

# Git Assignment

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## 1. Repository Initialization and Status Check

```
mkdir Git_Assignment1_A00494758
cd Git_Assignment
git init
git status
```

The screenshot shows a terminal session with the following commands and output:

```
1: ~/D/e/s/w/c/Git_Assignment1_A00494758
bhavik@bhavik-Vostro-3500: ~ % 5:05 PM 2026-02-24
cd Dropbox/edu/sem/winter/current_practices_II/
bhavik@bhavik-Vostro-3500: /edu/sem/winter/current_practices_II % 5:05 PM 2026-02-24
ls
o1_linux o2_linux project_big_data tutorials week4_preamble
bhavik@bhavik-Vostro-3500: /edu/sem/winter/current_practices_II % 5:05 PM 2026-02-24
mkdir Git_Assignment1_A00494758
bhavik@bhavik-Vostro-3500: /edu/sem/winter/current_practices_II % 5:06 PM 2026-02-24
cd Git_Assignment1_A00494758
bhavik@bhavik-Vostro-3500: (1) Repository Initialization and Status Check (10 Points)
bhavik@bhavik-Vostro-3500: /smu/winter/current_practices_II/Git_Assignment1_A00494758 % 5:06 PM 2026-02-24
git init
Initialized empty Git repository in /home/bhavik/dropbox/edu/sem/winter/current_practices_II/Git_Assignment1_A00494758/.git/
bhavik@bhavik-Vostro-3500: /Git_Assignment1_A00494758 % 5:06 PM 2026-02-24
git status
On branch main
No commits yet
nothing to commit (create/copy files and use "git add <file(s)>").
Navigate into that directory.
bhavik@bhavik-Vostro-3500: /Git_Assignment1_A00494758 % 5:07 PM 2026-02-24
touch git_assignment_md
• Initialize a Git repository within that directory.
bhavik@bhavik-Vostro-3500: /Git_Assignment1_A00494758 % 5:07 PM 2026-02-24
antigravity .
Run the Git command to check the current branch status.
bhavik@bhavik-Vostro-3500: /Git_Assignment1_A00494758 % 5:07 PM 2026-02-24
```

**(1) Repository Initialization and Status Check (10 Points)**

- Initialize a Git repository within that directory.
- Run the Git command to check the current branch status.

**(2) File Creation and Version Control (20 Points)**

- Create a new file countries.txt and add the countries: USA, Canada, Mexico (one per line).
- Create another file shapes.txt and add shapes: Circle, Square, Triangle (one per line).

Figure 1: q1

## 2. File Creation and Version Control

```
touch countries.txt
echo "USA" > countries.txt
echo "Canada" >> countries.txt
echo "Mexico" >> countries.
touch shapes.txt
echo "Circle" >> shapes.txt
echo "Square" >> shapes.txt
echo "Triangle" >> shapes.txt
cat countries.txt shapes.txt
git status
git commit -m "Adding Countries and Shapes"
touch numbers.txt
echo "One" > numbers.txt
echo "Two" >> numbers.txt
```

```
echo "Three" >> numbers.txt
git add numbers.txt
git commit -m "Adding numbers"
git log
```

```

bhavik@.../Git_Assignment1_A00494758 ~ 5:15 PM 2026-02-24
> cat countries.txt shapes.txt
File: countries.txt
1 USA
2 Canada
3 Mexico

File: shapes.txt
1 Circle
2 Square
3 Triangle

bhavik@.../Git_Assignment1_A00494758 ~ 5:15 PM 2026-02-24
> git status
On branch main
 3
No commits yet
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    countries.txt
    git_assignment.md
    q1.png
    shapes.txt
nothing added to commit but untracked files present (use "git add" to track)

bhavik@.../Git_Assignment1_A00494758 ~ 5:15 PM 2026-02-24
> git add countries.txt shapes.txt
bhavik@.../Git_Assignment1_A00494758 ~ 5:15 PM 2026-02-24
> git status
On branch main
No commits yet
Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   countries.txt
    new file:   shapes.txt
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    git_assignment.md
    q1.png

bhavik@.../Git_Assignment1_A00494758 ~ 5:16 PM 2026-02-24
> git commit -m "Adding Countries and Shapes"
[main (root-commit) defe015] Adding Countries and Shapes
 2 files changed, 6 insertions(+)
 create mode 100644 countries.txt
 create mode 100644 shapes.txt

bhavik@.../Git_Assignment1_A00494758 ~ 5:16 PM 2026-02-24
>

