

1. git init

```
C:\Users\JD\Desktop\css445Ass>git init
Initialized empty Git repository in C:/Users/JD/Desktop/css445Ass/.git/
```

2. git status

```
C:\Users\JD\Desktop\css445Ass>git status
On branch master

No commits yet

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

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

3. git diff

```
C:\Users\JD\Desktop\css445Ass>git diff .gitignore
diff --git a/.gitignore b/.gitignore
index 67d449f..9e9d179 100644
--- a/.gitignore
+++ b/.gitignore
@@ -1,2 @@
 myFirst.js
+myFolder
\ No newline at end of file
```

4. Create .gitignore file, and notice how it works

Before ignoring

```
C:\Users\JD\Desktop\css445Ass>git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        .gitignore
        myFirst.js

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

After ignoring

```
C:\Users\JD\Desktop\css445Ass>git status
On branch master

No commits yet

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

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

5. git add

```
C:\Users\JD\Desktop\css445Ass>git add .

C:\Users\JD\Desktop\css445Ass>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   .gitignore
```

6. git commit

```
C:\Users\JD\Desktop\css445Ass>git commit -m "my first commit"
[master (root-commit) 382dc72] my first commit
1 file changed, 1 insertion(+)
create mode 100644 .gitignore
```

7. git commit -amend (updating the last commit)

```
C:\Users\JD\Desktop\css445Ass>git commit --amend -m "commit has been modified"
[master 1146b29] commit has been modified
Date: Mon Oct 31 15:58:52 2022 -0500
2 files changed, 5 insertions(+)
create mode 100644 addNum.js
```

8. git log

```
C:\Users\JD\Desktop\css445Ass> git log
commit 1146b29ecc5074742407977c25975cb7345808af (HEAD -> master)
Author: Jean <damour2014stage@gmail.com>
Date:   Mon Oct 31 15:58:52 2022 -0500

    commit has been modified

commit 382dc728d003e4dd7d4652a1a958636dbb03b567
Author: Jean <damour2014stage@gmail.com>
Date:   Mon Oct 31 15:27:54 2022 -0500

    my first commit
```

```
C:\Users\JD\Desktop\css445Ass>git log --oneline
1146b29 (HEAD -> master) commit has been modified
382dc72 my first commit
```

9. git tag

```
C:\Users\JD\Desktop\css445Ass>git log
commit 1146b29ecc5074742407977c25975cb7345808af (HEAD -> master)
Author: Jean <damour2014stage@gmail.com>
Date:   Mon Oct 31 15:58:52 2022 -0500

    commit has been modified

commit 382dc728d003e4dd7d4652a1a958636dbb03b567 (tag: tagName)
Author: Jean <damour2014stage@gmail.com>
Date:   Mon Oct 31 15:27:54 2022 -0500

    my first commit

C:\Users\JD\Desktop\css445Ass>git log --oneline
1146b29 (HEAD -> master) commit has been modified
382dc72 (tag: tagName) my first commit
```

10.git branch

```
C:\Users\JD\Desktop\css445Ass>git branch firstBranch  
  
C:\Users\JD\Desktop\css445Ass>git branch -v  
firstBranch 1146b29 commit has been modified  
* master      1146b29 commit has been modified
```

11.git checkout

```
C:\Users\JD\Desktop\css445Ass>git checkout firstBranch  
Switched to branch 'firstBranch'  
  
C:\Users\JD\Desktop\css445Ass>git branch  
* firstBranch  
master
```

12.git merge

no conflict

```
C:\Users\JD\Desktop\css445Ass>git merge firstBranch  
Updating 1146b29..15ba697  
Fast-forward  
 .gitignore | 2 +-  
 addNum.js  | 3 ++-  
 myFirst.js | 5 +++++  
 3 files changed, 8 insertions(+), 2 deletions(-)  
 create mode 100644 myFirst.js
```

i. Create a conflict and solve the conflict

```
function addNum(a,b){  
    return a+b;  
}  
console.log(addNum(3,4));  
Accept Current Change | Accept Incoming Change | Accept Both Changes | Compare Changes  
<<<<<< HEAD (Current Change)  
// console.log(addNum(3,4));  
=====  
//here also I add a comment  
>>>>>> admin (Incoming Change)
```

```

1  ✓ function addNum(a,b){
2      |     return a+b;
3      |
4      | }
5  ✓ console.log(addNum(3,4));
6  ✓ // console.log(addNum(3,4));
7  ✓ //here also I add a comment
8

```

```
C:\Users\JD\Desktop\css445Ass>git add .
```

```
C:\Users\JD\Desktop\css445Ass>git commit -m "after correcting conflict"
[master 740d302] after correcting conflict
```

```
C:\Users\JD\Desktop\css445Ass>git status
On branch master
nothing to commit, working tree clean
```

```
C:\Users\JD\Desktop\css445Ass>git checkout master
Switched to branch 'master'
```

```
C:\Users\JD\Desktop\css445Ass>git add .
```

```
C:\Users\JD\Desktop\css445Ass>
```

```
C:\Users\JD\Desktop\css445Ass>git commit -m "new version to master"
[master 426bb52] new version to master
1 file changed, 1 insertion(+), 2 deletions(-)
```

```
C:\Users\JD\Desktop\css445Ass>git status
On branch master
nothing to commit, working tree clean
```

```
C:\Users\JD\Desktop\css445Ass>git merge admin
Auto-merging myFirst.js
CONFLICT (content): Merge conflict in myFirst.js
Automatic merge failed; fix conflicts and then commit the result.
```

13.

Undo changes from a certain commit `git revert`

```
C:\Users\JD\Desktop\css445Ass>git add .

