

Lab 1 Solution

Practice with all the local repository commands from the slides:

1. `git init`

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git init
Reinitialized existing Git repository in C:/Users/Tekletsadik Yigzaw/Desktop/AsycCS445/CS445/Lab1/.git/
```

2. `git status`

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git status
On branch master

No commits yet

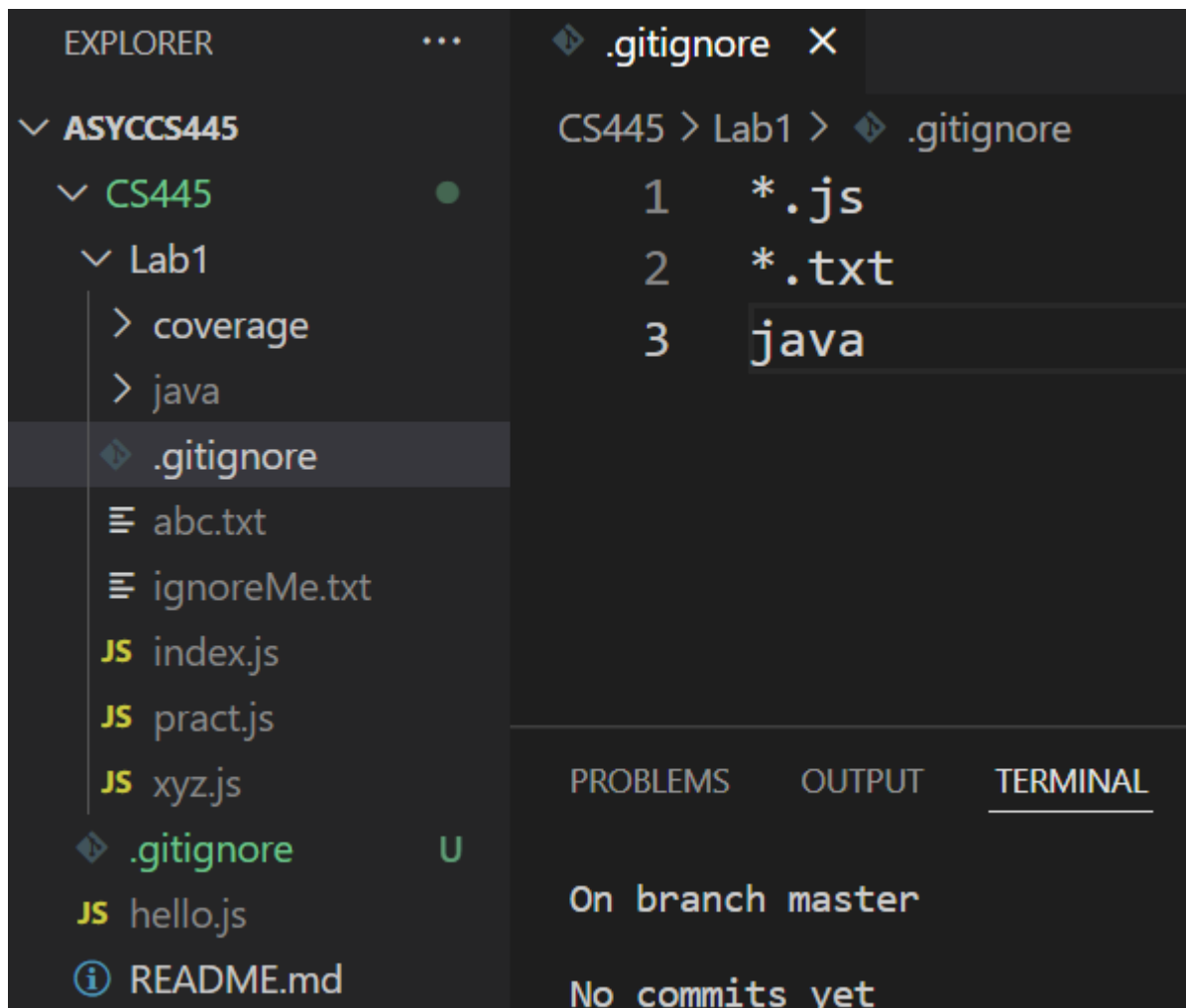
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    .gitignore

nothing added to commit but untracked files present (use "git add" to track)
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1>
```

3. `git diff`

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git diff .gitignore
diff --git a/.gitignore b/.gitignore
index fa6b7d6..298070d 100644
--- a/.gitignore
+++ b/.gitignore
@@ -1,3 +1,4 @@
 *.js
 *.txt
 -java
 \ No newline at end of file
+java
+html
 \ No newline at end of file
```

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



5. `git add`

```

PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git add .gitignore
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\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

```

PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git commit -m "gitignore file is added"
[master (root-commit) 1122a88] gitignore file is added
1 file changed, 3 insertions(+)
create mode 100644 .gitignore

```

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

```

1122a88 (HEAD -> master) gitignore file is added
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git commit --amend -m "Amended gitignore i
n the file"
[master 11fb8a4] Amended gitignore in the file
Date: Tue Apr 26 14:42:46 2022 -0500
1 file changed, 3 insertions(+)
create mode 100644 .gitignore

