

Git Assignment 1

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Git Assignment Documentation

1. Repository Initialization and Status Check

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

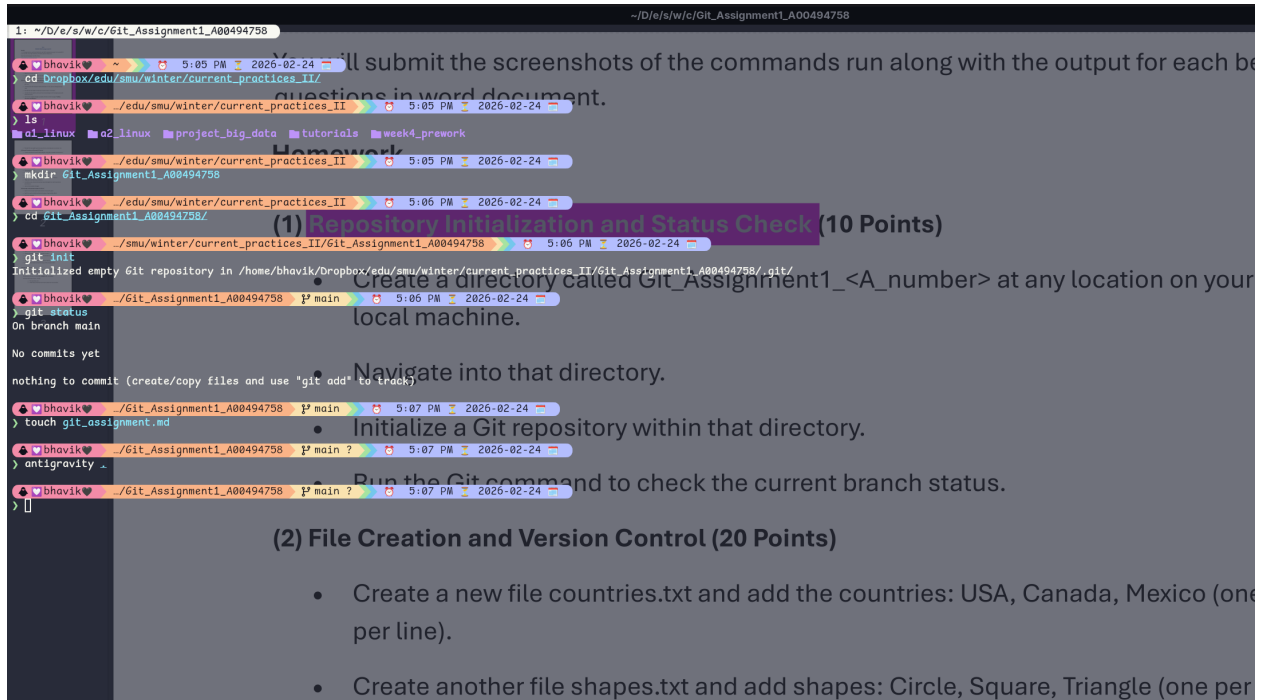


Figure 1: Screenshot 1: Repository Initialization and Status Check

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 1 main ? 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 1 main ? 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 1 main ? 5:15 PM 2026-02-24
> git add countries.txt shapes.txt

bhavik ~/Git_Assignment1_A00494758 1 main +? 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 1 main +? 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 1 main ? 5:16 PM 2026-02-24
> 
```

- Initialize a Git repository

- Run the Git command

(2) File Creation and Version

- Create a new file cou

- Create another file sh

- Run the Git command

- Commit your staged

Countries and Shapes

- Create a new file num

- Add numbers.txt to th

```

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

bhavik@.../Git_Assignment1_A00494758: main ? 5:17 PM 2026-02-24
> echo "Two" >> numbers.txt

bhavik@.../Git_Assignment1_A00494758: main ? 5:17 PM 2026-02-24
> echo "Three" >> numbers.txt

bhavik@.../Git_Assignment1_A00494758: main ? 5:17 PM 2026-02-24
> git add numbers.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

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

bhavik@.../Git_Assignment1_A00494758: main ? 5:18 PM 2026-02-24
> 
```

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

```
1: ~/D/e/s/w/c/Git_Assignment1_A00494758
bhavik♥ .../Git_Assignment1_A00494758 ⓘ main ? 11:02 PM 2026-02-24
> 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)

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-Analystics branch"
[LearnAnalytics ea886d9] Add: languages to Learn-Analystics 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: Screenshot 3: Branch Creation and Initial Commit on LearnAnalytics

```
git add countries.txt
git commit -m "change: countries to European Countries"
```

```
1: ~/D/e/s/w/c/Git_Assignment1_A00494758
> git checkout -b user1
Switched to a new branch 'user1'
> nvim countries.txt
> cat countries.txt
File: countries.txt
1 ~ Germany
2 ~ France
3 ~ Italy
> git add countries.txt
> git commit -m "change: contries to European Countries"
[user1 150c1cd] change: contries to European Countries
1 file changed, 3 insertions(+), 3 deletions(-)
```

Figure 3: Screenshot 4.1: User 1 changes in countries.txt

```
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"
```

```

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

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: Screenshot 4.2: User 2 changes in countries.txt

```

git checkout user3
git stash pop
git add countries.txt
git commit -m "add: Australia and Brazil"

```

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
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.