```

- Initialize a Git repository
- Run the Git command
- Create a new file countries.txt
- Create another file shapes.txt
- Run the Git command
- Commit your staged changes

## Countries and Shapes

- Create a new file numbers.txt
- Add numbers.txt to the repository
- Commit the changes

- Run the Git command
- Create a new branch
- Add a file called languages.txt
- List all the branches
- Merging Conflicting Changes
- Create two new branches
- Switch to user1 mode

```

bhavik@...:~/Git_Assignment1_A00494758 % main ? 5:16 PM 2026-02-24
> touch numbers.txt

bhavik@...:~/Git_Assignment1_A00494758 % main ? 5:17 PM 2026-02-24
> echo "One" > numbers.txt
• Run the Git command

bhavik@...:~/Git_Assignment1_A00494758 % main ? 5:17 PM 2026-02-24
> echo "Two" >> numbers.txt
• Create a new branch

bhavik@...:~/Git_Assignment1_A00494758 % main ? 5:17 PM 2026-02-24
> git add numbers.txt
• Add a file called languages.txt

bhavik@...:~/Git_Assignment1_A00494758 % main +? 5:17 PM 2026-02-24
> git commit -m "Adding numbers"
[main 752b3b7] Adding numbers
 1 file changed, 3 insertions(+)
 create mode 100644 numbers.txt
• List all the branches

bhavik@...:~/Git_Assignment1_A00494758 % main ? 5:17 PM 2026-02-24
> git log
commit 752b3b72635d1047d4b08bdb186723320bc36799 (HEAD -> main)
Author: Bhavik Knight <15388512+bhavik-knight@users.noreply.github.com>
Date: Tue Feb 24 17:17:56 2026 -0400
  Adding numbers

commit defe0150c51a5d1aa80b5a624dafbba6d546733d
Author: Bhavik Knight <15388512+bhavik-knight@users.noreply.github.com>
Date: Tue Feb 24 17:16:18 2026 -0400
  Adding Countries and Shapes
• Merging Conflicting Changes

bhavik@...:~/Git_Assignment1_A00494758 % main ? 5:18 PM 2026-02-24
> 
• Create two new branches

bhavik@...:~/Git_Assignment1_A00494758 % main ? 5:18 PM 2026-02-24
> 
• Switch to user1 mode

```

### 3. Branch Creation and Commit

```

git checkout -b LearnAnalytics
touch languages.txt
echo "R" > languages.txt
echo "Python" >> languages.txt
echo "NumPy" >> languages.txt
git add languages.txt
git commit -m "Add: languages to Learn-Analystics branch"
git log

```

### 4. Merging Conflicting Changes

```

git checkout -b user1
Make changes
git add countries.txt
git commit -m "change: countries to European Countries"

```

```

1: ~/D/e/s/w/c/Git_Assignment1_A00494758
[ bhavik... /Git_Assignment1_A00494758 ⚡ main ? 11:02 PM 2026-02-24 Preview
> git checkout -b LearnAnalytics
Switched to a new branch 'LearnAnalytics'
[ bhavik... /Git_Assignment1_A00494758 ⚡ LearnAnalytics ? 11:04 PM 2026-02-24
> touch languages.txt
[ bhavik... /Git_Assignment1_A00494758 ⚡ LearnAnalytics ? 11:05 PM 2026-02-24
> echo "R" >> languages.txt
[ bhavik... /Git_Assignment1_A00494758 ⚡ LearnAnalytics ? 11:05 PM 2026-02-24
> echo "Python" >> languages.txt
[ bhavik... /Git_Assignment1_A00494758 ⚡ LearnAnalytics ? 11:05 PM 2026-02-24
> echo "NumPy" >> languages.txt
[ bhavik... /Git_Assignment1_A00494758 ⚡ LearnAnalytics ? 11:06 PM 2026-02-24
> git status
On branch LearnAnalytics
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    git_assignment.md
    languages.txt
    q1.png
    q2_1.png
    q2_2.png
nothing added to commit but untracked files present (use "git add" to track) learn-Analytics branch
[ bhavik... /Git_Assignment1_A00494758 ⚡ LearnAnalytics ? 11:06 PM 2026-02-24
> git add languages.txt
[ bhavik... /Git_Assignment1_A00494758 ⚡ LearnAnalytics +? 11:06 PM 2026-02-24
> git commit -m "Add: languages to Learn-Analytics branch"
[LearnAnalytics ea886d9] Add: languages to Learn-Analytics branch
  1 file changed, 3 insertions(+)
  create mode 100644 languages.txt
[ bhavik... /Git_Assignment1_A00494758 ⚡ LearnAnalytics ? 11:06 PM 2026-02-24
> git branch -a
* LearnAnalytics
  main

