1. `git init`

```
Initialized empty Git repository in /Users/yoelnegasi/Desktop/asy
nchronous JS/lab 1/.git/
yoelnegasi@yoels-MacBook-Pro lab 1 %
```
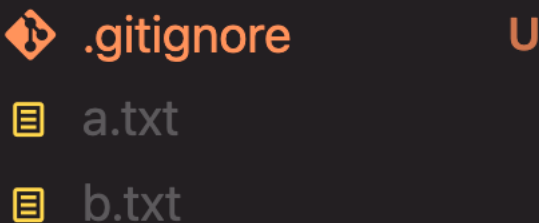
2. `git status`

```
yoelnegasi@yoels-MacBook-Pro lab 1 % git status
warning: unable to access '/Users/yoelnegasi/.config/git/ignore': Permission denied
On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)
yoelnegasi@yoels-MacBook-Pro lab 1 %
```

3. `git diff`

```
diff --git a/.gitignore b/.gitignore
index 87122ec..7d3b8b4 100644
--- a/.gitignore
+++ b/.gitignore
@@ -1,2 +1,3 @@
 a.txt
 b.txt
:
```

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

5. `git add`

```
On branch master

No commits yet

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

yoelnegasi@yoels-MacBook-Pro lab 1 % []
```

6. `git commit`

```
yoelnegasi@yoels-MacBook-Pro lab 1 % git commit -m'added gitignore'
[master (root-commit) c13a496] added gitignore
warning: unable to access '/Users/yoelnegasi/.config/git/attributes': Permission
denied
warning: unable to access '/Users/yoelnegasi/.config/git/attributes': Permission
denied
 1 file changed, 2 insertions(+)
 create mode 100644 .gitignore
```

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

```
yoelnegasi@yoels-MacBook-Pro lab 1 % git commit --amend -m"added gitignore"
[master 3cbcad4] added gitignore
 Date: Tue Oct 26 20:40:29 2021 -0500
warning: unable to access '/Users/yoelnegasi/.config/git/attributes': Permission denied
warning: unable to access '/Users/yoelnegasi/.config/git/attributes': Permission denied
 1 file changed, 2 insertions(+)
 create mode 100644 .gitignore
yoelnegasi@yoels-MacBook-Pro lab 1 % git log
commit 3cbcad4fefd32a0f046e84be06d0e73839bd8087 (HEAD -> master)
Author: yoelng <yoelgoitom25@gmail.com>
Date:   Tue Oct 26 20:40:29 2021 -0500
```

8. `git log`

```
yoelnegasi@yoels-MacBook-Pro lab 1 % git log
commit 3cbcad4fefd32a0f046e84be06d0e73839bd8087 (HEAD -> master)
Author: yoelng <yoelgoitom25@gmail.com>
Date:   Tue Oct 26 20:40:29 2021 -0500
```

9. `git tag`

```
yoelnegasi@yoels-MacBook-Pro lab 1 % git log --oneline
96b248f (HEAD -> master) add
a4f8568 (tag: lol) add
5c59d2d added file
5552844 added
3cbcad4 added gitignore
yoelnegasi@yoels-MacBook-Pro lab 1 %
```

10. `git branch`

```
yoelnegasi@yoels-MacBook-Pro lab 1 % git branch shoopingCart
yoelnegasi@yoels-MacBook-Pro lab 1 % gti branch
zsh: command not found: gti
yoelnegasi@yoels-MacBook-Pro lab 1 % git branch
* master
  shoopingCart
```

11. `git checkout`

```
yoelnegasi@yoels-MacBook-Pro lab 1 % git log --oneline
ac66a42 (HEAD -> shoopingCart) addC
96b248f (master) add
a4f8568 (tag: lol) add
5c59d2d added file
5552844 added
3cbcad4 added gitignore
yoelnegasi@yoels-MacBook-Pro lab 1 % git checkout master
```