```

8. git log

```

PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git log
commit 1122a88342270af5e3b2ef39e99a07c9362c2357 (HEAD -> master)
Author: Tekletsadik Yigzaw <Tyigzaw@miu.edu>
Date: Tue Apr 26 14:42:46 2022 -0500

    gitignore file is added
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git log --oneline
1122a88 (HEAD -> master) gitignore file is added

```

9. git tag

```

PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git tag -a firstCommit -m "first"091dc32
warning: refname '091dc32' is ambiguous.
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git log --oneline
ec9f138 (HEAD, tag: firstCommit, tag: 2e68317, tag: 091dc32, master) hello index.js
f1eb9d8 Hello index.js
091dc32 hello .js files
2e68317 ignore java folder
11fb8a4 Amended gitignore in the file

```

10.git branch

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git branch
* master
  shippingcart
  shoppingcart
  user-managment
```

11.git checkout

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git checkout master
Switched to branch 'master'
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git checkout shoppingcart
Switched to branch 'shoppingcart'
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git status
On branch shoppingcart
nothing to commit, working tree clean
```

12.git merge

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git merge shoppingcart
Updating ec9f138..d4a2471
Fast-forward
 shippingcart.js | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 shoppingcart.js
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git status
On branch master
nothing to commit, working tree clean
```

- i. Create a conflict and solve the conflict

```

PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git checkout master
Switched to branch 'master'
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git merge shoppingcart
Auto-merging shoppingcart.js
CONFLICT (content): Merge conflict in shoppingcart.js
Automatic merge failed; fix conflicts and then commit the result.
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git add .
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git commit -m "merge changes from shoppingcart"
[master c00207e] merge changes from shoppingcart
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git merge shoppingcart
Already up to date.

```

13. Undo changes from a certain commit git revert

```

PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git revert 3a3916b
[master 4377cd6] Revert "prepare for revert test changes"
1 file changed, 1 deletion(-)
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git log --oneline
4377cd6 (HEAD -> master) Revert "prepare for revert test changes"
3a3916b prepare for revert test
c00207e merge changes from shoppingcart
af0466e (shoppingcart) changes in shoppingcart branch
4341dd2 changes in master
d4a2471 (new-branch) shoppingcart init commit
ec9f138 (tag: firstCommit, tag: 2e68317, tag: 091dc32, user-managment, shippingcart) hello index.js
f1eb9d8 Hello index.js
091dc32 hello .js files
2e68317 ignore java folder
11fb8a4 Amended gitignore in the file

```

14. Erase commits with git reset

```

PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git log --oneline
4377cd6 (HEAD -> master) Revert "prepare for revert test changes"
3a3916b prepare for revert test
c00207e merge changes from shoppingcart
af0466e (shoppingcart) changes in shoppingcart branch
4341dd2 changes in master
d4a2471 (new-branch) shoppingcart init commit
ec9f138 (tag: firstCommit, tag: 2e68317, tag: 091dc32, user-managment, shippingcart) hello index.js
f1eb9d8 Hello index.js
091dc32 hello .js files
2e68317 ignore java folder
11fb8a4 Amended gitignore in the file
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git reset ec9f138
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1> git log --oneline
ec9f138 (HEAD -> master, tag: firstCommit, tag: 2e68317, tag: 091dc32, user-managment, shippingcart) hello index.js
f1eb9d8 Hello index.js
091dc32 hello .js files
2e68317 ignore java folder
11fb8a4 Amended gitignore in the file
PS C:\Users\Tekletsadik Yigzaw\Desktop\AsycCS445\CS445\Lab1>

```

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.](#)

Repository template

Start your repository with a template repository's contents.

No template ▼

Owner *



Tekleyigzaw21 ▼

Repository name *

Great repository names are short and memorable. Need inspiration? How about [refactored-guacamole?](#)

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: None ▼

Tekleyigzaw21 / CS445-lab-solns Public

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main 1 branch 0 tags

Go to file Add file Code

Tekleyigzaw21 Update README.md 3738b92 6 minutes ago 6 commits

README.md	Update README.md	6 minutes ago
hello.js	init commit 2	19 minutes ago

2. git clone

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\CS445-lab-solns> git clone https://github.com/Tekleyigzaw21/CS445-lab-solns.git
Cloning into 'CS445-lab-solns'...
remote: Enumerating objects: 18, done.
remote: Counting objects: 100% (18/18), done.
remote: Compressing objects: 100% (13/13), done.
remote: Total 18 (delta 0), reused 6 (delta 0), pack-reused 0
Receiving objects: 100% (18/18), done.
```

3. git remote

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\CS445-lab-solns> git remote
origin
PS C:\Users\Tekletsadik Yigzaw\Desktop\CS445-lab-solns> git add .
PS C:\Users\Tekletsadik Yigzaw\Desktop\CS445-lab-solns> git commit -m "init commit"
[main d34b069] init commit
1 file changed, 1 insertion(+)
create mode 100644 hello.js
(use "git push" to publish your local commits)
```

4. git push

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\CS445-lab-solns> 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), 306 bytes | 102.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Tekleyigzaw21/CS445-lab-solns.git
PS C:\Users\Tekletsadik Yigzaw\Desktop\CS445-lab-solns>
```

