Complete Git & GitHub Collaboration Guide

A full workflow guide covering project creation, configuration, and collaboration between multiple users.

Part 1 — Setup (For Both People)

`1` Install and Verify Git

Command: git --version
Checks if Git is installed. If not, download from https://git-scm.com/downloads.

`2` Configure Git (One-Time Setup)
Each person must identify themselves using:

```
git config --global user.name "Your Full Name"
git config --global user.email "your_email@example.com"
Verify setup with: git config –list
```

Part 2 — Person 1: Project Creator Workflow

1. Step 1: Create a Project Folder Locally

2. Step 2: Initialize Git Repository

```
git init
```

3. Step 3: Add Some Files
4. Step 4: Check Repository Status

```
git status
```

5. Step 5: Stage Files for Commit

```
git add .
```

6. Step 6: Commit Changes

```
git commit -m "Initial project setup with README and app file"
```

7. Step 7: Create a Repository on GitHub

   Create repo at https://github.com and copy the HTTPS URL.

8. Step 8: Link Local Repo to GitHub

```
git remote add origin https://github.com/username/team-project.git
git remote -v
```

9. Step 9: Push Local Project to GitHub

```
git branch -M main
git push -u origin main
```

10. Step 10: Invite Collaborator

- Go to Settings → Collaborators → Add people → Enter GitHub username → Invite

Part 3 — Person 2: Collaborator Workflow

11. Step 1: Clone Repository

```
git clone https://github.com/username/team-project.git
cd team-project
```

12. Step 2: Check Current Branch

```
git branch
```

13. Step 3: Create a New Branch for Work

```
git checkout -b feature-1
```

14. Step 4: Make Changes
15. Step 5: Check Status and Stage Changes

```
git status
git add .
```

16. Step 6: Commit Changes

```
git commit -m "Added new feature "
```

17. Step 7: Push New Branch to GitHub

```
git push -u origin feature-1
```

18. Step 8: Create a Pull Request (PR)

- Go to GitHub → Compare & Pull Request → Create Pull Request

Part 4 — Person 1: Review & Merge Pull Request

1. Open Pull Requests tab on GitHub → Review and merge.
2. Pull latest updates:

git pull origin main

Part 5 — Both Users: Ongoing Collaboration Commands

- git status — Check file changes
- git add . — Add all modified files
- git commit -m "message" — Commit with message
- git push origin <branch> — Push to GitHub
- git pull origin main — Pull updates
- git checkout <branch> — Switch branch
- git checkout -b <branch> — Create new branch
- git branch -d <branch> — Delete local branch after merge
- git log --oneline — Show summarized commit log
- git remote -v — View remote URLs
- git merge <branch> — Merge branch into current branch

Summary of Workflow

Person	Action	Key Commands
Person 1	Create local project	git init, git add ., git commit -m, git remote add origin, git push -u origin main
Person 1	Share repo	Invite collaborator
Person 2	Clone project	git clone, git checkout -b feature, git add ., git commit, git push origin feature
Person 1	Merge PR	Merge on GitHub
Both	Sync code	git pull origin main