1. `git init`

Winny@Michaels-MacBook-Pro-2 lab1 % git init

Initialized empty Git repository in /Users/Winny/Desktop/Asynchronous js/lab1/.git/

2. `git status`
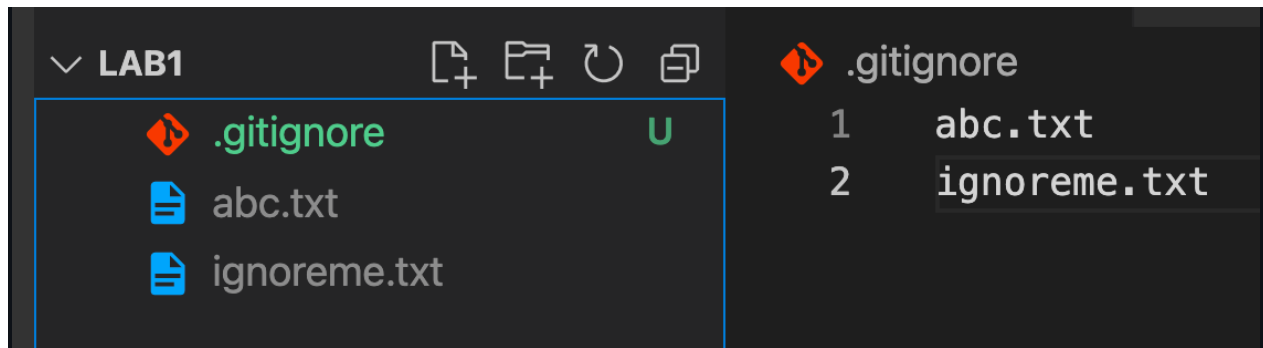
Winny@Michaels-MacBook-Pro-2 lab1 % git status

On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)

3. `git diff`

```
Winny@Michaels-MacBook-Pro-2 lab1 % git diff .gitignore
diff --git a/.gitignore b/.gitignore
index 506902b..9fcefe9 100644
--- a/.gitignore
+++ b/.gitignore
@@ -1,2 +1,3 @@
 abc.txt
-ignoreme.txt
\ No newline at end of file
+ignoreme.txt
+javascript
```

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

LAB1
.gitignore   U
abc.txt
ignoreme.txt

.gitignore
1   abc.txt
2   ignoreme.txt

5. `git add`

```
Winny@Michaels-MacBook-Pro-2 lab1 % 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`

```
Winny@Michaels-MacBook-Pro-2 lab1 % git commit -m"added gitig
re file"
[master (root-commit) 1f9ca54] added gitignore file
 1 file changed, 2 insertions(+)
 create mode 100644 .gitignore
Winny@Michaels-MacBook-Pro-2 lab1 % git status
On branch master
nothing to commit, working tree clean
```

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

```
Winny@Michaels-MacBook-Pro-2 lab1 % git commit --amend -m"added
 gitignore file"
[master 7bbde88] added gitignore file
 Date: Tue Oct 26 20:40:24 2021 -0500
 1 file changed, 2 insertions(+)
 create mode 100644 .gitignore
Winny@Michaels-MacBook-Pro-2 lab1 % git log
commit 7bbde88befcbd5209337cfb5718fb3ec91a5be16 (HEAD -> master
)
Author: winny-coder <81041180+winny-coder@users.noreply.github.
com>
Date:    Tue Oct 26 20:40:24 2021 -0500
```

8. git log

```
Winny@Michaels-MacBook-Pro-2 lab1 % git log
commit 1f9ca54189b1980833f2d48f3cfce309da4b12fc (HEAD -> master
)
Author: winny-coder <81041180+winny-coder@users.noreply.github.
com>
Date:    Tue Oct 26 20:40:24 2021 -0500

    added gitignore file
Winny@Michaels-MacBook-Pro-2 lab1 % git commit --amend -m"added
 gitignore file"
[master 7bbde88] added gitignore file
```

9. git tag

```
HEAD is now at 5efa00c added
Winny@Michaels-MacBook-Pro-2 lab1 % git checkout master
Previous HEAD position was 5efa00c added
Switched to branch 'master'
Winny@Michaels-MacBook-Pro-2 lab1 % git log --oneline
1e6cc5b (HEAD -> master) added
5efa00c (tag: firstname) added
7bbde88 added gitignore file
```

10. git branch

