

```
Student@HNCE-29 MINGW64 ~ (master)
$ mkdir GitLab-1MC24CS058
Student@HNCE-29 MINGW64 ~ (master)
$ cd GitLab-1MC24CS058
Student@HNCE-29 MINGW64 ~/GitLab-1MC24CS058 (master)
$ git init
Initialized empty Git repository in c:/users/Student/GitLab-1MC24CS058/.git/
Student@HNCE-29 MINGW64 ~/GitLab-1MC24CS058 (master)
$ git config --global user.name "Prajwal-1MC24CS058"
Student@HNCE-29 MINGW64 ~/GitLab-1MC24CS058 (master)
$ git config --global user.email "prajwal58@gmail.com"
Student@HNCE-29 MINGW64 ~/GitLab-1MC24CS058 (master)
$ echo "GitLab Program 1">gitlab-prgm-1.txt
Student@HNCE-29 MINGW64 ~/GitLab-1MC24CS058 (master)
$ cat gitlab-prgm-1.txt
GitLab Program 1
Student@HNCE-29 MINGW64 ~/GitLab-1MC24CS058 (master)
$ git add gitlab-prgm-1.txt
warning: in the working copy of 'gitlab-prgm-1.txt', LF will be replaced by CRLF the next time git touches it
Student@HNCE-29 MINGW64 ~/GitLab-1MC24CS058 (master)
$ git add gitlab-prgm-1.txt
Student@HNCE-29 MINGW64 ~/GitLab-1MC24CS058 (master)
$ git status
On branch master
No commits yet
Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:  gitlab-prgm-1.txt

Student@HNCE-29 MINGW64 ~/GitLab-1MC24CS058 (master)
$ git commit -m "add gitlab-prgm-1.txt in master branch"
[master (root-commit) e262bd1] add gitlab-prgm-1.txt in master branch
1 file changed, 1 insertion(+)
create mode 100644 gitlab-prgm-1.txt

Student@HNCE-29 MINGW64 ~/GitLab-1MC24CS058 (master)
$ git status
On branch master
nothing to commit, working tree clean
Student@HNCE-29 MINGW64 ~/GitLab-1MC24CS058 (master)
$ git log
commit e262bd1031fa35775d7862f0f171ee6897253b53 (HEAD -> master)
Author: Prajwal-1MC24CS058 <prajwal58@gmail.com>
Date:   Thu Oct 30 14:38:40 2025 +0530

  add gitlab-prgm-1.txt in master branch
```

Initialised empty git repository in C:/Users/Student/gitlab-  
Student@HNCE-29 MINGW64 / (master) 17:05:08/git

On branch master

No commits yet

Changes to be committed:

(use "git rm --cached <file>..." to unstage)

new file: git-prgm-1.txt

[master (root-commit) e262bed] add gitlab-prgm-1.txt in master branch  
1 file changed, 1 insertion(+)  
create mode 100644 gitlab-prgm-1.txt

## Setting Up and Basic Commands

Initialize a new git repository in a directory. Create a new file and add it to the staging area and commit the changes with an appropriate commit message

Solution:

Step 1: To initialize git repository in a directory  
\$ git init

Filepath:  
-> c:\git

Step 2: Create a new file and add it to staging area

\$ git add git-prgm-1.txt

To create / check status of git repository

\$ git status

Step 3: Commit the changes with an appropriate commit message. Replace "your commit message here" with meaningful description of your changes

\$ git commit -m "add git-prgm-1.txt into master branch"

If author is not identified, have to configure email-id

\$ git config --global user.name "Prajwal-1H(24CS058)"

\$ git config --global user.email "prajwal58@gmail.com"

(10)  
10  
83  
10/10

Already on 'master'

switched to a new branch 'feature-branch'  
Student @ HNCE-29 MINGW64 ~ / Atuljithab-1/HC21/SOS8 (feature-branch)



[feature branch] 748a5fb] added gitlab-prgm-2.txt to feature branch  
1 file changed, 1 inserted (+)  
create mode 100644 gitlab-prgm-2.txt

Switched to branch 'master'

Student @ HNCE-29 MINGW64 ~ / Atuljithab-1/HC21/SOS8 (master)