12. `git merge`

```
 shoppingCart.js | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 shoppingCart.js
```

i.   Create a conflict and solve the conflict

```
2   <<<<<<< HEAD (Current Change)
3   //change on master
4   =======
5   console.log("added on different branch");
6   >>>>>>> shoopingCart (Incoming Change)
7
```

```
yoelnegasi@yoels-MacBook-Pro lab 1 % sudo git add .
Password:
yoelnegasi@yoels-MacBook-Pro lab 1 % git commit -m"added"
[master a56d329] added
yoelnegasi@yoels-MacBook-Pro lab 1 % git status
warning: unable to access '/Users/yoelnegasi/.config/git/ignore': Permission denie
d
On branch master
nothing to commit, working tree clean
yoelnegasi@yoels-MacBook-Pro lab 1 % git merge shoopingCart
Already up to date.
```

13. Undo changes from a certain commit `git revert`

```
 1 file changed, 3 insertions(+), 3 deletions(-)
yoelnegasi@yoels-MacBook-Pro lab 1 % git log --oneline
2b61553 (HEAD -> master) word
a56d329 (shoopingCart) added
c3585be ad
9d4cfa4 newF
ac66a42 addC
96b248f add
a4f8568 (tag: lol) add
5c59d2d added file
5552844 added
3cbcad4 added gitignore
yoelnegasi@yoels-MacBook-Pro lab 1 % git revert 2b61553
```

14. Erase commits with `git reset`

```
yoelnegasi@yoels-MacBook-Pro lab 1 % git log --oneline
9d4cfa4 (HEAD -> master) newF
ac66a42 addC
96b248f add
a4f8568 (tag: lol) add
5c59d2d added file
5552844 added
3cbcad4 added gitignore
yoelnegasi@yoels-MacBook-Pro lab 1 % sudo git reset 96b248f
yoelnegasi@yoels-MacBook-Pro lab 1 % git log --oneline
96b248f (HEAD -> master) add
a4f8568 (tag: lol) add
5c59d2d added file
5552844 added
3cbcad4 added gitignore
yoelnegasi@yoels-MacBook-Pro lab 1 %
```

Number 2

1. Create a remote repository

Owner *

Repository name *

🎃 yoelNegasi ▾ / [_____ ✔]

Great repository names are short and memorable. Need inspiration? How about **vigilant-octo-chainsaw**?

Description (optional)

[_____]

⦿ 📘 **Public**
  Anyone on the internet can see this repository. You choose who can commit.

○ 🔒 **Private**
  You choose who can see and commit to this repository.

Initialize this repository with:
Skip this step if you're importing an existing repository.

☑ **Add a README file**
  This is where you can write a long description for your project. Learn more.

☑ **Add .gitignore**
  Choose which files not to track from a list of templates. Learn more.

  [.gitignore template: Java ▾]

☐ **Choose a license**
  A license tells others what they can and can't do with your code. Learn more.

This will set ⑂ main as the default branch. Change the default name in your settings.

[Creating repository...]

2. `git clone`

https://github.com/yoelNegasi/lab-1.git

3. `git remote`

```
yoelnegasi@yoels-MacBook-Pro lab-1 % git remote
origin
```

4. `git push`

```
yoelnegasi@yoels-MacBook-Pro lab-1 % sudo git push origin main
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), 326 bytes | 326.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/yoelNegasi/lab-1.git
   84a7696..a5271e5  main -> main
```

5. git fetch

```
yoelnegasi@yoels-MacBook-Pro lab-1 % git fetch
yoelnegasi@yoels-MacBook-Pro lab-1 % sudo git fetch
yoelnegasi@yoels-MacBook-Pro lab-1 % git fetch
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), 705 bytes | 141.00 KiB/s, done.
error: cannot update the ref 'refs/remotes/origin/main': unable to append to '.git/logs/refs/remotes/orig
n/main': Permission denied
From https://github.com/yoelNegasi/lab-1
 ! a5271e5..187837f  main       -> origin/main  (unable to update local ref)
yoelnegasi@yoels-MacBook-Pro lab-1 %
```
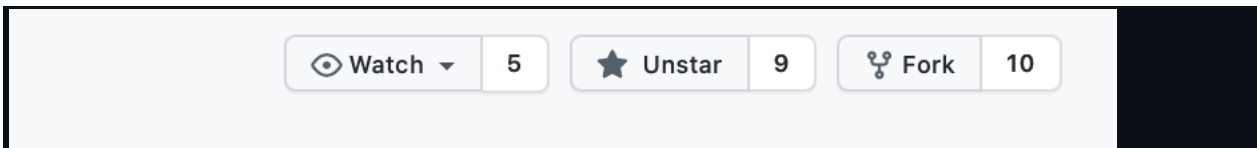
6. git pull

```
From https://github.com/yoelNegasi/lab-1
 * branch              main           -> FETCH_HEAD
Already up to date.
```

