Install GIT & make sure it is added into PATH.

Use GIT as local VCS. Steps to follow:

- 1. Create a directory 'project_dir' & cd to 'project_dir'.
- 2. Initialize git version database. (git init)
- Create a new file index.html.
- 4. Check the git status. You should find index.html as untracked file.
- 5. Stage the index.html file.
- Commit index.html
- 7. Make few changes in index.html & create a new file info.txt file.
- 8. Check git status. You should find index.html & info.txt as untracked files.
- 9. Configure GIT to ignore all txt files.
- 10. Again check the git status. You should find only index.html as untracked file.
- 11. State & commit index.html
- 12. Log all your comments so far.
- 13. Make some changes in index.html.
- 14. Revert the change made in the previous step using git command.
- 15. Again change index.html.
- 16. Stage index.html
- 17. Revert back the last stage.
- 18. Rename 'add' command to 'my-add'.
- 19. Using my_add command Stage index.html again & commit the changes.
- 20. Revert the last commit.

```
MINGW64:/c/Users/ABHISHEK JHA/Desktop/project_dir
                                                                                                    Χ
$ touch index.html
 ABHISHEK JHA@AJsSystem MINGW64 ~/Desktop/project_dir (master)
$ git status
On branch master
No commits yet
Untracked files:
  (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
 ABHISHEK JHA@AJsSystem MINGW64 ~/Desktop/project_dir (master)
$ git add index.html
ABHISHEK JHA@AJsSystem MINGW64 ~/Desktop/project_dir (master)
$ git commit -m ' Changed '
[master (root-commit) 44f1039] Changed
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 index.html
 ABHISHEK JHA@AJsSystem MINGW64 ~/Desktop/project_dir (master)
$ touch info.txt
ABHISHEK JHA@AJsSystem MINGW64 ~/Desktop/project_dir (master)
$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
Untracked files:
  (use "git add <file>..." to include in what will be committed)
no changes added to commit (use "git add" and/or "git commit -a")
 ABHISHEK JHA@AJsSystem MINGW64 ~/Desktop/project_dir (master)
$ touch .gitignore
 ABHISHEK JHA@AJsSystem MINGW64 ~/Desktop/project_dir (master)
$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
(use "git restore <file>..." to discard changes in working directory)
Untracked files:
  (use "git add <file>..." to include in what will be committed)
no changes added to commit (use "git add" and/or "git commit -a")
ABHISHEK JHA@AJsSystem MINGW64 ~/Desktop/project_dir (master)
```

```
MINGW64:/c/Users/ABHISHEK JHA/desktop/project_dir
                                                                                                 $ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
  (use "git push" to publish your local commits)
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
no changes added to commit (use "git add" and/or "git commit -a")
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git add .
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git commit -m 'Done'
[master 78cc193] Done
 1 file changed, 1 insertion(+), 1 deletion(-)
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git revert head
[master 21df30b] Revert "Done"
 1 file changed, 1 insertion(+), 1 deletion(-)
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 3 commits.
  (use "git push" to publish your local commits)
nothing to commit, working tree clean
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 3 commits.
  (use "git push" to publish your local commits)
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
no changes added to commit (use "git add" and/or "git commit -a")
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git add index.html
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git commit -m 'Again Edited'
[master 9a6c55c] Again Edited
 1 file changed, 1 insertion(+), 1 deletion(-)
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git revert head
[master 902a07d] Revert "Again Edited"
 1 file changed, 1 insertion(+), 1 deletion(-)
```

```
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git add index.html
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git commit -m 'last Commit'
On branch master
Your branch is ahead of 'origin/master' by 5 commits.
  (use "git push" to publish your local commits)
Untracked files:
  (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git add .
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git commit -m 'last Commit'
[master 2ddb4c7] last Commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 myadd.txt
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
$ git revert head
Removing myadd.txt
[master e9e0a4a] Revert "last Commit"
1 file changed, 0 insertions(+), 0 deletions(-)
 delete mode 100644 myadd.txt
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/project_dir (master)
```

GIT Branching Objective:

Commit HTML, CSS & JavaScript assignments into GIT.

SECTION-1 (HTML assignments) - Steps to follow: 21.

First take a backup of your assignments & projects. This is required because due to incorrect GIT operation you may lose your files.

