```
harsh@shah:~$ cd dev-ops/
harsh@shah:~/dev-ops$ cd cicd-pipeline/
harsh@shah:~/dev-ops/cicd-pipeline$ ls
HELP.md  mvnw  mvnw.cmd  pom.xml  src  target
harsh@shah:~/dev-ops/cicd-pipeline$
harsh@shah:~/dev-ops/cicd-pipeline$ git config --global user.name = "handsomeCoder"
harsh@shah:~/dev-ops/cicd-pipeline$ git config --global user.email - "harshshah1295@gmail.com"
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
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:   pom.xml
        modified:   src/test/java/org/devops/cicdpipeline/ApplicationTests.java

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        .mvn/
        mvnw
        mvnw.cmd
        src/main/java/org/devops/cicdpipeline/calculator/
        src/main/java/org/devops/cicdpipeline/exception/

no changes added to commit (use "git add" and/or "git commit -a")
harsh@shah:~/dev-ops/cicd-pipeline$ git add pom.xml src/
harsh@shah:~/dev-ops/cicd-pipeline$ git status
On branch master
Your branch is up to date with 'origin/master'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   pom.xml
        new file:   src/main/java/org/devops/cicdpipeline/calculator/CalculatorController.java
        new file:   src/main/java/org/devops/cicdpipeline/calculator/CalculatorService.java
        new file:   src/main/java/org/devops/cicdpipeline/exception/InvalidInput.java
        modified:   src/test/java/org/devops/cicdpipeline/ApplicationTests.java

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

harsh@shah:~/dev-ops/cicd-pipeline$ _
```