Insert

Delete

Enter

```
[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (master)
$ git checkout master
already on 'master'

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (master)
$ git checkout -b feature-branch
switched to a new branch 'feature-branch'

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ git checkout feature-branch
already on 'feature-branch'

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ echo "gitlab Program 2 in feature branch>gitlab-prgm-2.txt"
[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ cat gitlab-prgm-2.txt
gitlab Program 2 in feature branch

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ git status
On branch feature-branch
Changes to be committed:
  (use "git add <file>..." to include in what will be committed)
    (use "git add -A" to include all changes)

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

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ git add gitlab-prgm-2.txt
warning: In the working copy of 'gitlab-prgm-2.txt', LF will be replaced by CRLF the next time Git touches it

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ git add gitlab-prgm-2.txt

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ git status
On branch feature-branch
Changes to be committed:
  (use "git restore --staged <file>" to unstage)
    new file: gitlab-prgm-2.txt

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ git commit -m "added gitlab-prgm-2 to feature branch"
[feature-branch] 4748a5f2: added gitlab-prgm-2 to feature branch
  1 file changed, 1 insertion(s)
   create mode 100644 gitlab-prgm-2.txt

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ git status
On branch feature-branch
nothing to commit, working tree clean

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ git log
commit 4748a5f2:2bf62088c290c227b082409dfc1 (HEAD -> feature-branch)
Author: Prajwal-IHC24CS058 <prajwal15@gmail.com>
Date: Thu Oct 30 13:09:43 2025 +0530

  added gitlab-prgm-2 to feature branch

commit e262bd01fa35775d7862f0f171ee6897253b53 (master)
Author: Prajwal-IHC24CS058 <prajwal15@gmail.com>
Date: Thu Oct 30 14:38:40 2025 +0530

  add gitlab-prgm-1.txt in master branch

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ git checkout master
switched to branch 'master'

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (master)
$ git merge feature-branch
Updating e262bd01..4748a5f
Fast-forward
  gitlab-prgm-2.txt | 1 +
  1 file changed, 1 insertion(+)
   create mode 100644 gitlab-prgm-2.txt

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (master)
$ git log
commit 4748a5f2:2bf62088c290c227b082409dfc1 (HEAD -> master, feature-branch)
Author: Prajwal-IHC24CS058 <prajwal15@gmail.com>
Date: Thu Oct 30 15:09:43 2025 +0530

  added gitlab-prgm-2 to feature branch

commit e262bd01fa35775d7862f0f171ee6897253b53
Author: Prajwal-IHC24CS058 <prajwal15@gmail.com>
Date: Thu Oct 30 14:38:40 2025 +0530

  add gitlab-prgm-1.txt in master branch

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (master)
$ ]
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```
[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ git log
commit 4748a5f2:2bf62088c290c227b082409dfc1 (HEAD -> Feature-branch)
Author: Prajwal-IHC24CS058 <prajwal15@gmail.com>
Date: Thu Oct 30 14:38:40 2025 +0530

  add gitlab-prgm-2 to feature branch

commit e262bd01fa35775d7862f0f171ee6897253b53 (master)
Author: Prajwal-IHC24CS058 <prajwal15@gmail.com>
Date: Thu Oct 30 14:38:40 2025 +0530

  add gitlab-prgm-1.txt in master branch

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (feature-branch)
$ git checkout master
switched to branch 'master'

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (master)
$ git merge feature-branch
Updating e262bd01..4748a5f
Fast-forward
  gitlab-prgm-2.txt | 1 +
  1 file changed, 1 insertion(+)
   create mode 100644 gitlab-prgm-2.txt

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (master)
$ git log
commit 4748a5f2:2bf62088c290c227b082409dfc1 (HEAD -> master, Feature-branch)
Author: Prajwal-IHC24CS058 <prajwal15@gmail.com>
Date: Thu Oct 30 15:09:43 2025 +0530

  added gitlab-prgm-2 to feature branch

commit e262bd01fa35775d7862f0f171ee6897253b53
Author: Prajwal-IHC24CS058 <prajwal15@gmail.com>
Date: Thu Oct 30 14:38:40 2025 +0530

  add gitlab-prgm-1.txt in master branch

[student@HNC-29 MINGW64 ~/GitLab-IHC24CS058 (master)
$ ]
```

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Experiment Number : 2 Date : 16/10/25

### Creating and Managing Branches

Create a new branch named "feature-branch". Switch to the "master" branch Merge "feature-branch" into master

Solution:

Step 1: Make sure that you are in master branch

```
$ git checkout master
```

Step 2: Create a new branch named 'feature-branch' and switch to it

```
$ git checkout -b feature-branch
```

