Git & GitHub: A to Z Beginner Guide

Introduction

Git is a version control system that lets you track changes in your code.

GitHub is an online platform to host and collaborate on Git repositories.

Why use them? To save your code history, collaborate with others, and manage versions.

What is a Repository?

A repository (or repo) is a folder that contains all your project files and tracks changes with Git.

- Local Repo: on your computer
- Remote Repo: hosted on GitHub

Basic Git Commands

`git init` - Start a Git repository

`git add filename` - Stage files

`git commit -m "message"` - Save changes

`git status` - See current status

`git push` - Upload to GitHub

How to Push to GitHub

1. Create a repo on GitHub.
2. On your PC:
   `git init`
   `git add .`
   `git commit -m "first commit"`
   `git remote add origin <URL>`
   `git push -u origin main`

Common Terms

- **Commit**: Savepoint of your code

- **Branch**: A copy to try new features
- **Clone**: Download a GitHub repo
- **Pull**: Get updates
- **Fork**: Copy someone's repo to your account

Tips & Troubleshooting

- Always check `git status`
- Commit often
- Use meaningful messages
- If error: try `git pull origin main --rebase` before pushing