Number 3

1. Star the repository

2. Watch the repository for any changes

3. Fork the repository

4. Clone your forked repository into your local machine

```
yoelnegasi@yoels-MacBook-Pro cs445-labs % git clone https://github.com/yoelNegasi/cs445-labs.
Cloning into 'cs445-labs'...
remote: Enumerating objects: 192, done.
remote: Counting objects: 100% (192/192), done.
remote: Compressing objects: 100% (119/119), done.
remote: Total 192 (delta 73), reused 118 (delta 30), pack-reused 0
Receiving objects: 100% (192/192), 96.03 KiB | 910.00 KiB/s, done.
Resolving deltas: 100% (73/73), done.
warning: unable to access '/Users/yoelnegasi/.config/git/attributes': Permission denied
```

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

```
yoelnegasi@yoels-MacBook-Pro cs445-labs % git checkout 113029-yoelNegasi
error: pathspec '113029-yoelNegasi' did not match any file(s) known to git
yoelnegasi@yoels-MacBook-Pro cs445-labs % git branch 113029-yoelNegasi
yoelnegasi@yoels-MacBook-Pro cs445-labs % git branch
  113029-yoelNegasi
  13029-yoelNegasi
* main
```

6. Checkout your new branch

```
yoelnegasi@yoels-MacBook-Pro cs445-labs % git checkout 113029-yoelNegasi
warning: unable to access '/Users/yoelnegasi/.config/git/attributes': Permission denied
warning: unable to access '/Users/yoelnegasi/.config/git/ignore': Permission denied
Switched to branch '113029-yoelNegasi'
yoelnegasi@yoels-MacBook-Pro cs445-labs % sudo git checkout 113029-yoelNegasi
Password:
Already on '113029-yoelNegasi'
```

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

▼ Lab5

(); hallo.js

8. Commit the changes

```
yoelnegasi@yoels-MacBook-Pro cs445-labs % sudo git commit -m"commit"
[113029-yoelNegasi ce77dd9] commit
 1 file changed, 1 insertion(+)
 create mode 100644 Lab5/hallo.js
yoelnegasi@yoels-MacBook-Pro cs445-labs % git checkout main
```

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

```
yoelnegasi@yoels-MacBook-Pro cs445-labs % git merge 113029-yoelNegasi
Updating fc075c5..ce77dd9
warning: unable to access '/Users/yoelnegasi/.config/git/ignore': Permission denied
warning: unable to access '/Users/yoelnegasi/.config/git/attributes': Permission denied
Fast-forward
warning: unable to access '/Users/yoelnegasi/.config/git/attributes': Permission denied
warning: unable to access '/Users/yoelnegasi/.config/git/attributes': Permission denied
 Lab5/hallo.js | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 Lab5/hallo.js
```

10. Push your changes to the remote repo

```
yoelnegasi@yoels-MacBook-Pro cs445-labs % git push
warning: unable to access '/Users/yoelnegasi/.config/git/attributes': Permission denied
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 355 bytes | 355.00 KiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/yoelNegasi/cs445-labs.git
   fc075c5..ce77dd9  main -> main
```

11. Create a new Pull Request to the upstream repo

This branch is 1 commit ahead of bellaxing:main.			⇕ Contribute ▾	⟳ Fetch upstream ▾
⬚ **yoelng** commit			inutes ago	⟲ History
..				
📄 hallo.js	commit			6 minutes ago
📄 lab5.md	Update lab5.md			12 days ago

⇕ **This branch is 1 commit ahead of bellaxing:main.**
Open a pull request to contribute your changes upstream.

Open pull request