

## Notes for Git and GitHub

What is Git ?

What is GitHub ??

**\*How to check in our computer git is installed or not ?**

```
C:\Users\HP>git --version  
git version 2.33.0.windows.2
```

**\*How to create directory or folder using cmd??**

```
C:\Users\HP\Desktop>mkdir Lalit  
  
C:\Users\HP\Desktop>
```

```
C:\Users\HP\Desktop\Lalit>md Flutter  
  
C:\Users\HP\Desktop\Lalit>ren Flutter Dart  
  
C:\Users\HP\Desktop\Lalit>
```

**\*md** also is used to create folder using cmd and **ren** is used to **Rename the folder name**

**Flutter** is old name and **Dart** is new name.

### **\*How to Remove folder using cmd ??**

```
C:\Users\HP\Desktop\Lalit>rd Dart  
C:\Users\HP\Desktop\Lalit>
```

Note : Dart is folder name which folder want to remove.

### **\*How to create nested folder using cmd?**

```
C:\Users\HP\Desktop\Lalit> md Flutter\Dart\Map  
C:\Users\HP\Desktop\Lalit>
```

### **\*How to move one Drive to another drive?**

```
C:\Users\HP\Desktop\Lalit> F:  
F:\>
```

Note : F is the drive name.

### **\*How to See all Items inside the F Drive?**

```
F:\>dir  
Volume in drive F is New Volume  
Volume Serial Number is 4A29-8BEF  
  
Directory of F:\  
  
15-07-2022  10:14 PM      938,689,721 flutter_windows_3.0.5-stable.zip  
22-01-2020  04:57 PM    <DIR>      hindi song  
24-12-2022  05:06 PM    <DIR>      Kuch nhi to JS padh le bro  
29-03-2020  01:20 PM    <DIR>      lalit  
09-02-2023  10:56 AM    <DIR>      movies  
22-01-2020  04:57 PM    <DIR>      mp3  
07-09-2019  10:32 AM    <DIR>      riya  
20-02-2020  07:58 PM    <DIR>      video  
          1 File(s)      938,689,721 bytes  
          7 Dir(s)  319,699,046,400 bytes free  
  
F:\>
```

### **\*How To rename the file but you Know the Extension of file then you can do this?**

```
C:\Users\HP\Desktop\Lalit>ren automata.pdf AutomataMarks1.pdf  
C:\Users\HP\Desktop\Lalit>
```

\*\*\*How to move Parent to child and child to parent folder ??

```
C:\Users\HP\Desktop>cd Lalit
C:\Users\HP\Desktop\Lalit>cd ..
C:\Users\HP\Desktop>cd ..
C:\Users\HP>cd ..
C:\Users>cd ..
C:\>cd Users
C:\Users>cd HP
C:\Users\HP>cd Desktop
C:\Users\HP\Desktop>cd Lalit
C:\Users\HP\Desktop\Lalit>cd\
C:\>
```

```
C:\>cd Users\HP\Desktop\Lalit
C:\Users\HP\Desktop\Lalit>
```

1.**cd** is used to move Parent to child folder.

2.**cd ..** is used to move first close parent from child folder, Lalit has Desktop first close parent folder

3.**cd\** is used to move last parent folder from child folder.

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## Lets Start the Git Commands -> All Commands are run Only git bush

### How to set username and email before the using git?

```
C:\Users\HP\Desktop\firebase\lib>git config --global user.name Lalit
C:\Users\HP\Desktop\firebase\lib>git config --global user.email lalitkumar1031@gmail.com
C:\Users\HP\Desktop\firebase\lib>git config --global user.email
lalitkumar1031@gmail.com
C:\Users\HP\Desktop\firebase\lib>git config --global user.name
Lalit
C:\Users\HP\Desktop\firebase\lib>
```

### \*\*How to clone any project from github using git cmd??

```
C:\Users\HP>git clone https://github.com/Lalit-Kumar-1031/Love-Babber-10-Days-Recursion.git
Cloning into 'Love-Babber-10-Days-Recursion'...
remote: Enumerating objects: 44, done.
remote: Counting objects: 100% (44/44), done.
remote: Compressing objects: 100% (34/34), done.
remote: Total 44 (delta 10), reused 44 (delta 10), pack-reused 0Receiving objects: 90% (4Receiving objects: 93% (41/44), 3.07 MiB | 3
22.00 KiB/s
Receiving objects: 100% (44/44), 3.07 MiB | 350.00 KiB/s, done.
Resolving deltas: 100% (10/10), done.
```

### 1.git init cmd:

are basically used for initialize the the git repo inside new project or existed project and appear a .git folder inside the project.