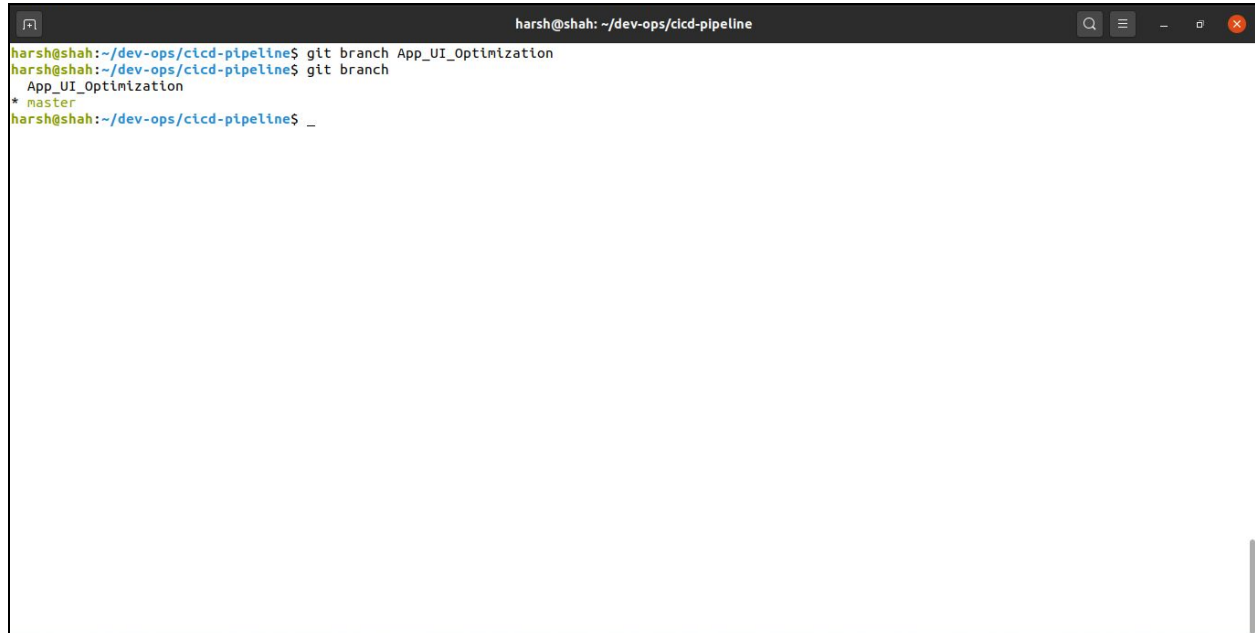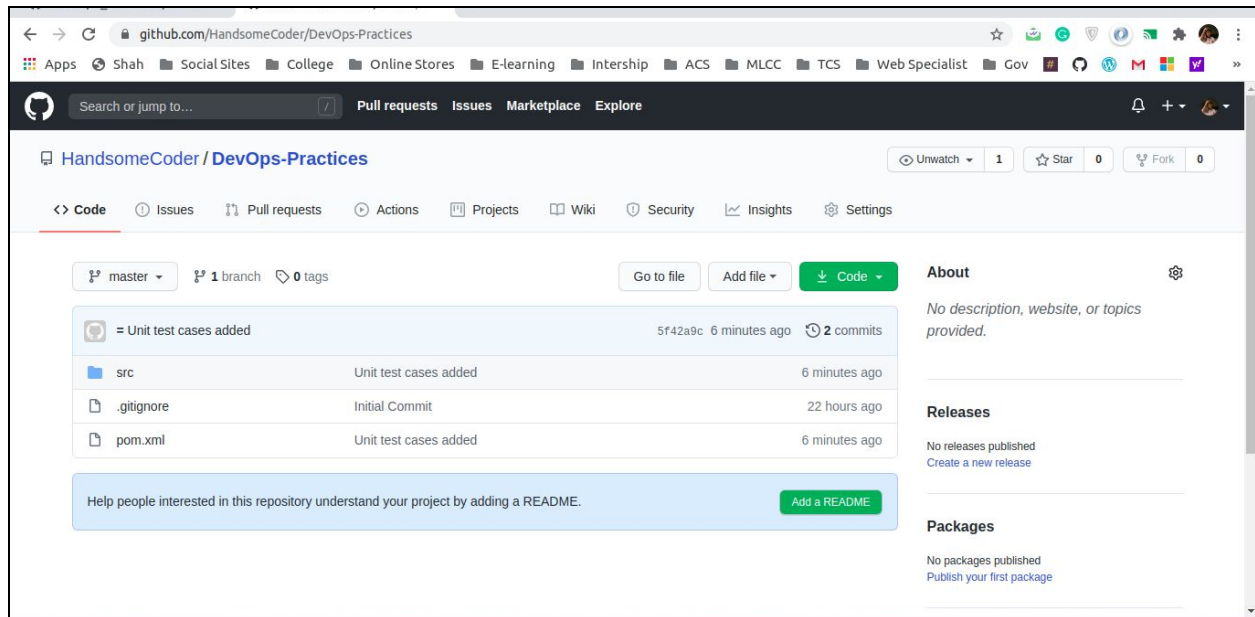
```
harsh@shah:~/dev-ops/cicd-pipeline$ git status
On branch master
Your branch is up to date with 'origin/master'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   pom.xml
        new file:   src/main/java/org/devops/cicdpipeline/calculator/CalculatorController.java
        new file:   src/main/java/org/devops/cicdpipeline/calculator/CalculatorService.java
        new file:   src/main/java/org/devops/cicdpipeline/exception/InvalidInput.java
        modified:   src/test/java/org/devops/cicdpipeline/ApplicationTests.java

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

harsh@shah:~/dev-ops/cicd-pipeline$ git commit -m "Unit test cases added"
[master 5f42a9c] Unit test cases added
 5 files changed, 182 insertions(+)
 create mode 100644 src/main/java/org/devops/cicdpipeline/calculator/CalculatorController.java
 create mode 100644 src/main/java/org/devops/cicdpipeline/calculator/CalculatorService.java
 create mode 100644 src/main/java/org/devops/cicdpipeline/exception/InvalidInput.java
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git push origin master
Username for 'https://github.com': handsomeCoder
Password for 'https://handsomeCoder@github.com':
remote: Invalid username or password.
fatal: Authentication failed for 'https://github.com/HandsomeCoder/DevOps-Practices.git/'
harsh@shah:~/dev-ops/cicd-pipeline$ git push origin master
Username for 'https://github.com': handsomeCoder
Password for 'https://handsomeCoder@github.com':
Enumerating objects: 32, done.
