

Git Assessment Objective :

The goal of this assignment is to help you get familiar with basic Git commands and workflows, which are commonly used in real world software development.

1. Create New Repository.

```
tamim@DESKTOP-D0JC06B MINGW64 ~ (master)
$ cd desktop

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop (master)
$ git init
Initialized empty Git repository in C:/Users/tamim/Desktop/.git/

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop (main)
$ git remote add origin https://github.com/Tamim29-eng/Practices
```

2. Create a New File.

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop (main)
$ mkdir git-Assessment

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop (main)
$ ls
BitTorrent.lnk*      Kindle.lnk*          ThunderVPN.lnk*      newproject/
'C programming.code-workspace' 'MinGW Installer.lnk'* 'Zoom Workplace.lnk'* project/
Discord.lnk*         'Opera Browser.lnk'* desktop.ini
Firefox.lnk*         Spotify.lnk*         git-Assessment/
Gitss/               'Tamim - Chrome.lnk'* 'idea64 - Shortcut.lnk'*

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop (main)
$ cd git-Assessment

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (main)
$ touch README.md
```

3. Create a Branch.

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (main)
$ git add .

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (main)
$ git commit -m "First commit"
[main (root-commit) d7f6ea6] First commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 git-Assessment/README.md

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (main)
$ git branch firstSample
```

4. Make Changes in the New Branch:

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (main)
$ git checkout firstSample
Switched to branch 'firstSample'

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (firstSample)
$ echo "Changes in firstSample" >>changedfirstSample.txt

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (firstSample)
$ git add changedfirstSample.txt
warning: in the working copy of 'git-Assessment/changedfirstSample.txt', LF will be replaced by CRLF the
next time Git touches it

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (firstSample)
$ git commit -m "Changes done in firstSample"
[firstSample 50a3b07] Changes done in firstSample
1 file changed, 1 insertion(+)
create mode 100644 git-Assessment/changedfirstSample.txt
```

5. Create Another Branch (Optional):

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (firstSample)
$ git checkout -b secondSample
Switched to a new branch 'secondSample'
```

6. Merge Branches.

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (secondSample)
$ git branch
  firstSample
  main
* secondSample

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (secondSample)
$ git checkout main
Switched to branch 'main'

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (main)
$ git merge firstSample
Updating d7f6ea6..50a3b07
Fast-forward
 git-Assessment/changedfirstSample.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 git-Assessment/changedfirstSample.txt
```

7. Pull Changes from Remote.

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (main)
$ git pull origin main
From https://github.com/Tamim29-eng/Practices
 * branch                main          -> FETCH_HEAD
Already up to date.
```

8. View Git Log and History.

```
tamim@DESKTOP-D0JCO6B MINGW64 ~/desktop/git-Assessment (main)
$ git log
commit 50a3b07d35301994d94f94d531c3610db3f7c03e (HEAD -> main, origin/main, secondSample, firstSample)
Author: Tamim Kothari <tamimkothari29@gmail.com>
Date:   Wed Feb 19 22:22:10 2025 +0530
```

Changes done in firstSample

```
commit d7f6ea6e56dda2aaeb639e6c22c12f32ea887a94
Author: Tamim Kothari <tamimkothari29@gmail.com>
Date:   Wed Feb 19 22:13:45 2025 +0530
```

