1. Initializing a git repository and adding remote origin

```
[root@ip-172-31-41-75 gitex]# git init
Initialized empty Git repository in /root/gitex/.git/
[root@ip-172-31-41-75 gitex]# git remote add origin https://github.com/way2rakes
hr/gitex.git
[root@ip-172-31-41-75 gitex]# git config --global user.name "rakesh"
[root@ip-172-31-41-75 gitex]# git config --global user.email "way2rakeshr@gmail.com"
[root@ip-172-31-41-75 gitex]#
```

2. Adding global username and email

```
[root@ip-172-31-41-75 gitex]# git remote add origin https://github.com/way2rakes
hr/gitex.git
[root@ip-172-31-41-75 gitex]# git config --global user.name "rakesh"
[root@ip-172-31-41-75 gitex]# git config --global user.email "way2rakeshr@gmail.com"
[root@ip-172-31-41-75 gitex]# git remote -v
origin  https://github.com/way2rakeshr/gitex.git (fetch)
origin  https://github.com/way2rakeshr/gitex.git (push)
[root@ip-172-31-41-75 gitex]#
```

3.Creating files

```
[root@ip-172-31-41-75 gitex]# touch file1.txt
[root@ip-172-31-41-75 gitex]# touch file2.txt
[root@ip-172-31-41-75 gitex]# touch file3.txt
[root@ip-172-31-41-75 gitex]# git status
On branch master

No commits yet
```

4. Adding files to staging area

```
[root@ip-172-31-41-75 gitex]# git add .
[root@ip-172-31-41-75 gitex]# git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)

        new file:    file1.txt
        new file:    file2.txt
        new file:    file3.txt

[root@ip-172-31-41-75 gitex]#
```

5. making initial commit

```
Changes to be committed:
  (use "git rm --cached <file>..." to unstage)

        new file:   file1.txt
        new file:   file2.txt
        new file:   file3.txt

[root@ip-172-31-41-75 gitex]# git commit -m "initial Commit"
[master (root-commit) ab7394a] initial Commit
 3 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file1.txt
 create mode 100644 file2.txt
 create mode 100644 file3.txt
[root@ip-172-31-41-75 gitex]#
```

6. creating file4

```
Untracked files:
  (use "git add <file>..." to include in what will be committed)


        file4.txt


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

7.remoing file from staging area by making use of git reset command by commit id

```
[root@ip-172-31-41-75 gitex]# git log
commit 786dac9a07c965e1aa9ee8b5346129bb3df9e561 (HEAD -> master)
Author: rakesh <way2rakeshr@gmail.com>
Date:   Wed Jul 1 10:56:14 2020 +0000

    adding file4

commit ab7394a240512d69084e433f27c83fbd3be5bf03 (origin/master)
Author: rakesh <way2rakeshr@gmail.com>
Date:   Wed Jul 1 10:43:38 2020 +0000

    initial Commit
[root@ip-172-31-41-75 gitex]# git revert 786dac9a07c965e1aa9ee8b5346129bb3df9e56
1
[master 333c4fa] Revert "removing file 4" This reverts commit 786dac9a07c965e1aa
9ee8b5346129bb3df9e561.
 1 file changed, 0 insertions(+), 0 deletions(-)
 delete mode 100644 file4.txt
[root@ip-172-31-41-75 gitex]# git status
On branch master
nothing to commit, working tree clean
[root@ip-172-31-41-75 gitex]# git log
commit 333c4fabd029075c2d352d3ed23bc373c7bd9cdf (HEAD -> master)
Author: rakesh <way2rakeshr@gmail.com>
Date:   Wed Jul 1 11:09:19 2020 +0000

    Revert
    "removing file 4"
    This reverts commit 786dac9a07c965e1aa9ee8b5346129bb3df9e561.

commit 786dac9a07c965e1aa9ee8b5346129bb3df9e561
Author: rakesh <way2rakeshr@gmail.com>
Date:   Wed Jul 1 10:56:14 2020 +0000

    adding file4

commit ab7394a240512d69084e433f27c83fbd3be5bf03 (origin/master)
Author: rakesh <way2rakeshr@gmail.com>
Date:   Wed Jul 1 10:43:38 2020 +0000

    initial Commit
[root@ip-172-31-41-75 gitex]#
```

8.create a new branch b1

```
file1.txt  file2.txt  file3.txt
[root@ip-172-31-41-75 gitex]# touch file5.txt
[root@ip-172-31-41-75 gitex]# git checkout -b br1
Switched to a new branch 'br1'
[root@ip-172-31-41-75 gitex]# git branch -a
* br1
  master
  remotes/origin/master
[root@ip-172-31-41-75 gitex]#
```

9. Renaming a branch b1 to future branch