Note : Now firebase project are ready to use git commands.

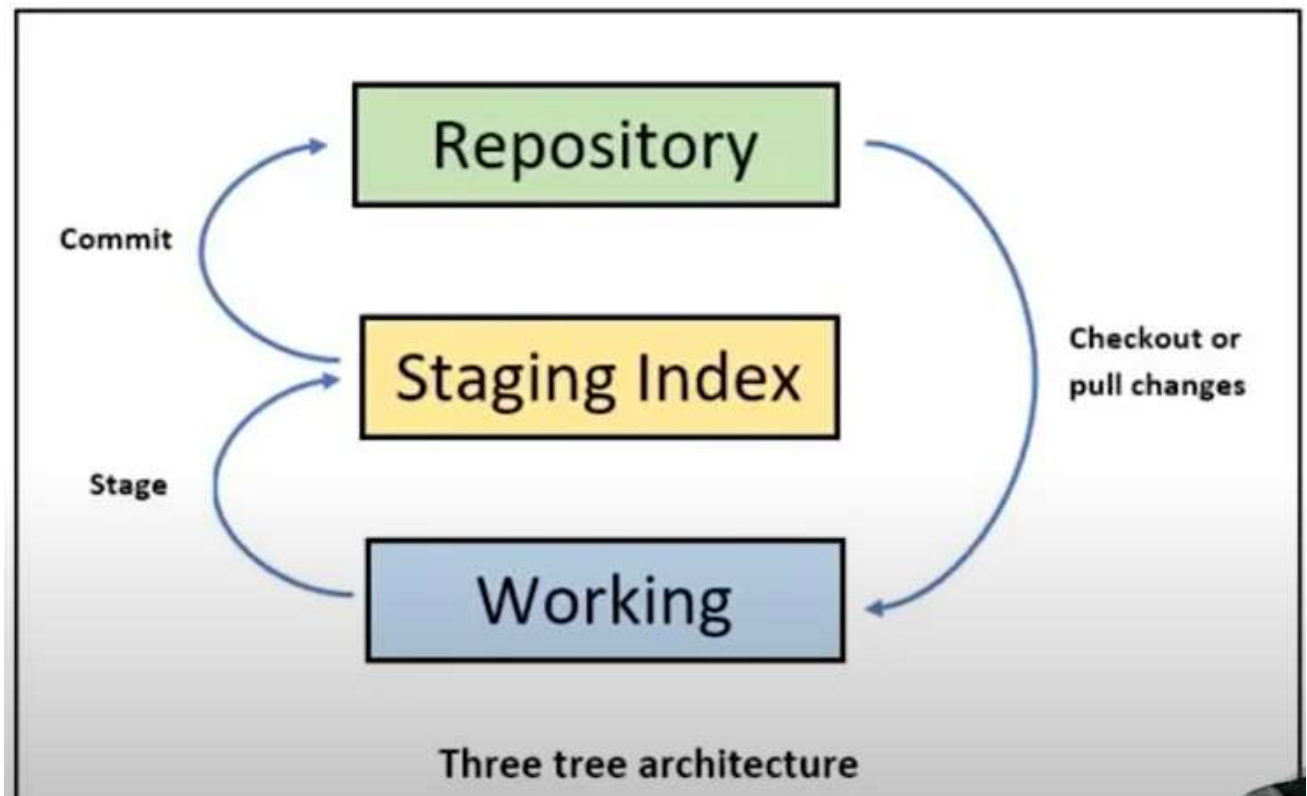
```
C:\Users\HP>cd Desktop\firebase
C:\Users\HP\Desktop\firebase>git init
Initialized empty Git repository in C:/Users/HP/Desktop/firebase/.git/
C:\Users\HP\Desktop\firebase>
```

### 2.git status :

command are used to seen the status of your project and which file have inside the staging area or which file have not inside staging area and also tells which file are ready to commit or which file are not ready to commit.

### Important point :-

\*\*\*If you want to commit any file then firstly that file are added into staging Area then commit that file ,without adding staging area you can't commit that file.