First commit

```
tamim@DESKTOP-D0JCO6B MINGW64 ~/desktop/git-Assessment (main)
$ history
 1 git --version
 2 ls
 3 pwd
 4 mkdir workspace
 5 ls
 6 cd workspace/
 7 ls
 8 mkdir learning
 9 rm -rf learning/
10 mkdir dsa
11 cd dsa/
12 git init .
13 ld
14 ls -al
15 vim .gitignore
16 git remote add origin https://github.com/Tamim29-eng/dsa.git
17 git remote add origin https://github.com/Tamim29-eng/dsa.git
18 git branch -M main
19 git push -u origin main
20 git remote -v
21 git remote --help
22 git remote remove origin
23 git remote add origin git@github.com:Tamim29-eng/dsa.git
24 git push origin main
25 ssh-keygen.exe -d rsa
26 ssh-keygen.exe -t rsa
27 cat ~/.ssh/id_rsa.pub
28 git push origin main
29 git status
30 vim README.md
31 git status
32 git add .
33 git status
34 git commit -m "Initial Commit"
35 git config --global user.email "tamimkothari29@gmail.com"
36 git config --global user.name "Tamim Kothari"
37 git commit -m "Initial Commit"
38 git status
39 git log
40 git push origin main
41 mkdir myproject
42 cd myproject
43 git init
44 touch myfile.txt
45 echo "Hello, Git!" > myfile.txt
46 git branch new-branch
47 git branch
48 git checkout main
49 git
50 ls
51 mkdir myfile
52 ls
53 mkdir newprj
54 cd desktop
```


9. Git Status and Staging

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/newproject (main)
$ git status
On branch main
nothing to commit, working tree clean
```

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (main)
$ echo "file for staging" >>staging.txt
```

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.
```

```
Untracked files:
  (use "git add <file>..." to include in what will be committed)
  ../BitTorrent.lnk
  ../C programming.code-workspace
  ../Discord.lnk
  ../Firefox.lnk
  ../Kindle.lnk
  ../MinGW Installer.lnk
  ../Opera Browser.lnk
  ../Spotify.lnk
  ../Tamim - Chrome.lnk
  ../ThunderVPN.lnk
  ../Zoom Workplace.lnk
  ../desktop.ini
  staging.txt
  ../idea64 - Shortcut.lnk
  ../newproject/
  ../project/
```

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

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (main)
$ git add staging.txt
warning: in the working copy of 'git-Assessment/staging.txt', LF will be replaced by CRLF the next time
Git touches it
```

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (main)
$ git commit -m "Staging file committed"
[main ec0f888] Staging file committed
 1 file changed, 1 insertion(+)
 create mode 100644 git-Assessment/staging.txt
```

10. Revert and Reset:

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/git-Assessment (main)
$ git revert d7f6ea6e56dda2aaeb639e6c22c12f32ea887a94
[main 4c9cccd] Revert "First commit"
1 file changed, 0 insertions(+), 0 deletions(-)
delete mode 100644 git-Assessment/README.md
```

```
tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/newproject (main)
$ git log
commit c5c45219135165d7756e39d8f88237f0fdcc470c (HEAD -> main, origin/main)
Author: Tamim Kothari <tamimkothari29@gmail.com>
Date: Wed Feb 19 20:04:38 2025 +0530

    rollno.txt modified

commit 82bc450f4d0e83a29c24b7611a30bbbd3c86016f
Author: Tamim Kothari <tamimkothari29@gmail.com>
Date: Wed Feb 19 20:02:57 2025 +0530

    rollno.txt added

commit cbbc1d35f6ee501c5e34f3b128747de156248b37
Author: Tamim Kothari <tamimkothari29@gmail.com>
Date: Wed Feb 19 20:01:40 2025 +0530

    hotel.txt added

commit 9a3caa5012c1055c7b8cbfb027333d1811ee9caf
Author: Tamim Kothari <tamimkothari29@gmail.com>
Date: Wed Feb 19 18:25:35 2025 +0530

    names.txt file added

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/newproject (main)
$ git reset 9a3caa5012c1055c7b8cbfb027333d1811ee9caf

tamim@DESKTOP-D0JC06B MINGW64 ~/desktop/newproject (main)
$ git log
commit 9a3caa5012c1055c7b8cbfb027333d1811ee9caf (HEAD -> main)
Author: Tamim Kothari <tamimkothari29@gmail.com>
Date: Wed Feb 19 18:25:35 2025 +0530

    names.txt file added
```