5. git fetch

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\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), 687 bytes | 68.00 KiB/s, done.
From https://github.com/Tekleyigzaw21/CS445-lab-solns
   25b8123..096581b  main       -> origin/main
```

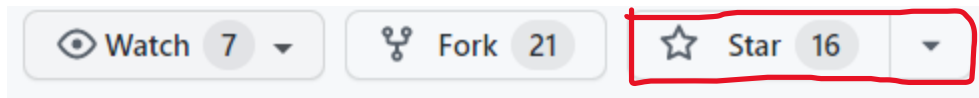
6. git pull

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\CS445-lab-solns> git merge
Updating 8e1cbe4..096581b
Fast-forward
 README.md | 4 +++-
 1 file changed, 3 insertions(+), 1 deletion(-)
PS C:\Users\Tekletsadik Yigzaw\Desktop\CS445-lab-solns> git pull origin main
From https://github.com/Tekleyigzaw21/CS445-lab-solns
   * branch            main       -> FETCH_HEAD
Updating 096581b..3738b92
Fast-forward
 README.md | 4 +++-
 1 file changed, 3 insertions(+), 1 deletion(-)
```

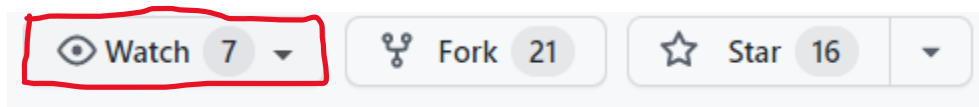
✓ CS445-LAB-SOLNS	① README.md > # CS445 Lab Solutions
> CS445-lab-solns	1 # CS445 Lab Solutions
JS hello.js	2
① README.md	3 1. Lab 1
	4 2. Lab 2
	5 3. Lab 3

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

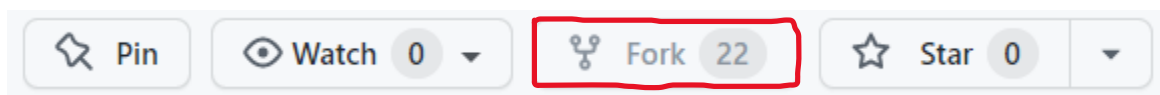
Assume we are working with the following upstream: <https://github.com/bellaxing/cs445-labs> Star the repository



1. Watch the repository for any changes



2. Fork the repository



3. Clone your forked repository into your local machine

```
PS C:\Users\Tekletsadik Yigzaw\Desktop> git clone https://github.com/Tekleyigzaw21/cs445-labs-1.git
Cloning into 'cs445-labs-1'...
remote: Enumerating objects: 231, done.
remote: Counting objects: 100% (73/73), done.
remote: Compressing objects: 100% (40/40), done.
remote: Total 231 (delta 40), reused 26 (delta 25), pack-reused 158 eceiving objects: 90% (208/231)
Receiving objects: 100% (231/231), 108.18 KiB | 1.80 MiB/s, done.
Resolving deltas: 100% (84/84), done.
```

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

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\cs445-labs-1> git branch 112200-Tekletsadik
PS C:\Users\Tekletsadik Yigzaw\Desktop\cs445-labs-1> git branch
112200-Tekletsadik
* main
PS C:\Users\Tekletsadik Yigzaw\Desktop\cs445-labs-1> █
```

5. Checkout your new branch

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\cs445-labs-1> git checkout 112200-Tekletsadik
Switched to branch '112200-Tekletsadik'
```

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

```
JS tekletsadik.js

JS tekletsadik.js
1  console.log("Hello Tekletsadik....");
2
```

7. Commit the changes

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\cs445-labs-1> git add .
PS C:\Users\Tekletsadik Yigzaw\Desktop\cs445-labs-1> git commit -m "changes in branch tekletsadik"
[112200-Tekletsadik ebed74a] changes in branch tekletsadik
1 file changed, 1 insertion(+)
create mode 100644 tekletsadik.js
```

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


```
PS C:\Users\Tekletsadik Yigzaw\Desktop\cs445-labs-1> git merge 112200-Tekletsadik
Updating 1c32ce1..ebed74a
Fast-forward
 tekletsadik.js | 1 +
1 file changed, 1 insertion(+)
create mode 100644 tekletsadik.js
```

9. Push your changes to the remote repo

```
PS C:\Users\Tekletsadik Yigzaw\Desktop\cs445-labs-1> 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), 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/Tekleyigzaw21/cs445-labs-1.git
1c32ce1..ebed74a  main -> main
```

10. Create a new Pull Request to the upstream repo

 15 Open ✓ 7 Closed

Author ▼	Label ▼	Assignee ▼	Sort ▼
 changes in branch tekletsadik #22 by Tekleyigzaw21 was closed 11 minutes ago			