Updating d5d4aea..3396eba
                                    Fast-forward
                                     HelloWorld.java | 1 +
                                     1 file changed, 1 insertion(+)

                                    C:\Users\JAINI VIKRAM\OneDrive\Pictures\Documents - Copy\2nd Year\2nd year Second
                                    Sem\FSAD\expe-1>git push origin
                                    Enumerating objects: 9, done.
                                    Counting objects: 100% (9/9), done.
                                    Delta compression using up to 12 threads
                                    Compressing objects: 100% (6/6), done.
                                    Writing objects: 100% (6/6), 725 bytes | 725.00 KiB/s, done.
                                    Total 6 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
                                    remote: Resolving deltas: 100% (1/1), completed with 1 local object.
                                    To https://github.com/Vikram13062006/SkillLabPrograms_90202_section-6.git
> OUTLINE                             4045b44..3396eba  main -> main
> TIMELINE
```


github.com/Vikram13062006/SkillLabPrograms_90202_section-6

Vikram13062006 / SkillLabPrograms_90202_section-6

<> Code ⊙ Issues � Pull requests ⊙ Actions ⊞ Projects ⊞ Wiki ⊕ Security ⊵ Insights ⚙ Settings

SkillLabPrograms_90202_section-6 Public

☆ Pin   ⊙ Watch 0 ▼   ⑂ Fork 0 ▼   ☆ Star 0 ▼

⑂ main ▼   ⑂ 1 Branch   ◌ 0 Tags   Go to file   t   Add file ▼   <> Code ▼

About

No description, website, or topics provided.

👤 Vikram13062006 EXPERIMENT-2.pdf		d913186 · 17 hours ago	⊙ 8 Commits
📁 demo	Experiment-2 demo project		yesterday
📄 HelloWorld.java	Fixed bug in main.java		yesterday
📄 Section-2_90202_EXPERIMENT-2.pdf	EXPERIMENT-2.pdf		17 hours ago
📄 notes.txt	Added feature update notes		yesterday

📖 README

⎯⋁⎯ Activity
☆ 0 stars
⊙ 0 watching
⑂ 0 forks

Releases

No releases published
Create a new release

Packages

No packages published