```
fatal: Not a valid object name.  branch .
Winny@Michaels-MacBook-Pro-2 lab1 % git branch newbranch
  Winny@Michaels-MacBook-Pro-2 lab1 % git branch
  * master
    shoppingcart
  Winny@Michaels-MacBook-Pro-2 lab1 % git branch user-master
  Winny@Michaels-MacBook-Pro-2 lab1 % git branch
  * master
    shoppingcart
    user-master
  Winny@Michaels-MacBook-Pro-2 lab1 % git checkout shoppingcart
  Switched to branch 'shoppingcart'
  Winny@Michaels-MacBook-Pro-2 lab1 % git status
  On branch shoppingcart
```

11. `git checkout`

```
Winny@Michaels-MacBook-Pro-2 lab1 % git log --oneline
0502faa (HEAD -> shoppingcart) shopping init commit
1e6cc5b (user-master, master) added
5efa00c (tag: firstname) added
7bbde88 added gitignore file
Winny@Michaels-MacBook-Pro-2 lab1 %  git checkout master
Switched to branch 'master'
```

12. `git merge`

```
Winny@Michaels-MacBook-Pro-2 lab1 % git merge shoppingcart
Updating 1e6cc5b..0502faa
Fast-forward
 shoppingcart.js | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 shoppingcart.js
Winny@Michaels-MacBook-Pro-2 lab1 % git status
On branch master
nothing to commit, working tree clean
```

Create a conflict and solve the conflict

```
CONFLICT (content): Merge conflict in shoppingcart.js
Automatic merge failed; fix conflicts and then commit the result.
Winny@Michaels-MacBook-Pro-2 lab1 % git ad .
git: 'ad' is not a git command. See 'git --help'.

The most similar commands are
        add
        am
Winny@Michaels-MacBook-Pro-2 lab1 % git add .
Winny@Michaels-MacBook-Pro-2 lab1 % git commit -m"adding"
[master d235a03] adding
Winny@Michaels-MacBook-Pro-2 lab1 % git merge shoppingcart
Already up to date.
```
Accept Current Change | Accept Incoming Change | Accept Both Changes | Compare Changes
```
<<<<<<< HEAD (Current Change)
console.log("change made in master -line-2")
=======
console.log("gvvfjv")
>>>>>>> shoppingcart (Incoming Change)
```

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

```
Winny@Michaels-MacBook-Pro-2 lab1 % git log --oneline
beb1a07 (HEAD -> master) commit
d235a03 adding
78c686c (shoppingcart) change made in shopping cart
aa0f3f9 change master
0502faa (newbranch) shopping init commit
1e6cc5b (user-master) added
5efa00c (tag: firstname) added
7bbde88 added gitignore file
Winny@Michaels-MacBook-Pro-2 lab1 % git revert beb1a07
[master 3ac8f42] Revert "commit"
 1 file changed, 1 insertion(+), 1 deletion(-)
```

14. Erase commits with `git reset`

```
Winny@Michaels-MacBook-Pro-2 lab1 % git log --oneline
beb1a07 (HEAD -> master) commit
d235a03 adding
78c686c (shoppingcart) change made in shopping cart
aa0f3f9 change master
0502faa (newbranch) shopping init commit
1e6cc5b (user-master) added
5efa00c (tag: firstname) added
7bbde88 added gitignore file
Winny@Michaels-MacBook-Pro-2 lab1 % git revert beb1a07
[master 3ac8f42] Revert "commit"
 1 file changed, 1 insertion(+), 1 deletion(-)
Winny@Michaels-MacBook-Pro-2 lab1 % git reset d235a03
Winny@Michaels-MacBook-Pro-2 lab1 % git log --oneline
d235a03 (HEAD -> master) adding
78c686c (shoppingcart) change made in shopping cart
aa0f3f9 change master
0502faa (newbranch) shopping init commit
1e6cc5b (user-master) added
5efa00c (tag: firstname) added
7bbde88 added gitignore file
```

Practice with all the remote repository commands from the slides:

1. Create a remote repository

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository.

Owner *   **Repository name** *

winnyAbraha ▾ / cs445-lab1-solns   ✓

Great repository names are short and memorable. Need inspiration? How about **silver-sniffle**?

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.

Create repository

2. `git clone`

https://github.com/winnyAbraha/cs445-lab-solns.git

3. `git remote`

`Winny@Michaels-MacBook-Pro-2 cs445-lab-solns % git remote`
`origin`

4. `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), 407 bytes | 407.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/winnyAbraha/cs445-lab-solns.git
   250eafe..c9063db  main -> main
error: update_ref failed for ref 'refs/remotes/origin/main': cannot update the ref 'refs/remotes
/origin/main': unable to append to '.git/logs/refs/remotes/origin/main': Permission denied
```