```
[root@ip-172-31-41-75 gitex]# git checkout -b br1
Switched to a new branch 'br1'
[root@ip-172-31-41-75 gitex]# git branch -a
* br1
  master
  remotes/origin/master
[root@ip-172-31-41-75 gitex]# git branch -m future_branch1
[root@ip-172-31-41-75 gitex]# git branch -a
* future_branch1
  master
  remotes/origin/master
[root@ip-172-31-41-75 gitex]#
```

10. modified file1 in future branch and committing it

```
remotes/origin/master
[root@ip-172-31-41-75 gitex]# vi file1.txt
[root@ip-172-31-41-75 gitex]# git status
On branch future_branch1
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   file1.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)

        file5.txt

no changes added to commit (use "git add" and/or "git commit -a")
[root@ip-172-31-41-75 gitex]# git status
On branch future_branch1
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   file1.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)

        file5.txt

no changes added to commit (use "git add" and/or "git commit -a")
[root@ip-172-31-41-75 gitex]# git add .
[root@ip-172-31-41-75 gitex]# git status
On branch future_branch1
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   file1.txt
        new file:   file5.txt

[root@ip-172-31-41-75 gitex]# git commit -m "adding modified file"
[future_branch1 cb21875] adding modified file
 2 files changed, 1 insertion(+)
 create mode 100644 file5.txt
[root@ip-172-31-41-75 gitex]# git branch
```

11.creating hotfix branch

```
[root@ip-172-31-41-75 gitex]# git branch hotfix_branch
[root@ip-172-31-41-75 gitex]# git branch -a
* future_branch1
  hotfix_branch
  master
  remotes/origin/master
[root@ip-172-31-41-75 gitex]# git checkout hotfix_branch
Switched to branch 'hotfix_branch'
[root@ip-172-31-41-75 gitex]#
```

12. modified file in hotfix branch file1.txt

```
On branch hotfix_branch
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   file1.txt

no changes added to commit (use "git add" and/or "git commit -a")
[root@ip-172-31-41-75 gitex]# git add .
[root@ip-172-31-41-75 gitex]# git commit -m "added mr extrodinary"
[hotfix_branch a2aleec] added mr extrodinary
 1 file changed, 1 insertion(+), 1 deletion(-)
[root@ip-172-31-41-75 gitex]#
```

14.merge code to master branch from future and hotfix branch

```
[root@ip-172-31-41-75 gitex]# git branch -a
  future_branch1
  hotfix_branch
* master
  remotes/origin/master
[root@ip-172-31-41-75 gitex]# git merge future_branch1
Updating 333c4fa..cb21875
Fast-forward
 file1.txt | 1 +
 file5.txt | 0
 2 files changed, 1 insertion(+)
 create mode 100644 file5.txt
[root@ip-172-31-41-75 gitex]# git merge hotfix_branch
Updating cb21875..a2aleec
Fast-forward
 file1.txt | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)
```

15.git push to remote repo

```
[root@ip-172-31-41-75 gitex]# git push origin master
Username for 'https://github.com': way2rakeshr
Password for 'https://way2rakeshr@github.com':
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Compressing objects: 100% (7/7), done.
Writing objects: 100% (9/9), 922 bytes | 922.00 KiB/s, done.
Total 9 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/way2rakeshr/gitex.git
   ab7394a..a2aleec  master -> master
[root@ip-172-31-41-75 gitex]#
```

16. deleting branches in local

```
ab7594a..a2a1eec  master -> master
[root@ip-172-31-41-75 gitex]# git branch -a
  future_branch1
  hotfix_branch
* master
  remotes/origin/master
[root@ip-172-31-41-75 gitex]# git branch -d future_branch1
Deleted branch future_branch1 (was cb21875).
[root@ip-172-31-41-75 gitex]# git branch -d hotfix_branch
Deleted branch hotfix_branch (was a2a1eec).
[root@ip-172-31-41-75 gitex]# git branch -a
* master
  remotes/origin/master
[root@ip-172-31-41-75 gitex]#
```