```

Figure 2: q3

```

1: ~/D/e/s/w/c/Git_Assignment1_A00494758
└─ bhavik.../Git_Assignment1_A00494758 ⌘ main ? 11:11 PM 2026-02-24 q2_1.png
> git checkout -b user1
Switched to a new branch 'user1'
└─ bhavik.../Git_Assignment1_A00494758 ⌘ user1 ? 11:11 PM 2026-02-24 q2_1.png
> nvim countries.txt
└─ bhavik.../Git_Assignment1_A00494758 ⌘ user1 !? 11:12 PM 2026-02-24 q2_1.png
> cat countries.txt
File: countries.txt
git checkout -b user1
Germany
France
Italy
└─ git add countries.txt
└─ bhavik.../Git_Assignment1_A00494758 ⌘ user1 !? 11:12 PM 2026-02-24 q2_1.png
> git add countries.txt
└─ bhavik.../Git_Assignment1_A00494758 ⌘ user1 +? 11:12 PM 2026-02-24 q2_1.png
> git commit -m "change: countries to European Countries"
[User1 150c1cd] change: countries to European Countries
 1 file changed, 3 insertions(+), 3 deletions(-)

```

Figure 3: q4\_1

```

git checkout main
git checkout -b user2
Make changes
git add countries.txt
git commit -m "change: countries to Asian Countries"
git checkout -b combine_countries
git merge user1
git add countries.txt
git commit -m "change: resolved merge conflicts by keeping all countries"

```

## 5. Stashing and Applying Changes

```

git checkout main
git checkout -b user3
echo "Australia" >> countries.txt
echo "Brazil" >> countries.txt

git stash
git checkout main
echo "UK" >> countries.txt
git add countries.txt
git commit -m "add: UK"

git checkout user3
git stash pop

```

```

bhavik .../Git_Assignment1_A00494758 ⌘ user1 ? 11:12 PM 2026-02-24
> git checkout user2
Switched to branch 'user2'

bhavik .../Git_Assignment1_A00494758 ⌘ user2 ? 11:12 PM 2026-02-24
> nvim countries.txt

bhavik .../Git_Assignment1_A00494758 ⌘ user2 !? 11:13 PM 2026-02-24
> cat countries.txt
File: countries.txt
1 ~ Japan
2 ~ Chine
3 ~ India
3 Make changes
4 `` bash
5 git add countries.txt
6 git commit -m "Change: countries to European Countries"

bhavik .../Git_Assignment1_A00494758 ⌘ user2 !? 11:13 PM 2026-02-24
> git add countries.txt

bhavik .../Git_Assignment1_A00494758 ⌘ user2 +? 11:13 PM 2026-02-24
> git commit -m "change: countries to Asian Countries"
[User2 0bc4a2d] change: countries to Asian Countries
 1 file changed, 3 insertions(+), 3 deletions(-)

```

Figure 4: q4\_2

```

bhavik .../Git_Assignment1_A00494758 ⌘ user2 ? 11:18 PM 2026-02-24
> git checkout -b combine_countries
Switched to a new branch 'combine_countries'

bhavik .../Git_Assignment1_A00494758 ⌘ combine_countries ? 11:18 PM 2026-02-24
> git branch -a
  LearnAnalytics
* combine_countries
  main
  user1
  user2
    q2_2.png
    q3.png
    q4_1.png

bhavik .../Git_Assignment1_A00494758 ⌘ combine_countries ? 11:18 PM 2026-02-24
> git merge user1
Auto-merging countries.txt
CONFLICT (content): Merge conflict in countries.txt
Automatic merge failed; fix conflicts and then commit the result.

bhavik .../Git_Assignment1_A00494758 ⌘ combine_countries =? 11:18 PM 2026-02-24
> git add countries.txt

bhavik .../Git_Assignment1_A00494758 ⌘ combine_countries +? 11:19 PM 2026-02-24
> git commit -m "change: resolved merge conflicts by keeping all countries"
[combine_countries fd97b9d] change: resolved merge conflicts by keeping all countries

bhavik .../Git_Assignment1_A00494758 ⌘ combine_countries ? 11:19 PM 2026-02-24
> cat countries.txt
File: countries.txt
1 Japan
2 Chine
3 India
4 Germany
5 France
6 Italy

bhavik .../Git_Assignment1_A00494758 ⌘ combine_countries ? 11:19 PM 2026-02-24
> Timeline