5. git fetch

```
Winny@Michaels-MacBook-Pro-2 cs445-lab-solns % 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), 721 bytes | 180.00 KiB/s, done.
error: cannot update the ref 'refs/remotes/origin/main': unable to append
to '.git/logs/refs/remotes/origin/main': Permission denied
From https://github.com/winnyAbraha/cs445-lab-solns
 ! 160770d..b228ee3  main        -> origin/main  (unable to update local re
f)
```

6. git pull

```
Winny@Michaels-MacBook-Pro-2 cs445-lab-solns % sudo git pull origin main
Password:

From https://github.com/winnyAbraha/cs445-lab-solns
 * branch            main        -> FETCH_HEAD
   160770d..250eafe  main        -> origin/main
Updating 160770d..250eafe
Fast-forward
 README.md | 5 ++++-
 1 file changed, 4 insertions(+), 1 deletion(-)
```

upstream: https://github.com/bellaxing/cs445-labs

1. Star the repository

```
 Watch ▾   5     ★ Unstar  11     Fork  12
```

2. Watch the repository for any changes

3. Fork the repository

4. Clone your forked repository into your local machine

https://github.com/winnyAbraha/cs445-labs.git

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

```
Winny@Michaels-MacBook-Pro-2 cs445-labs % git branch 113031-wintanaAbraha
Winny@Michaels-MacBook-Pro-2 cs445-labs % git branch
  113031-wintanaAbraha
* main
```

6. Checkout your new branch

```
Winny@Michaels-MacBook-Pro-2 cs445-labs % git checkout 113031-wintanaAbrah
a
Switched to branch '113031-wintanaAbraha'
```

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

8. Commit the changes

```
Winny@Michaels-MacBook-Pro-2 cs445-labs % git add .
Winny@Michaels-MacBook-Pro-2 cs445-labs % git commit -m"commit"
[113031-wintanaAbraha 441e75c] commit
 1 file changed, 1 insertion(+)
 create mode 100644 hello.js
Winny@Michaels-MacBook-Pro-2 cs445-labs % ▮
```

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

```
Winny@Michaels-MacBook-Pro-2 cs445-labs %  git merge 113031-wintanaAbraha
Updating fc075c5..441e75c
Fast-forward
 hello.js | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 hello.js
```

10. Push your changes to the remote repo

```
Winny@Michaels-MacBook-Pro-2 cs445-labs % git push
remote: Permission to bellaxing/cs445-labs.git denied to winnyAbraha.
fatal: unable to access 'https://github.com/bellaxing/cs445-labs.git/': Th
e requested URL returned error: 403
```

11. Create a new Pull Request to the upstream repo

⑂ main ▾	⑂ 1 branch	◇ 0 tags		Go to file	Add file ▾	Code ▾	About

No description, website, or top

This branch is up to date with bellaxing:main.   ⇅ Contribute ▾   ⟳ Fetch upstream ▾   ▭ Readme

⇅ **This branch is not ahead of the upstream bellaxing:main.**
No new commits yet. Enjoy your day!

Open pull request

	TinaXing2012 lab10		ys ago	⏱ 46 commits
Lab1	lab4	17 days ago
Lab10	lab1	5 days ago
Lab2	lab4	17 days ago
Lab3	change to use class instead of constructor function	15 days ago

Releases
No releases published
Create a new release

Packages