Bytewise Fellowship Deep Learning

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1) Change into the project's root folder on the command line and use the "git init" command to start versioning this project:

```
User@DESKTOP-UN98P79 MINGW64 /d/Data Science Summer/Work/first
$ git config --global user.name "abdulrehmanmemon"

User@DESKTOP-UN98P79 MINGW64 /d/Data Science Summer/Work/first
$ git config --global user.email "a.rehmanmemon.034@gmail.com"

User@DESKTOP-UN98P79 MINGW64 /d/Data Science Summer/Work/first
$ git config --global color.ui auto

User@DESKTOP-UN98P79 MINGW64 /d/Data Science Summer/Work/first
$ git init
Initialized empty Git repository in D:/Data Science Summer/Work/first/.git/
```

2) The files in that directory

```
$ ls -la
total 8
drwxr-xr-x 1 User 197121 0 Mar 15 22:53 ./
drwxr-xr-x 1 User 197121 0 Mar 15 22:48 ../
drwxr-xr-x 1 User 197121 0 Mar 15 22:53 .git/
```

3) Ignoring Files

```
User@DESKTOP-UN98P79 MINGW64 /d/Data Science Su
$ touch one.gitignore

User@DESKTOP-UN98P79 MINGW64 /d/Data Science Su
$ git add one.gitignore

User@DESKTOP-UN98P79 MINGW64 /d/Data Science Su
$ git add -A

User@DESKTOP-UN98P79 MINGW64 /d/Data Science Su
$ git commit -m "Initial commit"
[master (root-commit) 491a6ba] Initial commit
 1 file changed, 17 insertions(+)
 create mode 100644 one.gitignore
```

4) Commit by staging some changes with the "git add".

```
User@DESKTOP-UN98P79 MINGW64 /d/Data Science Summer/Work/first (master)
$ git add one-page.html index.html

User@DESKTOP-UN98P79 MINGW64 /d/Data Science Summer/Work/first (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   index.html
        new file:   one-page.html
```

5) Adding commit message

```
User@DESKTOP-UN98P79 MINGW64 /d/Data Science Summer/Work/first (master)
$ git commit -m "Just adding two random pages"
[master a274c48] Just adding two random pages
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 index.html
 create mode 100644 one-page.html
```

6) Display the project's commit history:

```
User@DESKTOP-UN98P79 MINGW64 /d/Data Science Summer/Work/first (mast
$ git log
commit a274c48bc046b6d5a5ea3b9c740fae97cdbc5968 (HEAD -> master)
Author: "abdulrehmanmemon" <"a.rehmanmemon.034@gmail.com">
Date:   Wed Mar 15 23:00:03 2023 +0500

    Just adding two random pages

commit 491a6ba3411fdc007b1d5e7e3d2e67d830ef4db8
Author: "abdulrehmanmemon" <"a.rehmanmemon.034@gmail.com">
Date:   Wed Mar 15 22:57:14 2023 +0500

    Initial commit
```

7) Check detailed changes

```
User@DESKTOP-UN98P79 MINGW64 /d/Data Science Summer/Work/first (master)
$ git log -p
commit a274c48bc046b6d5a5ea3b9c740fae97cdbc5968 (HEAD -> master)
Author: "abdulrehmanmemon" <"a.rehmanmemon.034@gmail.com">
Date:   Wed Mar 15 23:00:03 2023 +0500

    Just adding two random pages

diff --git a/index.html b/index.html
new file mode 100644
index 0000000..e69de29
diff --git a/one-page.html b/one-page.html
new file mode 100644
index 0000000..e69de29

commit 491a6ba3411fdc007b1d5e7e3d2e67d830ef4db8
Author: "abdulrehmanmemon" <"a.rehmanmemon.034@gmail.com">
Date:   Wed Mar 15 22:57:14 2023 +0500

    Initial commit

diff --git a/one.gitignore b/one.gitignore
new file mode 100644
```

8) Create new branch

```
User@DESKTOP-UN98P79 MINGW64 /d/
$ git branch contact-form
```

```
User@DESKTOP-UN98P79 MI
$ git branch
  contact-form
* master
```

9) Saving work temporary

```
User@DESKTOP-UN98P79 MINGW64 /d/Data Science Summer/Work/first (master)
$ git add hello.html

User@DESKTOP-UN98P79 MINGW64 /d/Data Science Summer/Work/first (master)
$ git stash
Saved working directory and index state WIP on master: a274c48 Just adding two r
andom pages
```

10) Switch to newly created branch (contact-form)

```
User@DESKTOP-UN98P79 MINGW64 /d/Data
$ git checkout contact-form
Switched to branch 'contact-form'
```

11) integrate the changes from our "contact-form" branch into "master":

```
User@DESKTOP-UN98P79 MINGW
$ git merge contact-form
Already up to date.
```