- 22. Create an empty directory 'Assignments' & cd to 'Assignments'.
- 23. Create a file README.txt inside 'Assignments' & write few lines about the contents of 'Assignments' folder.
- 24. Commit README.txt file.
- 25. Now create a new branch 'html-assignments'.
- 26. Switch to 'html-assignments' branch.
- 27. Copy all HTML assignments inside 'Assignments' folder.
- 28. Commit HTML assignments into 'html-assignments' branch.
- 29. Make minor changes into few files belonging to 'html-assignments' branch.
- 30. Commit those changed files.
- 31. Switch to master branch.
- 32. Make minor changes into README.txt file & commit those changes into master.
- 33. Again switch to 'html-assignments' branch.
- 34. Make minor changes into few files belonging to 'html-assignments' branch.
- 35. Commit those changes.
- 36. Switch to master.
- 37. Merge 'html-assignments' branch into master. Confirm all html assignments are shown in master.
- 38. Finally delete the 'html-assignments' branch.

```
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop (master)
$ mkdir Assignments
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop (master)
$ cd Assignments
Changes not staged for commit:
 (use "git add <file>..." to update what will be committed)
 (use "git restore <file>..." to discard changes in working directory)
 (commit or discard the untracked or modified content in submodules)
         dified: README.txt.txt
MINGW64:/c/Users/ABHISHEK JHA/desktop/Assignments
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git add --a
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git commit -m " README.txt Committed"
[master (root-commit) 5fbe3fe] README.txt Committed
19 files changed, 2 insertions(+)
 create mode 160000 ADAPT-Assignment
 create mode 100644 Assignments/README.txt.txt
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git branch html-assignment
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git checkout html-assignment
Switched to branch 'html-assignment'
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (html-assignment)
$ git add --a
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (html-assignment)
$ git status
On branch html-assignment
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
       deleted: ../ADAPT-Assignment
new file: Html_Assignments.html
new file: index.html
```

```
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (html-assignment)
$ git status
On branch html-assignment
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        deleted: ../ADAPT-Assignment
        new file: Html_Assignments.html
        new file: index.html
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (html-assignment)
$ git commit -m " HTML Files Committed"
[html-assignment 2bb289e] HTML Files Committed
 3 files changed, 23 insertions(+), 1 deletion(-)
 delete mode 160000 ADAPT-Assignment
 create mode 100644 Assignments/Html_Assignments.html
 create mode 100644 Assignments/index.html
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (html-assignment)
$ git checkout master
Switched to branch 'master'
        ADAPT-Assignment
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git status
On branch master
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
  (commit or discard the untracked or modified content in submodules)
                                          (untracked content)
no changes added to commit (use "git add" and/or "git commit -a")
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git add --a
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified: README.txt.txt
```

MINGW64:/c/Users/ABHISHEK JHA/desktop/Assignments

MINGW64:/c/Users/ABHISHEK JHA/desktop/Assignments

```
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (html-assignment)
$ git commit -m " Last Commit"
[html-assignment 4854cb2] Last Commit
3 files changed, 3 insertions(+), 4 deletions(-)
 create mode 160000 ADAPT-Assignment
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (html-assignment)
$ git checkout master
Switched to branch 'master'
       ADAPT-Assignment
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git merge master html-assignment
Updating 5fbe3fe..4854cb2
Fast-forward
Assignments/README.txt.txt
                                  3 ++-
Assignments/index.html
                                 1 +
 3 files changed, 22 insertions(+), 1 deletion(-)
create mode 100644 Assignments/Html_Assignments.html
 create mode 100644 Assignments/index.html
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git branch -d html-assignment
Deleted branch html-assignment (was 4854cb2).
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
```

SECTION-2 - (CSS assignments) Steps to follow:

