

GIT COMMANDS

- Initializing the remote git repository

```
PS C:\Users\likit\OneDrive\Documents\git> git init
Initialized empty Git repository in C:/Users/likit/OneDrive/Documents/git/.git/
PS C:\Users\likit\OneDrive\Documents\git>
```

- Checking the status of the remote git repository

```
PS C:\Users\likit\OneDrive\Documents\git> git status
On branch main

No commits yet

nothing to commit (create/copy files and use "git add" to track)
PS C:\Users\likit\OneDrive\Documents\git>
```

- To set the default master to main while initializing

```
PS C:\Users\likit\OneDrive\Documents\git> git init -b main
warning: re-init: ignored --initial-branch=main
Reinitialized existing Git repository in C:/Users/likit/OneDrive/Documents/git/.git/
PS C:\Users\likit\OneDrive\Documents\git>
```

- To add files in the Staging area

```
PS C:\Users\likit\OneDrive\Documents\git> git add .
PS C:\Users\likit\OneDrive\Documents\git> git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   file1.txt
PS C:\Users\likit\OneDrive\Documents\git>
```

- To commit the changes (provides a checksum)

```

PS C:\Users\likith\OneDrive\Documents\git> git commit -m "First commit"
[main (root-commit) c8418f7] First commit
1 file changed, 1 insertion(+)
create mode 100644 file1.txt
PS C:\Users\likith\OneDrive\Documents\git> git log
commit c8418f7eda31aba872b369e2798f3e3426037649 (HEAD -> main)
Author: likith somanna <likithsomanna7@gmail.com>
Date: Tue Aug 5 13:10:59 2025 +0530

    First commit
PS C:\Users\likith\OneDrive\Documents\git>

```

To check the difference between a working file and the committed file

```

PS C:\Users\likith\OneDrive\Documents\git> git diff
diff --git a/file1.txt b/file1.txt
index b528ced..5b53e06 100644
--- a/file1.txt
+++ b/file1.txt
@@ -1,2 @@
-Hello world !!!
\ No newline at end of file
+Hello world !!!
+this is likith
\ No newline at end of file
PS C:\Users\likith\OneDrive\Documents\git>

```

To check the difference between a staged file and the committed file

```

PS C:\Users\likith\OneDrive\Documents\git> git diff --staged
diff --git a/file1.txt b/file1.txt
index b528ced..5b53e06 100644
--- a/file1.txt
+++ b/file1.txt
@@ -1,2 @@
-Hello world !!!
\ No newline at end of file
+Hello world !!!
+this is likith
\ No newline at end of file
PS C:\Users\likith\OneDrive\Documents\git>

```

To delete any committed files or untrack the changes (confidentiality) before pushing

```
create mode 100644 creden.txt
PS C:\Users\likit\OneDrive\Documents\git> git rm --cached creden.txt
rm 'creden.txt'
PS C:\Users\likit\OneDrive\Documents\git>
```

Cloning a repository

```
PS C:\Users\likit\OneDrive\Documents\git> git clone https://github.com/Likithsomanna7/UI-Payment-And-Expense-Tracker-MongoDB.git
Cloning into 'UI-Payment-And-Expense-Tracker-MongoDB'...
remote: Enumerating objects: 155, done.
remote: Counting objects: 100% (155/155), done.
remote: Compressing objects: 100% (106/106), done.
remote: Total 155 (delta 69), reused 120 (delta 38), pack-reused 0 (from 0)
Receiving objects: 100% (155/155), 147.52 KiB | 186.00 KiB/s, done.
Resolving deltas: 100% (69/69), done.
```

To add a remote origin

```
PS C:\Users\likit\OneDrive\Documents\git> git remote add origin https://github.com/Likithsomanna7/UI-Payment-And-Expense-Tracker-MongoDB.git
PS C:\Users\likit\OneDrive\Documents\git>
```

To create a Tag (Annotated Tagging)

```
PS C:\Users\likit\OneDrive\Documents\git> git tag -a v1.0 -m "1st release"
PS C:\Users\likit\OneDrive\Documents\git> git show v1.0
tag v1.0
Tagger: likith somanna <likithsomanna7@gmail.com>
Date: Tue Aug 5 18:19:15 2025 +0530

1st release

commit 66329ea7027ca60cd58d2f054882a98c097fed59 (HEAD -> main, tag: v1.0)
Author: likith somanna <likithsomanna7@gmail.com>
Date: Tue Aug 5 13:43:15 2025 +0530

    second commit

diff --git a/creden.txt b/creden.txt
new file mode 100644
index 0000000..509023e
```

To create a branch (Snapshots like linkedlist)

```
PS C:\Users\likit\OneDrive\Documents\git> git checkout -b branch1
Switched to a new branch 'branch1'
```

List the branch

```
PS C:\Users\likit\OneDrive\Documents\git> git branch
branch1
* main
```

To switch to the previous branch

```
PS C:\Users\likit\OneDrive\Documents\git> git switch -
Switched to branch 'branch1'
```

To Delete the branch

```
Switched to branch 'main'  
PS C:\Users\likit\OneDrive\Documents\git> git branch -d branch1  
Deleted branch branch1 (was 66329ea).
```

For Logging

```
error: no such remote: origin  
PS C:\Users\likit\OneDrive\Documents\git> git checkout -b branch1  
Switched to a new branch 'branch1'
```

Merging

```
Switched to branch 'main'  
PS C:\Users\likit\OneDrive\Documents\git> git merge branch1  
Updating 66329ea..d6aea46  
Fast-forward  
 creden.txt | 1 +  
 1 file changed, 1 insertion(+)
```

To pull the change from the main or from other branches

```
Deleted branch branch1 (was 66329ea).  
PS C:\Users\likit\OneDrive\Documents\git> git pull origin main  
fatal: 'origin' does not appear to be a git repository  
fatal: Could not read from remote repository.
```

Merge Conflict (main ---> branch1 (changes on same line)(commit) | back to main (again changes on same line) (commit) Try merging conflict occurs

```
PS C:\Users\likit\OneDrive\Documents\git> git merge branch4  
Auto-merging index.js  
CONFLICT (content): Merge conflict in index.js  
Automatic merge failed; fix conflicts and then commit the result.  
PS C:\Users\likit\OneDrive\Documents\git>
```

Similarly Rebase same concept but top of each other also checks for conflicts rebase on both the branch and the main

Forking

Fork Workflow

1. Fork the main repo
2. Clone down forked repo to own environment
3. Make the changes to the main branch in the forked repo
4. Push changes to the main branch in the forked repo
5. Open a PR with the changes from the fork onto the original repo

Add Upstream : `git remote add upstream " " (original repo)`

Add origin : `git remote add origin " "(local copy in my repo)`