Step 3- Make sure changes in feature-branch by adding/modifying/ deleting files as needed.

```
$ echo "Gitlab Program No 2" > gitlab-prgm-2.txt
```

```
$ git add gitlab-prgm-2.txt
```

Step 4- Stage and commit your changes in the feature branch

```
$ git commit -m "added gitlab-prgm-2" to feature branch
```

Step 5- Switch back to 'master' branch

```
$ git checkout master
```

Step 6- Merge the "featurebranch" into the "master" branch

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Gold

Updating e262bd1... 4748a5f

Fast forward

gitlab-prgm-2.txt | +

1 file changed, 1 insertion(+)

create mode 100644 gitlab-prgm-2.txt

commit 4748a5f71... (HEAD -> master, feature-branch)

Author: Prajwal-1HC21CS058 <prajwal58@gmail.com>

Date: Thu Oct 30 15:09:43 2025 +0530

added gitlab-prgm-2 to feature branch

commit e262bd1031fa

Author: Prajwal-1HC21CS058 <prajwal58@gmail.com>

Date: Thu Oct 30 16:38:10 2025 +0530

added gitlab-prgm-1.txt in master branch.

Updating e262bd1... 474fa5f

Fast forward

gitlab-prgm-2.txt | 1 +

1 file changed, 1 insertion(+)

create mode 100644 gitlab-prgm-2.txt

commit 474fa5f1.... (HEAD -> master, feature-branch)

Author: Prajwal-1HC21C5058 <prajwal58@gmail.com>

Date: Thu Oct 30 15:09:43 2025 +0530

added gitlab-prgm-2 to feature branch

commit e262bd1031fa

Author: Prajwal-1HC21C5058 <prajwal58@gmail.com>

Date: Thu Oct 30 16:38:40 2025 +0530

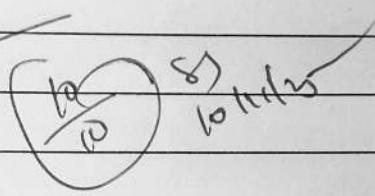
added gitlab-prgm-1.txt in master branch.

Experiment Number : ..... Date : .....

\$ git merge feature-branch

To check logs.

\$ git log



```

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (master)
$ git stash save "stash temporary storage on master branch"
no local changes to save

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (master)
$ echo "gitlab Program 3 on master">>gitlab-prgm-3.txt
student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (master)
$ cat gitlab-prgm-3.txt
gitlab Program 3 on master

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (master)
$ git add gitlab-prgm-3.txt
warning: in the working copy of 'gitlab-prgm-3.txt', LF will be replaced by CRLF the next time git touches it
student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (master)
$ git add gitlab-prgm-3.txt

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (master)
$ git status
on branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:  gitlab-prgm-3.txt

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (master)
$ git stash save "stash temporary storage on master branch"
saved working directory and index state on master: stash temporary storage on master branch

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (master)
$ git stash apply
on branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:  gitlab-prgm-3.txt

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (master)
$ git checkout feature-branch
A       gitlab-prgm-3.txt
switched to branch 'feature-branch'

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (feature-branch)
$ git stash save "stash temporary storage on master branch"
saved working directory and index state on feature-branch: stash temporary storage on master branch

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (feature-branch)
$ git stash apply
on branch feature-branch
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:  gitlab-prgm-3.txt

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (feature-branch)
$ git status
on branch feature-branch
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:  gitlab-prgm-3.txt

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (feature-branch)
$ git log
commit 474ba5f71b2f620b888c29bc92179b82409dfc1 (HEAD -> feature-branch, master)
Date:   Thu Oct 30 15:09:43 2025 +0530

  added gitlab-prgm-2 to feature branch

commit e262bd1031fa35775d7862f0f171ee6807253b53
Author: Prajwal-1HC24CS058 <prajwal58@gmail.com>
Date:   Thu Oct 30 14:38:40 2025 +0530

  add gitlab-prgm-1.txt in master branch

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (feature-branch)
$ git commit -a "add gitlab-prgm-3 to the feature branch"
[feature-branch 0e982d] add gitlab-prgm-3 to the feature branch
 1 file changed, 2 insertion(+)
 create mode 100644 gitlab-prgm-3.txt

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (feature-branch)
$ git log
commit 474ba5f71b2f620b888c29bc92279b82409dfc1 (HEAD -> feature-branch)
Author: Prajwal-1HC24CS058 <prajwal58@gmail.com>
Date:   Thu Oct 30 15:09:43 2025 +0530

  added gitlab-prgm-2 to feature branch

commit e262bd1031fa35775d7862f0f171ee6807253b53
Author: Prajwal-1HC24CS058 <prajwal58@gmail.com>
Date:   Thu Oct 30 14:38:40 2025 +0530

  add gitlab-prgm-1.txt in master branch

student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (feature-branch)
$ |

