

Lab-1

1. git init

```
maico@Michaels-MacBook-Pro Lab 1 % git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /Users/maico/Desktop/courses Assignments/CS445/Lab 1/.git/
```

2. git status

```
maico@Michaels-MacBook-Pro Lab 1 % git status
On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)
maico@Michaels-MacBook-Pro Lab 1 % git status
On branch master

No commits yet

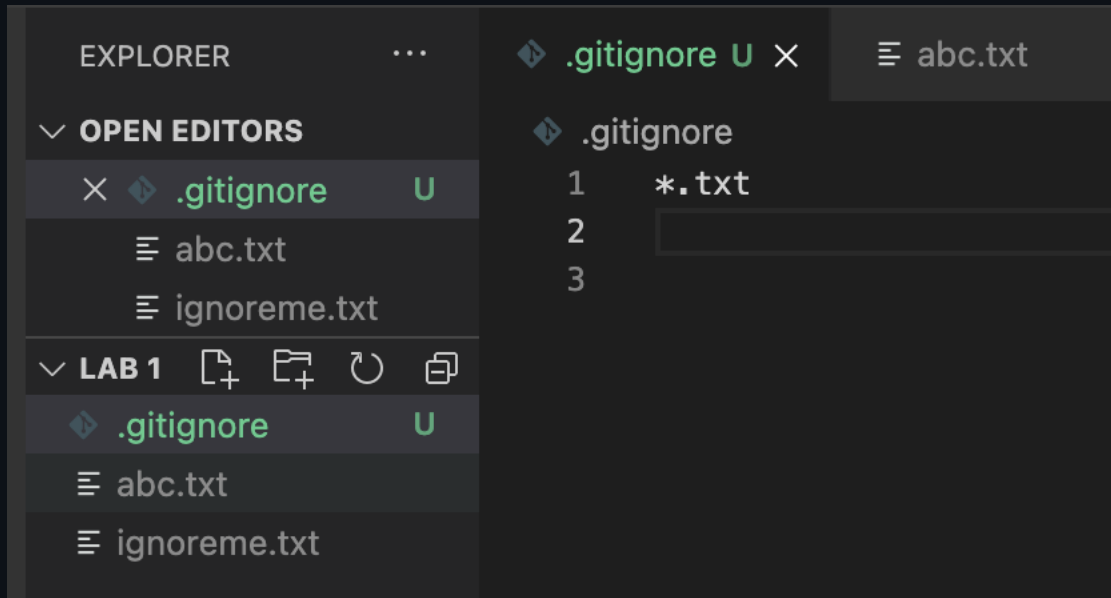
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        .gitignore

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

3. git diff

```
maico@Michaels-MacBook-Pro Lab 1 % git diff .gitignore
diff --git a/.gitignore b/.gitignore
index 960fe79..8deab45 100644
--- a/.gitignore
+++ b/.gitignore
@@ -1,2 +1,2 @@
 *.txt
-
+javascript
```

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



5. git add

```
maico@Michaels-MacBook-Pro Lab 1 % git add .gitignore
maico@Michaels-MacBook-Pro Lab 1 % 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

```
maico@Michaels-MacBook-Pro Lab 1 % git commit -m "added .gitignore file"
[master (root-commit) 6c3b9df] added .gitignore file
1 file changed, 2 insertions(+)
create mode 100644 .gitignore
```

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

```
maico@Michaels-MacBook-Pro Lab 1 % git commit --amend -m "amended gitignore init commit"
[master 0e58691] amended gitignore init commit
Date: Tue Oct 26 21:56:48 2021 -0500
1 file changed, 2 insertions(+)
create mode 100644 .gitignore
```

8. git log

```
maico@Michaels-MacBook-Pro Lab 1 % git log --oneline
0e58691 (HEAD -> master) amended gitignore init commit
maico@Michaels-MacBook-Pro Lab 1 % git log
commit 0e586911770392b573227de2632ac98ab281f6be (HEAD -> master)
Author: Maicobe20 <mikeberhane2020@gmail.com>
Date: Tue Oct 26 21:56:48 2021 -0500

    amended gitignore init commit
```

9. git tag

```
maico@Michaels-MacBook-Pro Lab 1 % git tag -a firstmike -m "first" 0e58691
maico@Michaels-MacBook-Pro Lab 1 % git log --oneline
17f29c0 (HEAD -> master, tag: firstcommit, tag: 75cd99e) added mike folder
75cd99e ignore javascript file
0e58691 (tag: firstmike) amended gitignore init commit
```

