**REPORT**

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### **About Git and GitHub:**

#### **Git:** Git is a version control system (VCS) that tracks changes in code, allowing multiple people to collaborate without messing up the project.

It helps us in:

* Keep track of code changes.
* Work on different features (branches) without affecting the main code.
* Roll back to previous versions if things break.

#### **GitHub:** GitHub is an online platform that hosts Git repositories. Think of it as a Google Drive for your code but with powerful collaboration tools.

#### It allows developers to:

* Store and manage code remotely.
* Collaborate with others through pull requests.
* Use GitHub Actions for automation and deployment.

### **Protocols:**

Every enterprise or website follows 2 protocols

They are:

* HTTPS: Hyper Text Transfer Protocol **Secure →** Mostly used for banking sectors and the domains that need security to protect the ongoing session.
* SSH: Secure Shell → Used by It Industries.

### **Commands:**

1. **$ git config --global user.name "Your Name" :** To enter the name/user ID of the user's github account.
2. **$ git config --global user.email "**[**your@email.com**](mailto:your@email.com)**" :** To enter the email id of the github account of the user.
3. **$ git -- version:** To check the version of the current running git on your personal computer.
4. **$ git --global --list:** To display the identities.
5. **$ git init:** This initializes a Git repo in your project folder.
6. **$ git clone <repo-url>:** To copy an existing repo from GitHub to your local system.
7. **$ git status:** Shows uncommitted changes.
8. **$ git add <file>:** Add a specific file.
9. **$ git add . :** Add all changes.
10. **$ git commit -m "commit message":** Saves your changes with a message.
11. **$ git push origin main:** Pushes changes to the main branch.
12. **$ git remote add origin <repo-url>:** Connects your git and github repo.