```

```

Student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (feature-branch)
$ git log
commit 474ba5f71b2f620b888c29bc92179b82409dfc1 (HEAD -> feature-branch, master)
Author: Prajwal-1HC24CS058 <prajwal58@gmail.com>
Date:   Thu Oct 30 15:09:43 2025 +0530

  added gitlab-prgm-2 to feature branch

commit e262bd1031fa35775d7862f0f171ee6807253b53
Author: Prajwal-1HC24CS058 <prajwal58@gmail.com>
Date:   Thu Oct 30 14:38:40 2025 +0530

  add gitlab-prgm-1.txt in master branch

Student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (feature-branch)
$ git commit -a "add gitlab-prgm-3 to the feature branch"
[feature-branch 0e982d] add gitlab-prgm-3 to the feature branch
 1 file changed, 2 insertion(+)
 create mode 100644 gitlab-prgm-3.txt

Student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (feature-branch)
$ git log
commit 474ba5f71b2f620b888c29bc92279b82409dfc1 (HEAD -> feature-branch)
Author: Prajwal-1HC24CS058 <prajwal58@gmail.com>
Date:   Thu Oct 30 15:09:43 2025 +0530

  added gitlab-prgm-2 to feature branch

commit e262bd1031fa35775d7862f0f171ee6807253b53
Author: Prajwal-1HC24CS058 <prajwal58@gmail.com>
Date:   Thu Oct 30 14:38:40 2025 +0530

  add gitlab-prgm-1.txt in master branch

Student@HNCE-29 MINGW64 ~/GitLab-1HC24CS058 (feature-branch)
$ |

```

No local changes to save.

saved working directory and index stage on master : stash  
temporary storage on master branch

on branch master

changes to be committed:

(use "git restore -staged <file>..." to unstage)

new file: gitlab-prgm-3.txt

gitlab-prgm-3.txt

switched to branch feature-branch!

Student@HNCE-29 MINGW04 ~\gitlab-1\H2\CS058 (feature-branch)

Experiment Number : 3 Date : 23/10/2025 7

### Creating and Managing Branches

Write the command to stash changes, switch branches and then apply the stashed changes

stash - temporarily saves your changes to a "stash", so we can switch branches without committing or losing work

Solution: To stash changes, switch branches and then apply stashed changes in git, following commands are used

Step 1: Stash your changes. \$ git stash save "your message"  
\$ git stash save "stash temporary storage"

Create and modify and then add a file using git add command called "gitlab-prgm-3.txt"

\$ git add gitlab-prgm-3.txt

~~\$ git stash save "stash temporary storage" on master branch~~

Apply the stash

\$ git stash apply

Step 2: Switch to the desired branch

The desired branch here being feature branch

\$ git checkout feature-branch

(use branch!)

saved working directory and index stage on feature-branch  
stash temporary storage on feature-branch.

On branch feature-branch:

Changes to be committed:

(use "git restore --staged <file>..." to unstage)  
new file: gitlab-prgm-3.txt

On branch feature-branch

Changes to be committed:

(use "git restore --staged <file>..." to unstage)  
new file: gitlab-prgm-3.txt

[feature-branch 0-e9d682b] add gitlab-prgm-3.txt to feature<sup>branch</sup>  
1 file changed, 1 insertion (+)  
create mode 100644 gitlab-prgm-3.txt

commit 0-e9d682b HEAD -> feature-branch

Author: Prajwal-1HC2UCS058 <prajwals8@gmail.com>

Date: Thu Oct 30 15:44:01 2025 +0530

add gitlab-prgm-3.txt to the feature branch.

Experiment Number : ..... Date : .....

Step 3: Apply the stashed changes

\$ git stash save "stash temporary storage on feature branch"

\$ git stash apply

To check status

\$ git status

Since git-prgm-3.txt is not committed to git repository  
it is not visible in the repository logs. So to commit  
\$ git commit -m "add git-prgm-3.txt to feature branch"

To check logs

\$ git log