C:\Users\JD\Desktop\css445Ass>git commit -m "revert one"
[master 756af5e] revert one
1 file changed, 2 insertions(+), 1 deletion(-)

C:\Users\JD\Desktop\css445Ass>git revert HEAD
[master bc89db6] Revert "revert one"
1 file changed, 1 insertion(+), 2 deletions(-)
```

```
C:\Users\JD\Desktop\css445Ass>git log --oneline
bc89db6 (HEAD -> master) Revert "revert one"
756af5e revert one
740d302 after correcting conflict
426bb52 new version to master
8cc42c2 (admin) admin new version
dbc45ee change made to master branch
15ba697 (firstBranch) my first
186c47f conflict lab
1146b29 commit has been modified
382dc72 (tag: tagName) my first commit
```

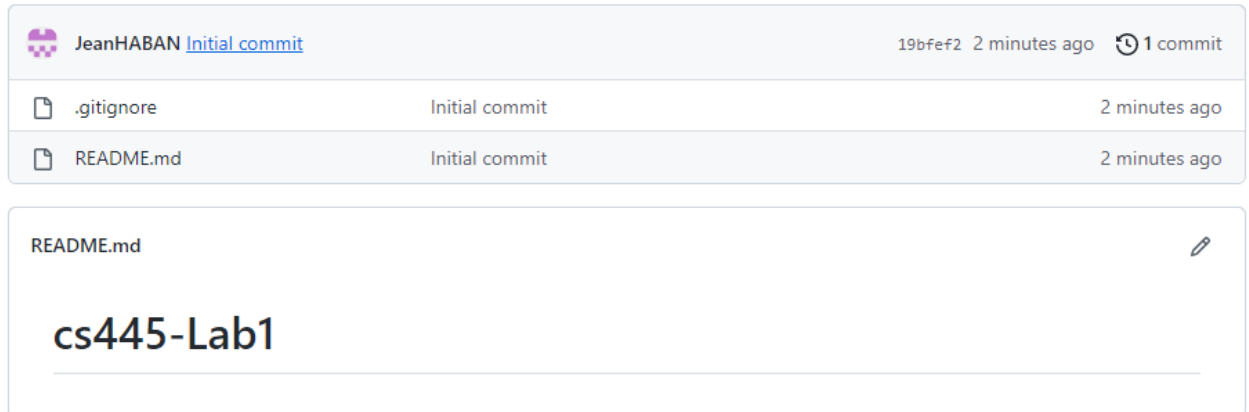
13. Erase commits with git reset

```
C:\Users\JD\Desktop\css445Ass>git reset 740d302
```

```
C:\Users\JD\Desktop\css445Ass>git log --oneline
740d302 (HEAD -> master) after correcting conflict
426bb52 new version to master
8cc42c2 (admin) admin new version
dbc45ee change made to master branch
15ba697 (firstBranch) my first
186c47f conflict lab
1146b29 commit has been modified
382dc72 (tag: tagName) my first commit
```

Practice with all the remote repository commands from the slides:

1. Create a remote repository



The screenshot shows a GitHub repository page for a user named JeanHABAN. The repository is titled 'Initial commit' and has a commit hash of 19bfe2. It was committed 2 minutes ago and is the first of one commit. The repository contains two files: .gitignore and README.md, both committed initially 2 minutes ago. The README.md file is displayed below, containing the text 'cs445-Lab1'.

File	Commit	Time
.gitignore	Initial commit	2 minutes ago
README.md	Initial commit	2 minutes ago

README.md

cs445-Lab1

2. git clone

```
C:\Users\JD\Desktop>git clone https://github.com/JeanHABAN/cs445-Lab1.git
Cloning into 'cs445-Lab1'...
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (4/4), done.
```

3. git remote

```
C:\Users\JD\Desktop\cs445-Lab1>git remote
origin
```

4. git push


```
C:\Users\JD\Desktop\cs445-Lab1>git push origin main
info: please complete authentication in your browser...
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 332 bytes | 166.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/JeanHABAN/cs445-Lab1.git
  19bfef2..fe7fa70  main -> main
```

5. git fetch

```
C:\Users\JD\Desktop\cs445-Lab1>git fetch
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 746 bytes | 41.00 KiB/s, done.
From https://github.com/JeanHABAN/cs445-Lab1
   fe7fa70..7bcb62b  main       -> origin/main