```

bhavik ~/Git_Assignment1_A00494758 1? user2 ? 11:18 PM 2026-02-24
> git checkout -b combine_countries
Switched to a new branch 'combine_countries'

bhavik ~/Git_Assignment1_A00494758 1? combine_countries ? 11:18 PM 2026-02-24
> git branch -a
  LearnAnalytics
* combine_countries
  main
  user1
  user2

bhavik ~/Git_Assignment1_A00494758 1? 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 1? combine_countries =? 11:18 PM 2026-02-24
> git add countries.txt

bhavik ~/Git_Assignment1_A00494758 1? 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 1? 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 1? combine_countries ? 11:19 PM 2026-02-24
> 
> Timeline

```

Figure 5: Screenshot 4.3: Resolved Merge Conflicts in combine_countries branch

```

bhavik ~/Git_Assignment1_A00494758 1? user3 !? 11:23 PM 2026-02-24
> cat
^C

bhavik ~/Git_Assignment1_A00494758 1? user3 !? 11:24 PM 2026-02-24
> cat countries.txt
File: countries.txt
1 USA
2 Canada
3 Mexico
4 + Australia
5 + Brazil

bhavik ~/Git_Assignment1_A00494758 1? user3 !? 11:24 PM 2026-02-24
> git stash countries.txt
Automatic merge failed; fix conflicts and then commit the result.

```

Figure 6: Screenshot 5.1: Changes to be stashed in user3 branch


```

bhavik ~/Git_Assignment1_A00494758 user3 !? 11:24 PM 2026-02-24
> git stash
Saved working directory and index state WIP on user3: 752b3b7 Adding numbers

bhavik ~/Git_Assignment1_A00494758 user3 $? 11:25 PM 2026-02-24
> git checkout main
Switched to branch 'main'

bhavik ~/Git_Assignment1_A00494758 main $? 11:26 PM 2026-02-24
> echo "UK" >> countries.txt

bhavik ~/Git_Assignment1_A00494758 main !$? 11:26 PM 2026-02-24
> cat countries.txt
File: countries.txt
1 USA
2 Canada
3 Mexico
4 + UK

bhavik ~/Git_Assignment1_A00494758 main !$? 11:26 PM 2026-02-24
> git add countries.txt

bhavik ~/Git_Assignment1_A00494758 main $+? 11:28 PM 2026-02-24
> git commit -m "add: UK"
[main ac255fd] add: UK
1 file changed, 1 insertion(+)

```

Figure 7: Screenshot 5.2: Committing UK to main branch

```

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

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
1 USA
2 Canada
3 Mexico
4 + Australia
5 + Brazil

bhavik .../Git_Assignment1_A00494758 user3 !? 11:28 PM 2026-02-24
> git add countries.txt

bhavik .../Git_Assignment1_A00494758 user3 +? 11:29 PM 2026-02-24
> git commit -m "add: Australia and Brazil"
```

Figure 8: Screenshot 5.3: Applying stashed changes to user3 branch after main update

```

> git branch -a
  LearnAnalytics
* bugfix
  combine_countries
  main
  user1
  user2
  user3

130 # Git Assignment
120 ## Bhavik Bhagat - A00494758
30  ### 5. Stashing and Applying Changes
24  echo "UK" >> countries.txt
23  git add countries.txt
22  git commit -m "add: UK"
21  ""

bhavik ~/Git_Assignment1_A00494758 bugfix ? 11:37 PM 2026-02-24
> ls -la
drwxrwxr-x  bhavik 24 Feb 23:37 -I .git .rw-rw-r-- 365k bhavik 24 Feb 17:16 -N
-rw-rw-r-- 7 bhavik 24 Feb 23:34 -- bugfix.txt .rw-rw-r-- 318k bhavik 24 Feb 17:18 -N
-rw-rw-r-- 35 bhavik 24 Feb 23:28 -- countries.txt .rw-rw-r-- 403k bhavik 24 Feb 23:09 -N
-rw-rw-r-- 2.2k bhavik 24 Feb 23:35 -N git_assignment.md .rw-rw-r-- 217k bhavik 24 Feb 23:16 -N
-rw-rw-r-- 14 bhavik 24 Feb 17:17 -- numbers.txt .rw-rw-r-- 182k bhavik 24 Feb 23:17 -N
-rw-rw-r-- 432k bhavik 24 Feb 17:10 -N q1.png .rw-rw-r-- 267k bhavik 24 Feb 23:20 -N

bhavik ~/Git_Assignment1_A00494758 bugfix ? 11:37 PM 2026-02-24
> cat bugfix.txt random.txt
File: bugfix.txt
1 Bugfix
File: random.txt
1 Random
  
```

Figure 9: Screenshot 6.1: Bugfix branch commits

