Git version control

Git is a distributed version control system (VCS) used to track changes in source code during software development.used for speed, efficiency and collaboration. We use it when you want to upload the code or any files in the cloud to keep track of it and don't lose it from your device and also for collaboration with a team working in different places with the same project.

| **Cloud repository** | **explain** |
| --- | --- |
| Github | The most popular cloud-based Git repository, ideal for open-source projects and enterprise development. |
| Gitlab | A complete DevOps platform offering Git repository hosting |
| Azure | Microsoft’s Git-based repository solution integrated with Azure services and DevOps tools. |

There are many cloud repositories that used git version control and most popular are:

Here are the set of all git commands with explanation:

| Command | Description |
| --- | --- |
| git config --global user.name "Your Name" | Sets the username for Git commits |
| git config --global user.email "your.email@example.com" | Sets the email for Git commits. |
| git init | Initializes a new Git repository in the current directory |
| git clone <repository\_URL> | Creates a copy of a remote repository on your local machine. |
| git status | Shows the status of changes in the working directory. |
| git log --oneline | Shows commit history in a compact format. |
| git log | Displays commit history. |
| git diff | Shows changes between the working directory and the last commit. |
| git add <file> | Stages a specific file for the next commit. |
| git commit -m "Commit message" | Commits staged files with a descriptive message. |
| git remote add origin <repository\_URL> | Connects a local repository to a remote one. |
| git branch | Lists all branches in the repository. |
| git push origin <branch\_name> | Pushes changes to a remote repository. |
| Git pull | Fetches and integrates changes from the remote repository. |