\*These file are called untracked file that are not inside the staging area.

```
C:\Users\HP\Desktop\firebase>git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        .gitignore
        .metadata
        README.md
        analysis_options.yaml
        android/
        assets/
        ios/
        lib/
        linux/
        macos/
        pubspec.lock
        pubspec.yaml
        test/
        web/
        windows/

nothing added to commit but untracked files present (use "git add" to track)
```

### 3.git add

git add command are used to add one or all files from non staging area to staging area.

**Command for all file add to staging area -> git add .**

**Command for add one file into staging area -> git add**

```
C:\Users\HP\Desktop\firebase>git add .
warning: LF will be replaced by CRLF in .metadata.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in android/app/google-services.json.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in linux/flutter/generated_plugin_registrant.cc.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in linux/flutter/generated_plugin_registrant.h.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in linux/flutter/generated_plugins.cmake.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in macos/Flutter/GeneratedPluginRegistrant.swift.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in pubspec.lock.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in windows/flutter/generated_plugin_registrant.cc.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in windows/flutter/generated_plugin_registrant.h.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in windows/flutter/generated_plugins.cmake.
The file will have its original line endings in your working directory
```

```
C:\Users\HP\Desktop\firebase\lib\Image_Upload>git add Fact.java

C:\Users\HP\Desktop\firebase\lib\Image_Upload>git status
On branch master

No commits yet
```

**4.git commit :** command are used to save the all changes in the file and all staging area files are move to local storage.

```
C:\Users\HP\Desktop\firebase\lib\Image_Upload>git commit -m " Initialized Commit"
[master (root-commit) 4e6ab58] Initialized Commit
144 files changed, 6398 insertions(+)
create mode 100644 .gitignore
create mode 100644 .metadata
```

**6.git diff filename :-** This command are basically used for seen the changes in the particular files.

- Indicates which content are remove from the file and + indicates which content are added in the file.

**\*\*Comparison between Working directory and staging area file only.**

```

C:\Users\HP\Desktop\firebase\lib>git diff main.dart
diff --git a/lib/main.dart b/lib/main.dart
index 8094df7..b924346 100644
--- a/lib/main.dart
+++ b/lib/main.dart
@@ -18,7 +18,7 @@ class MyApp extends StatelessWidget {
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
-     title: 'Flutter Demo',
+     title: 'Firebase',
      theme: ThemeData(
        primarySwatch: Colors.red,
      ),
    );
  }
}

C:\Users\HP\Desktop\firebase\lib>

```

**\*\*How to see the changes between Staging area and last commit state.**

**\*Comparison between staging area and last commit.**

```

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/lal (master)
$ git diff --staged
diff --git a/About.html b/About.html
index 629f333..61d975b 100644
--- a/About.html
+++ b/About.html
@@ -3,5 +3,6 @@
</head>
<body>
<p>Hello Flutter </p>
+<p>Hello Flutter </p>
</body>
</html>
\ No newline at end of file

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/lal (master)
$ |

```

## 7.git log command :

This command are basically used for seen the all commit with username and date and also seen the commit id that id help to see the changes into file.

There are total 3 commit with commit id.

**\*\*ye Command run krne pr hamara cursor ajib state me chla jata h use normal state me lane ke liye Esc +wq press krke enter press krege**

```

C:\Users\HP\Desktop\firebase\lib>git log
commit 4f2999b32b11da2a3e0e50437be30b33068c72f5 (HEAD -> master)
Author: lalitkumar <lalitkumar1031@gmail.com>
Date:   Fri Feb 10 19:17:53 2023 +0530

    Java Code Updated

commit ca22802d072498b13eb8db5b782ebd4977d04b10
Author: lalitkumar <lalitkumar1031@gmail.com>
Date:   Fri Feb 10 13:31:58 2023 +0530

    Main file are updated

commit 4e6ab582ecc6f9f88127516259cb370f25b24978
Author: lalitkumar <lalitkumar1031@gmail.com>
Date:   Fri Feb 10 12:53:06 2023 +0530

    Initialized Commit

C:\Users\HP\Desktop\firebase\lib>

```

**\*\* git log -2 are used to see the last 2 commit.**

```

C:\Users\HP\Desktop\firebase\lib>git log -2
commit 4f2999b32b11da2a3e0e50437be30b33068c72f5 (HEAD -> master)
Author: lalitkumar <lalitkumar1031@gmail.com>
Date:   Fri Feb 10 19:17:53 2023 +0530

    Java Code Updated

commit ca22802d072498b13eb8db5b782ebd4977d04b10
Author: lalitkumar <lalitkumar1031@gmail.com>
Date:   Fri Feb 10 13:31:58 2023 +0530

    Main file are updated

C:\Users\HP\Desktop\firebase\lib>