10. git branch

```
maico@Michaels-MacBook-Pro Lab 1 % git branch michael
maico@Michaels-MacBook-Pro Lab 1 % git branch
* master
  michael
```

11. git checkout

```
maico@Michaels-MacBook-Pro Lab 1 % git checkout michael
Switched to branch 'michael'
```

12. git merge

```
maico@Michaels-MacBook-Pro Lab 1 % git merge michael
Updating 17f29c0..e12afcd
Fast-forward
 mike/mike2.js | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 mike/mike2.js
```

Create a conflict and solve the conflict

```
maico@Michaels-MacBook-Pro Lab 1 % git merge michael2
Auto-merging mike/mike.js
CONFLICT (content): Merge conflict in mike/mike.js
Automatic merge failed; fix conflicts and then commit the result.
maico@Michaels-MacBook-Pro Lab 1 % git add .
maico@Michaels-MacBook-Pro Lab 1 % git commit -m "merging branch to master"
[master 869f6fc] merging branch to master
maico@Michaels-MacBook-Pro Lab 1 %
```

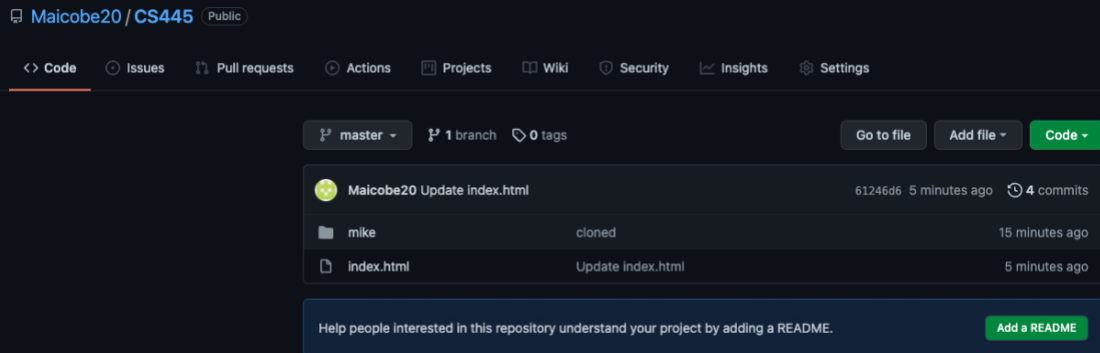
13. Undo changes from a certain commit git revert

```
maico@Michaels-MacBook-Pro Lab 1 % git revert HEAD
[master 9844ba5] Revert "again revert"
 1 file changed, 1 insertion(+)
maico@Michaels-MacBook-Pro Lab 1 % git log --oneline
9844ba5 (HEAD -> master) Revert "again revert"
8d18b78 again revert
2a9ebbe revert preparation
869f6fc merging branch to master
ebc1424 change in master
7571959 (michael2) change on michael2
e12afcd (michael) commit michael
17f29c0 (tag: firstcommit, tag: 75cd99e) added mike folder
75cd99e ignore javascript file
0e58691 (tag: firstmike) amended gitignore init commit
```

14. Erase commits with git reset

```
maico@Michaels-MacBook-Pro Lab 1 % git reset 2a9ebbe
maico@Michaels-MacBook-Pro Lab 1 % git log --oneline
2a9ebbe (HEAD -> master) revert preparation
869f6fc merging branch to master
ebc1424 change in master
7571959 (michael2) change on michael2
e12afcd (michael) commit michael
17f29c0 (tag: firstcommit, tag: 75cd99e) added mike folder
75cd99e ignore javascript file
0e58691 (tag: firstmike) amended gitignore init commit
```

1. Create a remote repository



```
maico@Michaels-MacBook-Pro Desktop % git clone https://github.com/Maicobe20/CS445-labs.git
Cloning into 'CS445-labs'...
warning: You appear to have cloned an empty repository.
```

2. git clone

3. git remote

```
maico@Michaels-MacBook-Pro CS445 % git remote
origin
```

4. git push

```
maico@Michaels-MacBook-Pro CS445 % git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Writing objects: 100% (4/4), 251 bytes | 251.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Maicobe20/CS445.git
* [new branch]      master -> master
```

