Git Command Usage Documentation

This document explains the Git commands used during a terminal session to initialize a repository, connect it to GitHub, and push code while resolving conflicts.

# 1. Navigate to Project Directory

cd ~/Users/alok/java\_codes/linear\_search.java  
❗ Error: This path is incorrect because 'linear\_search.java' is a file, not a directory.  
  
cd java\_codes  
✅ Correctly navigated to the project directory.

# 2. Initialize a Git Repository

git init  
Initializes a new Git repository in the current directory.  
Creates a .git folder to track versions.

# 3. Add and Commit Files

git add .  
Stages all files in the current directory for commit.  
  
git commit -m "Initial commit"  
Commits the staged files with a message.

# 4. Add Remote Repository

git remote add origin https://github.com/Alok9809/full\_stack  
Links the local repository to the remote GitHub repo.  
  
❗ Error: remote origin already exists.  
The remote was already set earlier, so this command fails.

# 5. Push to Remote Repository (First Attempt)

git push origin main  
❗ Error: Updates were rejected because the remote contains work that you do not have locally.  
This usually happens when the remote has existing commits that your local branch does not.

# 6. Pull Remote Changes with Rebase

git pull origin main --rebase  
Fetches remote changes and rebases your commits on top of them to avoid conflicts.

# 7. Push After Rebase

git push origin main  
Successfully pushes the local changes to the GitHub repository.

# 8. Summary of Key Git Commands

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| --- | --- |
| Command | Purpose |
| git init | Initializes a new Git repository |
| git add . | Stages all files for commit |
| git commit -m "..." | Commits changes with a message |
| git remote add origin <url> | Adds a remote GitHub repository |
| git push origin main | Pushes changes to GitHub |
| git pull origin main --rebase | Pulls and rebases remote changes |