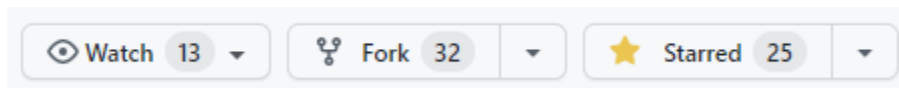
C:\Users\JD\Desktop\cs445-Lab1>git merge
Updating fe7fa70..7bcb62b
Fast-forward
 README.md | 3 ++-
 1 file changed, 2 insertions(+), 1 deletion(-)
```

6. git pull

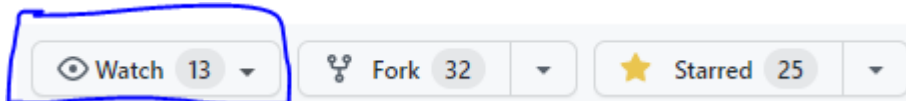
```
C:\Users\JD\Desktop\cs445-Lab1>git pull
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 789 bytes | 41.00 KiB/s, done.
From https://github.com/JeanHABAN/cs445-Lab1
   7bcb62b..155801d  main      -> origin/main
Updating 7bcb62b..155801d
Fast-forward
 README.md | 1 +
 1 file changed, 1 insertion(+)
```

Practice with all the third party repositories commands from the slides:

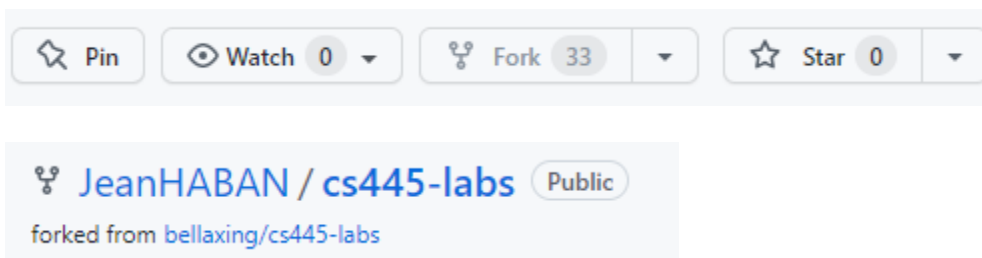
1. Star the repository



2. Watch the repository for any changes



3. Fork the repository



4. Clone your forked repository into your local machine

```
C:\Users\JD\Desktop>git clone https://github.com/JeanHABAN/cs445-labs.git
Cloning into 'cs445-labs'...
remote: Enumerating objects: 231, done.
remote: Counting objects: 100% (73/73), done.
remote: Compressing objects: 100% (40/40), done.

Receiving objects: 100% (231/231), 108.18 KiB | 4.92 MiB/s, done.
Resolving deltas: 100% (84/84), done.
```

5. Create a new topic branch using studentId-studentName format, For example:
610001-JohnSmith

```
C:\Users\JD\Desktop\cs445-labs>git branch 112-Jean

C:\Users\JD\Desktop\cs445-labs>git branch
112-Jean
* main
```

6. Checkout your new branch

```
C:\Users\JD\Desktop\cs445-labs>git checkout 112-Jean
Switched to branch '112-Jean'

C:\Users\JD\Desktop\cs445-labs>git branch
* 112-Jean
main
```

7. Add a new file with your name, example: hello.js

```
C:\Users\JD\Desktop\cs445-labs>git add .
```

8. Commit the changes

```
C:\Users\JD\Desktop\cs445-labs>git commit -m "commit greeting"
[112-Jean 97b4768] commit greeting
1 file changed, 3 insertions(+)
create mode 100644 greeting.js
```

9. Merge your studentId-studentName branch with the main branch

```
C:\Users\JD\Desktop\cs445-labs>git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

C:\Users\JD\Desktop\cs445-labs>git branch
 112-Jean
* main

C:\Users\JD\Desktop\cs445-labs>git merge 112-Jean
Updating 1c32ce1..97b4768
Fast-forward
 greeting.js | 3 +++
 1 file changed, 3 insertions(+)
 create mode 100644 greeting.js
```

10. Push your changes to the remote repo

```
C:\Users\JD\Desktop\cs445-labs>git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 324 bytes | 324.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/JeanHABAN/cs445-labs.git
 1c32ce1..97b4768  main -> main
```

11. Create a new Pull Request to the upstream repo

commit greeting #31

🔒 Closed

JeanHABAN wants to merge 1 commit into `bellaxing:main` from `JeanHABAN:main` [📄](#)

[Conversation](#) 0

[Commits](#) 1

[Checks](#) 0

[Files changed](#) 1



JeanHABAN commented 2 minutes ago

[😊](#) [⋮](#)

No description provided.



[commit greeting](#)

97b4768



JeanHABAN commented 2 minutes ago

[Author](#) [😊](#) [⋮](#)

Thank you