Counting objects: 100% (32/32), done.
Delta compression using up to 4 threads
Compressing objects: 100% (11/11), done.
Writing objects: 100% (20/20), 2.59 KiB | 663.00 KiB/s, done.
Total 20 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/HandsomeCoder/DevOps-Practices.git
   84db997..5f42a9c  master -> master
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git branch App_UI_Optimization
harsh@shah:~/dev-ops/cicd-pipeline$ git branch
  App_UI_Optimization
* master
harsh@shah:~/dev-ops/cicd-pipeline$ git checkout App_UI_Optimization
Switched to branch 'App_UI_Optimization'
harsh@shah:~/dev-ops/cicd-pipeline$ ls
HELP.md  mvnw  mvnw.cmd  pom.xml  src  target
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git branch App_UI_Optimization
harsh@shah:~/dev-ops/cicd-pipeline$ git branch
  App_UI_Optimization
* master
harsh@shah:~/dev-ops/cicd-pipeline$ git checkout App_UI_Optimization
Switched to branch 'App_UI_Optimization'
harsh@shah:~/dev-ops/cicd-pipeline$ ls
HELP.md  mvnw  mvnw.cmd  pom.xml  src  target
harsh@shah:~/dev-ops/cicd-pipeline$ git status
On branch App_UI_Optimization
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:   src/main/resources/static/index.html

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        .mvn/
        mvnw
        mvnw.cmd
        src/main/resources/static/assets/
        src/main/resources/static/index.css

no changes added to commit (use "git add" and/or "git commit -a")
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git status
On branch App_UI_Optimization
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   src/main/resources/static/assets/me.jpg
        new file:   src/main/resources/static/index.css
        modified:   src/main/resources/static/index.html

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

harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
harsh@shah:~/dev-ops/cicd-pipeline$ ls
HELP.md  mvnw  mvnw.cmd  pom.xml  src  target
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
harsh@shah:~/dev-ops/cicd-pipeline$ ls
HELP.md  mvnw  mvnw.cmd  pom.xml  src  target
harsh@shah:~/dev-ops/cicd-pipeline$ git merge App_UI_Optimization
Updating 5f42a9c..1d0a723
Fast-forward
 src/main/resources/static/assets/me.jpg | Bin 0 -> 135823 bytes
 src/main/resources/static/index.css     |  16 ++++++++++++++++
 src/main/resources/static/index.html    |   9 +++++++--
 3 files changed, 23 insertions(+), 2 deletions(-)
 create mode 100644 src/main/resources/static/assets/me.jpg
 create mode 100644 src/main/resources/static/index.css
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
Updating 5f42a9c..1d0a723
Fast-forward
 src/main/resources/static/assets/me.jpg | Bin 0 -> 135823 bytes
 src/main/resources/static/index.css     |  16 ++++++++++++++++
 src/main/resources/static/index.html    |   9 +++++++--
 3 files changed, 23 insertions(+), 2 deletions(-)
 create mode 100644 src/main/resources/static/assets/me.jpg
 create mode 100644 src/main/resources/static/index.css
harsh@shah:~/dev-ops/cicd-pipeline$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
  (use "git push" to publish your local commits)

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

nothing added to commit but untracked files present (use "git add" to track)
harsh@shah:~/dev-ops/cicd-pipeline$ git push origin master
Username for 'https://github.com': handsomeCoder
Password for 'https://handsomeCoder@github.com':
Enumerating objects: 16, done.