```

Figure 5: q4\_3

```

> cat countries.txt
> cat countries.txt
> git stash
> git status
  # On branch main
  # Your branch is up-to-date with 'origin/main'.
  #
  nothing to commit, working tree clean
  
```

Figure 6: q5\_1

```

> git add countries.txt
> git status
  # On branch main
  # Changes to be committed:
  #   (use "git restore" to unstage)
  #
  #       modified:   countries.txt
  #
  nothing added to commit but untracked files present (use "git add" to track)
  
```

Figure 7: q5\_2

```
git add countries.txt
git commit -m "add: Australia and Brazil"
```

The screenshot shows a terminal window with the following content:

```

bhavik@.../Git_Assignment1_A00494758: ~ user3 $? 11:28 PM 2026-02-24
> git stash pop
On branch user3
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:   countries.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    git_assignment.md
    q1.png
    q2_1.png
    q2_2.png
    q3.png
    q4_1.png
    q4_2.png
    q4_3.png
    q5_1.png
    q5_2.png
Uninstalling Scripts Installed Via Curl
no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (68feeba3713f667ca06335076de938eb139ed782)

bhavik@.../Git_Assignment1_A00494758: ~ user3 !? 11:28 PM 2026-02-24
> cat countries.txt
File: countries.txt
Data: Name Suggestions
1 USA
2 Canada
3 Mexico
4 Australia
5 Brazil
git stash list
git stash pop
git stash apply
Ask Gemini 3
Building a Movie Recommendation Engine

bhavik@.../Git_Assignment1_A00494758: ~ user3 !? 11:28 PM 2026-02-24
> git add countries.txt
git Settings & help
bhavik@.../Git_Assignment1_A00494758: ~ user3 +? 11:29 PM 2026-02-24
> git commit -m "add: Australia and Brazil"
Gemini is A
```

Figure 8: q5\_3

## 6. Advanced Git Workflow

```
git checkout main
git checkout -b bugfix
touch bugfix.txt
echo "Bugfix" >> bugfix.txt
git add bugfix.txt
git commit -m "add: bugfix"
touch random.txt
echo "Random" >> random.txt
git add random.txt
git commit -m "add: random"

git checkout main
```

```

bhavik@...:~/Git_Assignment1_A00494758$ git branch -a
* bugfix
  main
bhavik@...:~/Git_Assignment1_A00494758$ bash
bhavik@...:~/Git_Assignment1_A00494758$ git add countries.txt
bhavik@...:~/Git_Assignment1_A00494758$ git commit -m "add: UK"
bhavik@...:~/Git_Assignment1_A00494758$ ls -la
drwxrwxr-x  4  bhavik  24 Feb 23:37 -I .git
-rw-rw-r--  7  bhavik  24 Feb 23:34 -- bugfix.txt
-rw-rw-r--  35 bhavik  24 Feb 23:28 -- countries.txt
-rw-rw-r-- 2.2k bhavik  24 Feb 23:35 -N git_assignment.md
-rw-rw-r-- 14 bhavik  24 Feb 17:17 -- numbers.txt
-rw-rw-r-- 1432k bhavik  24 Feb 17:10 -- q1.png
-rw-rw-r-- 267k bhavik  24 Feb 23:20 -- q2.1.png
bhavik@...:~/Git_Assignment1_A00494758$ cat bugfix.txt random.txt
File: bugfix.txt
## 5. Stashing and Applying Changes
File: random.txt
Random
bhavik@...:~/Git_Assignment1_A00494758$
```

Figure 9: q6\_1

```

git reflog
git cherry-pick 39ab44f
ls -la
```

In this case, cherry-pick took the bugfix.txt file from the bugfix branch and added it to the main branch.

