**Basic Git Commands Summary**

**Git Config**

* Configure Git settings like user name, email, etc.

syntax

git config

**Git Init**

* Initialize a new Git repository in the current directory.

syntax

git init

**Git Clone**

* Clone a repository into a new directory.

syntax

git clone URL

**Git Add**

* Add one or more files to the staging (Index) area.

syntax

git add Filename # Add one file git add \* # Add all files

**Git Commit**

* Record or snapshot changes to the repository with a message.

syntax

git commit -m "Commit Message" # Commit with a message git commit -a # Commit all changes

**Git Status**

* Display the state of the working directory and staging area.

syntax

git status

**Git Push**

* Upload local repository content to a remote repository.

syntax

git push [remote] [branch]

**Git Pull**

* Receive data from a remote repository and merge it into the current branch.

syntax

git pull URL

**Git Branch**

* List all branches available in the repository.

syntax

git branch

**Git Merge**

* Merge the specified branch's history into the current branch.

syntax

git merge BranchName

**Git Log**

* Check the commit history.

syntax

git log

**GitHub Account Creation**

**Steps to Create a GitHub Account:**

1. **Visit GitHub Website:**
   * Go to [GitHub](https://github.com/) in your web browser.
2. **Sign Up:**
   * Click on the "Sign Up" button on the GitHub homepage.
3. **Provide Information:**
   * Fill in the required information, including a username, email address, and password.
4. **Choose a Plan:**
   * Select a plan based on your needs. GitHub offers both free and paid plans.
5. **Verify Your Account:**
   * Complete the account creation process by verifying your email address.
6. **Create Your First Repository:**
   * Once your account is set up, you can create a new repository to start managing your projects.

**Staging and Committing Operations in Git**

**Git Add**

* **Purpose:**
  + Adds file contents to the Index (Staging Area) for the next commit.
* **Syntax:**

bashCopy code

$ git add <File name>

* **Options:**
  + **git add -A** or **git add .**: Adds all files to the staging area.
  + **git add --ignore-removal**: Stages only updated and newly created files.
  + **git add -u**: Stages only modified and deleted files.
  + **git add \*.java**: Stages files based on a wildcard pattern.

**Git Commit**

* **Purpose:**
  + Records changes in the repository and creates a commit.
* **Syntax:**

bashCopy code

$ git commit

* **Options:**
  + **git commit -a**: Commits snapshots of all changes (ignores newly created files).
  + **git commit -m "Commit message"**: Specifies the commit message on the command line.
  + **git commit --amend**: Edits the last commit message.

**Git Clone**

* **Purpose:**
  + Creates a local copy of a remote repository.
* **Syntax:**

bashCopy code

$ git clone <repository URL>

* **Options:**
  + **git clone -b <Branch name> <Repository URL>**: Clones a specific branch.

**Git Fork**

* **Purpose:**
  + Creates a copy of a repository for experimentation without affecting the original project.
* **How to Fork a Repository on GitHub:**
  + Login to GitHub.
  + Find the repository to fork.
  + Click the "Fork" button on the upper right side of the repository's page.