```

bhavik ~/Git_Assignment1_A00494758 1? main ? 11:41 PM 2026-02-24
> git reflow
ac255fd (HEAD -> main) HEAD@{0}: checkout: moving from bugfix to main
d7ea91e (bugfix) HEAD@{1}: commit: add: random
39ab44f HEAD@{2}: commit: add: bugfix
a6c8163 (user3) HEAD@{3}: checkout: moving from user3 to bugfix
a6c8163 (user3) HEAD@{4}: commit: add: Australia and Brazil
752b3b7 HEAD@{5}: checkout: moving from main to user3
ac255fd (HEAD -> main) HEAD@{6}: commit: add: UK
752b3b7 HEAD@{7}: checkout: moving from user3 to main
752b3b7 HEAD@{8}: reset: moving to HEAD
752b3b7 HEAD@{9}: checkout: moving from main to user3
752b3b7 HEAD@{10}: checkout: moving from combine_countries to main
fd97b9d (combine_countries) HEAD@{11}: commit (merge): change: resolved merge conflicts by keeping all
0bc4a2d (user2) HEAD@{12}: checkout: moving from user2 to combine_countries
0bc4a2d (user2) HEAD@{13}: commit: change: countries to Asian Countries
752b3b7 HEAD@{14}: checkout: moving from user1 to user2
150c1cd (user1) HEAD@{15}: commit: change: contries to European Countries
752b3b7 HEAD@{16}: checkout: moving from main to user1
752b3b7 HEAD@{17}: checkout: moving from LearnAnalytics to main
ea886d9 (LearnAnalytics) HEAD@{18}: commit: Add: languages to Learn-Analystics branch
752b3b7 HEAD@{19}: checkout: moving from main to LearnAnalytics
752b3b7 HEAD@{20}: commit: Adding numbers
defe015 HEAD@{21}: commit (initial): Adding Countries and Shapes

bhavik ~/Git_Assignment1_A00494758 1? main ? 11:41 PM 2026-02-24
> git cherry-pick 39ab44f
[main f688828] add: bugfix
Date: Tue Feb 24 23:34:43 2026 -0400
1 file changed, 1 insertion(+)
create mode 100644 bugfix.txt

bhavik ~/Git_Assignment1_A00494758 1? main ? 11:42 PM 2026-02-24
> git status
On branch main
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
    q5-3.png
    q6-1.png

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

bhavik ~/Git_Assignment1_A00494758 1? main ? 11:42 PM 2026-02-24
> ls -la
drwxrwxr-x - bhavik 24 Feb 23:42 -I .git checkout .rw-rw-r-- 365k bhavik 24 Feb 17:16 -N q2-1.png .rw-rw-r-- 169k bhavik 24 Feb 23:25 -N q5-1.png
.rw-rw-r-- 7 bhavik 24 Feb 23:42 -- bugfix.txt .rw-rw-r-- 318k bhavik 24 Feb 17:18 -N q2-2.png .rw-rw-r-- 232k bhavik 24 Feb 23:30 -N q5-2.png
.rw-rw-r-- 21 bhavik 24 Feb 23:41 -- countries.txt .rw-rw-r-- 403k bhavik 24 Feb 23:09 -N q3.png .rw-rw-r-- 280k bhavik 24 Feb 23:32 -N q5-3.png
.rw-rw-r-- 2.2k bhavik 24 Feb 23:35 -N git_assignment.md .rw-rw-r-- 217k bhavik 24 Feb 23:16 -N q4-1.png .rw-rw-r-- 291k bhavik 24 Feb 23:38 -N q6-1.png
.rw-rw-r-- 14 bhavik 24 Feb 17:17 -- numbers.txt .rw-rw-r-- 182k bhavik 24 Feb 23:17 -N q4-2.png .rw-rw-r-- 23 bhavik 24 Feb 17:15 -- shapes.txt
.rw-rw-r-- 432k bhavik 24 Feb 17:10 -N q1.png .rw-rw-r-- 267k bhavik 24 Feb 23:20 -N q4-3.png

bhavik ~/Git_Assignment1_A00494758 1? main ? 11:42 PM 2026-02-24
> cat bugfix.txt
File: bugfix.txt
1 Bugfix

bhavik ~/Git_Assignment1_A00494758 1? main ? 11:43 PM 2026-02-24
```
