**GitHub Workflow Guide**

**📁 Your Git Branching Structure**

main → Final, production-ready code only

backup → Testing/integration of team work

harpreet → Harpreet’s individual development

kk → KK’s individual development

nikhil → Nikhil’s individual development

**✅ Team GitHub Workflow Guide**

**🧱 1. Initial Setup (One-Time)**

Each team member should:

git clone https://github.com/Harpreetsingh10414/EMS.git

cd EMS

git checkout -b <your-branch-name> # e.g., harpreet, kk, or nikhil

Make sure your local branch names match your role.

**🔄 2. Daily Routine (Best Practice)**

**✅ Every Morning – Pull Latest Changes**

Before you start work:

# Switch to your personal branch

git checkout harpreet # or kk / nikhil

# Pull latest changes from remote

git pull origin harpreet

# Also pull from backup in case something was merged yesterday

git pull origin backup

**💻 While Working – Make Commits**

# Stage and commit often

git add .

git commit -m "your message about what you did"

**⬆️ After Work – Push Your Changes**

git push origin harpreet # or kk / nikhil

**🔁 3. Merge to backup Branch (Team Integration)**

When your feature is working:

1. Checkout backup branch:
2. git checkout backup
3. git pull origin backup
4. Merge your branch:
5. git merge harpreet # or kk / nikhil
6. Push updated backup:
7. git push origin backup

**🧹 4. Merge to main (Only by Team Lead)**

When backup is stable and tested, only the team lead (maybe Harpreet?) should:

git checkout main

git pull origin main

git merge backup

git push origin main

**📌 Best Practices to Avoid Conflicts**

* ✅ Always pull before you push.
* ✅ Commit with clear messages.
* ✅ Never work directly on main.
* ✅ Coordinate merge timings to avoid multiple people merging at once.
* ✅ Test thoroughly before merging to backup.

**🕒 Suggested Weekly Routine**

| **Day** | **Task** |
| --- | --- |
| **Mon-Fri** | Work on individual branches, push daily |
| **Friday** | Everyone merges to backup after review |
| **Saturday** | Test on backup branch |
| **Sunday** | Merge backup to main if everything is stable |

**📋 Git Command Cheat Sheet**

| **Task** | **Command** |
| --- | --- |
| Check branch | git branch |
| Create new branch | git checkout -b branchname |
| Switch branch | git checkout branchname |
| Pull latest | git pull origin branchname |
| Push changes | git push origin branchname |
| Merge | git merge branchname |
| Add files | git add . |
| Commit | git commit -m "message" |
| Check status | git status |
| See history | git log |