```

**8.How to see the changes into the file through commit id ??**

```

C:\Users\HP\Desktop\firebase\lib>git show e1a0ce912e9cd135bf1220fd4d4f0dca39ceb8e8
commit e1a0ce912e9cd135bf1220fd4d4f0dca39ceb8e8 (HEAD -> Lalit)
Author: lalitkumar <lalitkumar1031@gmail.com>
Date:   Fri Feb 10 19:52:47 2023 +0530

    Title is updated

diff --git a/lib/main.dart b/lib/main.dart
index 8094df7..b924346 100644
--- a/lib/main.dart
+++ b/lib/main.dart
@@ -18,7 +18,7 @@ class MyApp extends StatelessWidget {
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
-     title: 'Flutter Demo',
+     title: 'Firebase',
      theme: ThemeData(
        primarySwatch: Colors.red,
      ),
    ),
  ),

```



**9.How to create new branch and Lalit my new branch name and cursor or head currently into master branch (green color indicate this )**

```
C:\Users\HP\Desktop\firebase\lib>git branch Lalit

C:\Users\HP\Desktop\firebase\lib>git branch
Lalit
* master

C:\Users\HP\Desktop\firebase\lib>
```

**10.How to see the status of the head or cursor??**

**Head currently onto the Lalit branch**

```
C:\Users\HP\Desktop\firebase\lib>git branch
* Lalit
  master

C:\Users\HP\Desktop\firebase\lib>
```

**11.How to switch one branch to another??**

```
C:\Users\HP\Desktop\firebase\lib>git checkout Lalit
Switched to branch 'Lalit'
M      lib/main.dart
```

**Lalit is the destination branch.**

**13.How to delete a particular branch??**

```
C:\Users\HP\Desktop\firebase>git branch
Lalit
* master

C:\Users\HP\Desktop\firebase>git branch -d Lalit
Deleted branch Lalit (was 61323c3).

C:\Users\HP\Desktop\firebase>git branch
* master

C:\Users\HP\Desktop\firebase>
```

## 12.How to create new branch and direct switch that branch with only one command??

```
HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/La1 (master)
$ git checkout -b Shakti
Switched to a new branch 'Shakti'

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/La1 (Shakti)
$ |
```

## 12.How to merge the changes of Lalit branch into master branch.

\*\*Merge the Lalit branch into master branch

\*Firstly go to master branch and run the merge command.

```
C:\Users\HP\Desktop\firebase> git branch
* Lalit
  master

C:\Users\HP\Desktop\firebase>git checkout master
Switched to branch 'master'

C:\Users\HP\Desktop\firebase>git branch
  Lalit
* master

C:\Users\HP\Desktop\firebase>git merge Lalit
Updating 4f2999b..61323c3
Fast-forward
 lib/main.dart | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)

C:\Users\HP\Desktop\firebase>
```

## 13.How to show all the files with hidden files??

```
HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/firebase (master)
$ ls -lart
total 118
-rw-r--r-- 1 HP 197121 567 Feb 4 10:16 README.md
-rw-r--r-- 1 HP 197121 745 Feb 4 10:16 .gitignore
-rw-r--r-- 1 HP 197121 1482 Feb 4 10:16 analysis_options.yaml
-rw-r--r-- 1 HP 197121 1668 Feb 4 10:16 .metadata
-rw-r--r-- 1 HP 197121 706 Feb 5 10:54 firebase.iml
-rw-r--r-- 1 HP 197121 4129 Feb 7 20:31 pubspec.yaml
-rw-r--r-- 1 HP 197121 12678 Feb 7 20:31 pubspec.lock
-rw-r--r-- 1 HP 197121 1765 Feb 7 21:42 .flutter-plugins
-rw-r--r-- 1 HP 197121 6445 Feb 7 21:42 .flutter-plugins-dependencies
drwxr-xr-x 1 HP 197121 0 Feb 10 12:01 ../
drwxr-xr-x 1 HP 197121 0 Feb 10 12:01 .dart_tool/
drwxr-xr-x 1 HP 197121 0 Feb 10 12:01 .idea/
drwxr-xr-x 1 HP 197121 0 Feb 10 12:01 android/
drwxr-xr-x 1 HP 197121 0 Feb 10 12:01 assets/
drwxr-xr-x 1 HP 197121 0 Feb 10 12:02 build/
drwxr-xr-x 1 HP 197121 0 Feb 10 12:02 ios/
drwxr-xr-x 1 HP 197121 0 Feb 10 12:02 linux/
drwxr-xr-x 1 HP 197121 0 Feb 10 12:02 macos/
drwxr-xr-x 1 HP 197121 0 Feb 10 12:02 test/
drwxr-xr-x 1 HP 197121 0 Feb 10 12:03 web/
drwxr-xr-x 1 HP 197121 0 Feb 10 12:03 windows/
drwxr-xr-x 1 HP 197121 0 Feb 10 12:26 Java/
drwxr-xr-x 1 HP 197121 0 Feb 10 12:26 ./
drwxr-xr-x 1 HP 197121 0 Feb 11 15:32 lib/
drwxr-xr-x 1 HP 197121 0 Feb 11 15:38 .git/
```

```
HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/firebase (master)
$ |
```