Counting objects: 100% (16/16), done.
Delta compression using up to 4 threads
Compressing objects: 100% (9/9), done.
Writing objects: 100% (10/10), 132.69 KiB | 12.06 MiB/s, done.
Total 10 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/HandsomeCoder/DevOps-Practices.git
   5f42a9c..1d0a723  master -> master
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git stash
Saved working directory and index state WIP on master: 1d0a723 UI Modification
harsh@shah:~/dev-ops/cicd-pipeline$ git stash list
stash@{0}: WIP on master: 1d0a723 UI Modification
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git stash
Saved working directory and index state WIP on master: 1d0a723 UI Modification
harsh@shah:~/dev-ops/cicd-pipeline$ git stash list
stash@{0}: WIP on master: 1d0a723 UI Modification
harsh@shah:~/dev-ops/cicd-pipeline$ git status
On branch master
Your branch is up to date with 'origin/master'.

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

nothing added to commit but untracked files present (use "git add" to track)
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git stash
Saved working directory and index state WIP on master: 1d0a723 UI Modification
harsh@shah:~/dev-ops/cicd-pipeline$ git stash list
stash@{0}: WIP on master: 1d0a723 UI Modification
harsh@shah:~/dev-ops/cicd-pipeline$ git status
On branch master
Your branch is up to date with 'origin/master'.

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

nothing added to commit but untracked files present (use "git add" to track)
harsh@shah:~/dev-ops/cicd-pipeline$ git checkout App_UI_Optimization
Switched to branch 'App_UI_Optimization'
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git stash
Saved working directory and index state WIP on master: 1d0a723 UI Modification
harsh@shah:~/dev-ops/cicd-pipeline$ git stash list
stash@{0}: WIP on master: 1d0a723 UI Modification
harsh@shah:~/dev-ops/cicd-pipeline$ git status
On branch master
Your branch is up to date with 'origin/master'.

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

nothing added to commit but untracked files present (use "git add" to track)
harsh@shah:~/dev-ops/cicd-pipeline$ git checkout App_UI_Optimization
Switched to branch 'App_UI_Optimization'
harsh@shah:~/dev-ops/cicd-pipeline$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git log
commit 84316c5edd48e4ae80d4220df2e59a745207c779 (HEAD -> master)
Author: = <->
Date:   Tue Jul 21 22:51:12 2020 +0530

    Optimize methods

commit 1d0a723b89841a6704d367989ed520db9829b4ab (origin/master, App_UI_Optimization)
Author: = <->
Date:   Tue Jul 21 22:23:22 2020 +0530

    UI Modification

commit 5f42a9c88f7c959f283410ef26d6cf3e93bf454b
Author: = <->
Date:   Tue Jul 21 19:54:35 2020 +0530

    Unit test cases added

commit 84db9974c4393332ed8b6ea5946003a338abf7b8
Author: HandsomeCoder <harshshah1295@gmail.com>
Date:   Mon Jul 20 21:52:02 2020 +0530

    Initial Commit
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline/src/main/resources$ git rebase
Current branch master is up to date.
harsh@shah:~/dev-ops/cicd-pipeline/src/main/resources$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline/src/main/resources$ git status
On branch Computation_Optimization
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:   ../java/org/devops/cicdpipeline/calculator/CalculatorService.java

no changes added to commit (use "git add" and/or "git commit -a")
harsh@shah:~/dev-ops/cicd-pipeline/src/main/resources$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git add .
harsh@shah:~/dev-ops/cicd-pipeline$ git status
On branch Computation_Optimization
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   src/main/java/org/devops/cicdpipeline/calculator/CalculatorService.java

harsh@shah:~/dev-ops/cicd-pipeline$ git commit -m "Optimize Computation"
[Computation_Optimization 668111e] Optimize Computation
 1 file changed, 1 deletion(-)
harsh@shah:~/dev-ops/cicd-pipeline$ git rebase master
Current branch Computation_Optimization is up to date.