12) Full practice

Create directories, different files, branches, merge

```
theia@theia-arehmanmemon:/home/project$ mkdir myrepo
theia@theia-arehmanmemon:/home/project$ cd myrepo
theia@theia-arehmanmemon:/home/project/myrepo$ git init
Initialized empty Git repository in /home/project/myrepo/.git/
theia@theia-arehmanmemon:/home/project/myrepo$ ls -la .git
total 40
drwxr-sr-x 7 theia users 4096 Mar 15 15:43 .
drwxr-sr-x 3 theia users 4096 Mar 15 15:43 ..
drwxr-sr-x 2 theia users 4096 Mar 15 15:43 branches
-rw-r--r-- 1 theia users   92 Mar 15 15:43 config
-rw-r--r-- 1 theia users   73 Mar 15 15:43 description
-rw-r--r-- 1 theia users   23 Mar 15 15:43 HEAD
drwxr-sr-x 2 theia users 4096 Mar 15 15:43 hooks
drwxr-sr-x 2 theia users 4096 Mar 15 15:43 info
drwxr-sr-x 4 theia users 4096 Mar 15 15:43 objects
drwxr-sr-x 4 theia users 4096 Mar 15 15:43 refs
theia@theia-arehmanmemon:/home/project/myrepo$ touch newfile
theia@theia-arehmanmemon:/home/project/myrepo$ git add newfile
theia@theia-arehmanmemon:/home/project/myrepo$ git config --global user.email "you@example.com"
theia@theia-arehmanmemon:/home/project/myrepo$ git config --global user.name "Your Name"
theia@theia-arehmanmemon:/home/project/myrepo$ git commit -m "added newfile"
[master (root-commit) 2c3f41f] added newfile
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 newfile
theia@theia-arehmanmemon:/home/project/myrepo$ git branch my1stbranch
theia@theia-arehmanmemon:/home/project/myrepo$ git branch
* master
  my1stbranch
theia@theia-arehmanmemon:/home/project/myrepo$ git checkout my1stbranch
Switched to branch 'my1stbranch'
theia@theia-arehmanmemon:/home/project/myrepo$ git branch
  master
```

```
   master
* my1stbranch
theia@theia-arehmanmemon:/home/project/myrepo$ git checkout -b my1stbranch
fatal: A branch named 'my1stbranch' already exists.
theia@theia-arehmanmemon:/home/project/myrepo$ echo 'Here is some text in my newfile.' >> newfile
theia@theia-arehmanmemon:/home/project/myrepo$ cat newfile
Here is some text in my newfile.
theia@theia-arehmanmemon:/home/project/myrepo$ touch readme.md
theia@theia-arehmanmemon:/home/project/myrepo$ git add readme.md
theia@theia-arehmanmemon:/home/project/myrepo$ git status
On branch my1stbranch
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        new file:   readme.md

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   newfile

theia@theia-arehmanmemon:/home/project/myrepo$ git add *
theia@theia-arehmanmemon:/home/project/myrepo$ git status
On branch my1stbranch
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   newfile
        new file:   readme.md

theia@theia-arehmanmemon:/home/project/myrepo$ git commit -m "added readme.md modified newfile"
[my1stbranch 17a0662] added readme.md modified newfile
```

```
theia@theia-arehmanmemon:/home/project/myrepo$ git commit -m "added readme.md modified newfile"
[my1stbranch 17a0662] added readme.md modified newfile
 2 files changed, 1 insertion(+)
 create mode 100644 readme.md
theia@theia-arehmanmemon:/home/project/myrepo$ git log
commit 17a06623f1998323b5328ea8915d954850639560 (HEAD -> my1stbranch)
Author: Your Name <you@example.com>
Date:   Wed Mar 15 15:49:28 2023 -0400

    added readme.md modified newfile

commit 2c3f41f1bd3a57b12276dbea582621147af7bdd1 (master)
Author: Your Name <you@example.com>
Date:   Wed Mar 15 15:45:22 2023 -0400

    added newfile
theia@theia-arehmanmemon:/home/project/myrepo$ git revert HEAD --no-edit
[my1stbranch fdcd920] Revert "added readme.md modified newfile"
 Date: Wed Mar 15 15:50:18 2023 -0400
 2 files changed, 1 deletion(-)
 delete mode 100644 readme.md
theia@theia-arehmanmemon:/home/project/myrepo$ touch goodfile
theia@theia-arehmanmemon:/home/project/myrepo$ git add goodfile
theia@theia-arehmanmemon:/home/project/myrepo$ git commit -m "added goodfile"
[my1stbranch fec5a97] added goodfile
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 goodfile
theia@theia-arehmanmemon:/home/project/myrepo$ git log
commit fec5a97483b887ad622755334138e437d0af580d (HEAD -> my1stbranch)
Author: Your Name <you@example.com>
Date:   Wed Mar 15 15:51:26 2023 -0400
```

```
[my1stbranch fec5a97] added goodfile
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 goodfile
theia@theia-arehmanmemon:/home/project/myrepo$ git log
commit fec5a97483b887ad622755334138e437d0af580d (HEAD -> my1stbranch)
Author: Your Name <you@example.com>
Date:   Wed Mar 15 15:51:26 2023 -0400

    added goodfile

commit fdcd920debefaf081c235edd44aeecafae1f28b2
Author: Your Name <you@example.com>
Date:   Wed Mar 15 15:50:18 2023 -0400

    Revert "added readme.md modified newfile"
theia@theia-arehmanmemon:/home/project/myrepo$ git checkout master
Switched to branch 'master'
theia@theia-arehmanmemon:/home/project/myrepo$ git merge my1stbranch
Updating 2c3f41f..fec5a97
Fast-forward
 goodfile | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 goodfile
theia@theia-arehmanmemon:/home/project/myrepo$ git log
commit fec5a97483b887ad622755334138e437d0af580d (HEAD -> master, my1stbranch)
Author: Your Name <you@example.com>
Date:   Wed Mar 15 15:51:26 2023 -0400

    added goodfile

commit fdcd920debefaf081c235edd44aeecafae1f28b2
Author: Your Name <you@example.com>
Date:   Wed Mar 15 15:50:18 2023 -0400

    Revert "added readme.md modified newfile"
theia@theia-arehmanmemon:/home/project/myrepo$ git branch -d my1stbranch
Deleted branch my1stbranch (was fec5a97).
```