5. git fetch

```
maico@Michaels-MacBook-Pro CS445 % git fetch
remote: Enumerating objects: 7, done.
remote: Counting objects: 100% (7/7), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 6 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (6/6), 1.27 KiB | 260.00 KiB/s, done.
From https://github.com/Maicobe20/CS445
  44855cb..44b3943  master    -> origin/master
maico@Michaels-MacBook-Pro CS445 % git merge
Merge made by the 'recursive' strategy.
 index.html | 2 ++
 1 file changed, 2 insertions(+)
 create mode 100644 index.html
```

6. git pull

```
maico@Michaels-MacBook-Pro CS445 % git pull
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 686 bytes | 228.00 KiB/s, done.
From https://github.com/Maicobe20/CS445
44b3943..61246d6 master -> origin/master
hint: Pulling without specifying how to reconcile divergent branches is
hint: discouraged. You can squelch this message by running one of the following
hint: commands sometime before your next pull:
hint:
hint:   git config pull.rebase false # merge (the default strategy)
hint:   git config pull.rebase true  # rebase
hint:   git config pull.ff only      # fast-forward only
hint:
hint: You can replace "git config" with "git config --global" to set a default
hint: preference for all repositories. You can also pass --rebase, --no-rebase,
hint: or --ff-only on the command line to override the configured default per
hint: invocation.
Merge made by the 'recursive' strategy.
 index.html | 2 ++
 1 file changed, 2 insertions(+)
```

1. Star the repository

Watch 5 Unstar 8 Fork 10

2. Watch the repository for any changes

Watch 5 Unstar 8 Fork 10

3. Fork the repository

Watch 5 Star 7 Fork 10

4. Clone your forked repository into your local machine

```
maico@Michaels-MacBook-Pro Desktop % git clone https://github.com/Maicobe20/cs445-labs.git
Cloning into 'cs445-labs'...
remote: Enumerating objects: 188, done.
remote: Counting objects: 100% (188/188), done.
remote: Compressing objects: 100% (116/116), done.
remote: Total 188 (delta 72), reused 115 (delta 30), pack-reused 0
Receiving objects: 100% (188/188), 95.73 KiB | 883.00 KiB/s, done.
Resolving deltas: 100% (72/72), done.
```

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

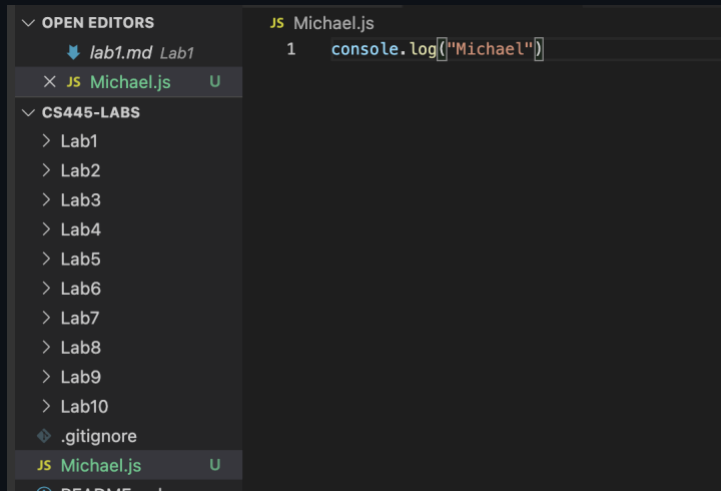
610001-JohnSmith

```
maico@Michaels-MacBook-Pro cs445-labs % git branch 113032-MichaelAbraha
maico@Michaels-MacBook-Pro cs445-labs % git branch
 113032-MichaelAbraha
* main
```

6. Checkout your new branch

```
maico@Michaels-MacBook-Pro cs445-labs % git checkout 113032-MichaelAbraha
Switched to branch '113032-MichaelAbraha'
```

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



8. Commit the changes

```
maico@Michaels-MacBook-Pro cs445-labs % git add .
maico@Michaels-MacBook-Pro cs445-labs % git commit -m "created new file Michael"
[113032-MichaelAbraha 0a89b4d] created new file Michael
1 file changed, 1 insertion(+)
create mode 100644 Michael.js
```

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

```
maico@Michaels-MacBook-Pro cs445-labs % git merge 113032-MichaelAbraha
Updating fc075c5..0a89b4d
Fast-forward
 Michael.js | 1 +
1 file changed, 1 insertion(+)
create mode 100644 Michael.js
```

10. Push your changes to the remote repo

```
maico@Michaels-MacBook-Pro cs445-labs % git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 301 bytes | 301.00 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/Maicobe20/cs445-labs.git
fc075c5..0a89b4d main -> main
```

11. Create a new Pull Request to the upstream repo