harsh@shah:~/dev-ops/cicd-pipeline$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
harsh@shah:~/dev-ops/cicd-pipeline$ git log
commit 1d0a723b89841a6704d367989ed520db9829b4ab (HEAD -> master, origin/master, App_UI_Optimization)
Author: = <->
Date:   Tue Jul 21 22:23:22 2020 +0530

    UI Modification

commit 5f42a9c88f7c959f283410ef26d6cf3e93bf454b
Author: = <->
Date:   Tue Jul 21 19:54:35 2020 +0530

    Unit test cases added

commit 84db9974c4393332ed8b6ea5946003a338abf7b8
Author: HandsomeCoder <harshshah1295@gmail.com>
Date:   Mon Jul 20 21:52:02 2020 +0530

    Initial Commit
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
harsh@shah:~/dev-ops/cicd-pipeline$ git pull
remote: Enumerating objects: 19, done.
remote: Counting objects: 100% (19/19), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 10 (delta 3), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (10/10), 1.07 KiB | 1.07 MiB/s, done.
From https://github.com/HandsomeCoder/DevOps-Practices
   1d0a723..5fc2cd0  master     -> origin/master
Updating 1d0a723..5fc2cd0
error: Your local changes to the following files would be overwritten by merge:
        src/main/java/org/devops/cicdpipeline/calculator/CalculatorService.java
Please commit your changes or stash them before you merge.
Aborting
harsh@shah:~/dev-ops/cicd-pipeline$ git stash
Saved working directory and index state WIP on master: 1d0a723 UI Modification
harsh@shah:~/dev-ops/cicd-pipeline$ git pull
Updating 1d0a723..5fc2cd0
Fast-forward
 src/main/java/org/devops/cicdpipeline/calculator/CalculatorService.java | 1 -
 1 file changed, 1 deletion(-)
harsh@shah:~/dev-ops/cicd-pipeline$ _
```

```
34    }
```

harsh@shah: ~/dev-ops/cicd-pipeline

```
harsh@shah:~$ cd dev-ops/
harsh@shah:~/dev-ops$ ls
cicd-pipeline
harsh@shah:~/dev-ops$ cd cicd-pipeline/
harsh@shah:~/dev-ops/cicd-pipeline$ git push origin master
Username for 'https://github.com': handsomeCoder
Password for 'https://handsomeCoder@github.com':
Everything up-to-date
harsh@shah:~/dev-ops/cicd-pipeline$
harsh@shah:~/dev-ops/cicd-pipeline$ git pull
remote: Enumerating objects: 19, done.
remote: Counting objects: 100% (19/19), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 10 (delta 3), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (10/10), 1.07 KiB | 1.07 MiB/s, done.
From https://github.com/HandsomeCoder/DevOps-Practices
   1d0a723..5fc2cd0  master     -> origin/master
Updating 1d0a723..5fc2cd0
error: Your local changes to the following files would be overwritten by merge:
        src/main/java/org/devops/cicdpipeline/calculator/CalculatorService.java
Please commit your changes or stash them before you merge.
Aborting
harsh@shah:~/dev-ops/cicd-pipeline$ git stash
Saved working directory and index state WIP on master: 1d0a723 UI Modification
harsh@shah:~/dev-ops/cicd-pipeline$ git pull
Updating 1d0a723..5fc2cd0
Fast-forward
 src/main/java/org/devops/cicdpipeline/calculator/CalculatorService.java | 1 -
 1 file changed, 1 deletion(-)
harsh@shah:~/dev-ops/cicd-pipeline$ git stash apply
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean
harsh@shah:~/dev-ops/cicd-pipeline$ git add .
harsh@shah:~/dev-ops/cicd-pipeline$
```