14.How to create blank file using git bash??

```
HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/lal (master)
$ touch About.html

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/lal (master)
$ touch contact.html

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/lal (master)
$ |
```

15.When you work on project then suddenly someone are change your project code. At this moment how to recover the code changes simply use git checkout command. This command are used for redirect at last commit of your code.

```
$ git checkout About.html
Updated 1 path from the index

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/lal (master)
$ |
```

16.This command are used for all files are recover by last commit.

```
HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/lal (master)
$ git checkout -f

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/lal (master)
$ |
```

17.How to commit a file without adding into staging area??

```

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/la1 (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   About.html

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   About.html

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/la1 (master)
$ git commit -a -m "Skipp the adding the file into stagig area"
[master 91c366e] Skipp the adding the file into stagig area
1 file changed, 2 insertions(+)

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/la1 (master)
$ |

```

**18.\*\*How to delete the file from only working directory or only staging area or deleted both directory as well.**

\*\*git rm -r . command are used to delete all the file from both directory.

-----  
**git rm**

Req1: Remove files from both staging & working directory

```

git rm file1.txt
git rm -r .      I

```

Req2: Remove files from only from staging

```

git rm --cached file2.txt

```

Req3: Remove files only working directory

```

rm file3.txt

```

**19.How to show all the files inside the working directory??**

```

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/La1 (master)
$ ls
About.html  Policy.html  contact.html

```

**20.How to show all the files inside the staging area??**

```
HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/LaI (master)
$ git ls-files
About.html
contact.html

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/LaI (master)
$
```

## 21. How to make .gitignore file??

\*\*git ignore file are basically used for ignore some files. If you want to ignore some files by git then that file are mention into .gitignore file like this format

```
HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/LaI (master)
$ touch .gitignore

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/LaI (master)
```

index.html	//this is used for specific file
*.html	//this is ignore all .html file
foldername/	//this is ignore this directory

## 22. How to push the project into github account with public repository??

\*\*Before the push any project into github account firstly create a repository

\*\*push master branch into github account.

```
HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/LaI (Shakti)
$ git remote add origin https://github.com/Lalit-Kumar-1031/Instagram_clone.git

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/LaI (Shakti)
$ git push origin master
Enumerating objects: 17, done.
Counting objects: 100% (17/17), done.
Delta compression using up to 4 threads
Compressing objects: 100% (14/14), done.
Writing objects: 100% (17/17), 1.42 KiB | 208.00 KiB/s, done.
Total 17 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), done.
To https://github.com/Lalit-Kumar-1031/Instagram_clone.git
 * [new branch]      master -> master

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/LaI (Shakti)
$ git branch
* Shakti
master
```

## 23. How to push another branch into github account??

```
HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/Lal (Shakti)
$ git push -u origin Shakti
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'Shakti' on GitHub by visiting:
remote:   https://github.com/Lalit-Kumar-1031/Instagram_clone/pull/new/Shakti
remote:
To https://github.com/Lalit-Kumar-1031/Instagram_clone.git
 * [new branch]      Shakti -> Shakti
Branch 'Shakti' set up to track remote branch 'Shakti' from 'origin'.

HP@LAPTOP-8FELQKVF MINGW64 ~/Desktop/Lal (Shakti)
$ |
```