- 1. Create a new branch 'css-assignments'.
- 2. Switch to 'css-assignments' branch.
- 3. Copy all CSS assignments inside 'Assignments' folder.
- 4. Commit CSS assignments into 'css-assignments' branch.
- 5. Make minor changes into README.txt file on line 1 belonging to 'css-assignments' branch.
- 6. Commit those changed files.
- 7. Switch to master branch.
- 8. Make minor changes into README.txt file on line 3 & commit those changes into master.
- 9. Again switch to 'css-assignments' branch.
- 10. Make minor changes into few files belonging to 'css-assignments' branch.
- 11. Commit those changes.
- 12. Switch to master.
- 13. Merge 'css-assignments' branch into master. Confirm all css assignments are shown in master.
- 14. Finally delete the 'css-assignments' branch.

```
MINGW64:/c/Users/ABHISHEK JHA/desktop/Assignments
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git branch css-assignment
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git checkout css-assignment
Switched to branch 'css-assignment'
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (css-assignment)
$ git status
On branch css-assignment
Untracked files:
   (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (css-assignment)
$ git add --a
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (css-assignment)
$ git commit -m " CSS Assignment Added"
[css-assignment 7439552] CSS Assignment Added
1 file changed, 14 insertions(+)
 create mode 100644 Assignments/css assignments.css
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (css-assignment)
$ git status
On branch css-assignment
Changes not staged for commit:
(use "git add <file>..." to update what will be committed)
(use "git restore <file>..." to discard changes in working directory)
no changes added to commit (use "git add" and/or "git commit -a")
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (css-assignment)
$ git add --a
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (css-assignment)
$ git commit -m " CSS Assignment's README.txt modified"
[css-assignment c8c18ee] CSS Assignment's README.txt modified
 1 file changed, 1 insertion(+)
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (css-assignment)
$ git checkout master
Switched to branch 'master'
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git status
On branch master
Changes not staged for commit:
(use "git add <file>..." to update what will be committed)
(use "git restore <file>..." to discard changes in working directory)
```

```
MINGW64:/c/Users/ABHISHEK JHA/desktop/Assignments
Changes not staged for commit:
(use "git add <file>..." to update what will be committed)
(use "git restore <file>..." to discard changes in working directory)
no changes added to commit (use "git add" and/or "git commit -a")
ABHISHEK
               JHA@AJsSystem MINGW64 ~/desktop/Assignments (css-assignment)
$ git add --a
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (css-assignment)
$ git commit -m " CSS Assignment's README.txt modified"
[css-assignment c8c18ee] CSS Assignment's README.txt modified
  1 file changed, 1 insertion(+)
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (css-assignment)
$ git checkout master
Switched to branch 'master'
               JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git status
On branch master
Changes not staged for commit:
(use "git add <file>..." to update what will be committed)
(use "git restore <file>..." to discard changes in working directory)
Untracked files:
(use "git add <file>..." to include in what will be committed)
no changes added to commit (use "git add" and/or "git commit -a")
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
  git add --a
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git commit -m " Master branch's README.txt modified"
[master 658a724] Master branch's README.txt modified
2 files changed, 17 insertions(+)
create mode 100644 Assignments/css assignments.css
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git checkout css-assignment
Switched to branch 'css-assignment'
```

MINGW64:/c/Users/ABHISHEK JHA/desktop/Assignments

```
ABHISHEK JHA@AJSSystem MINGW64 ~/desktop/Assignments (css-assignment)

§ git status

on branch css-assignment

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

modified: css assignments.css

no changes added to commit (use "git add" and/or "git commit -a")

ABHISHEK JHA@AJSSystem MINGW64 ~/desktop/Assignments (css-assignment)

§ git add --a

ABHISHEK JHA@AJSSystem MINGW64 ~/desktop/Assignments (css-assignment)

§ git commit — m "last commit

I file changed, I insertion(+), 2 deletions(-)

ABHISHEK JHA@AJSSystem MINGW64 ~/desktop/Assignments (css-assignment)

§ git checkout master

Witched to branch 'master'

ABHISHEK JHA@AJSSystem MINGW64 ~/desktop/Assignments (master)

§ git merge master css-assignment

CONFLICT (add) Add): Merge conflict in Assignments/css assignments.css

Auto-merging Assignments/css assignments.css

Auto-merging Assignments/README.txt.txt

Automatic merge failed; fix conflicts and then commit the result.

ABHISHEK JHA@AJSSystem MINGW64 ~/desktop/Assignments (master|MERGING)

§ git branch -d css-assignment

error: The branch 'css-assignment' is not fully merged.

§ git branch -D css-assignment'

ABHISHEK JHA@AJSSystem MINGW64 ~/desktop/Assignments (master|MERGING)

§ git branch -D css-assignment

Label SHERK JHA@AJSSystem MINGW64 ~/desktop/Assignments (master|MERGING)

§ git branch -D css-assignment (was e3375f1).

ABHISHEK JHA@AJSSystem MINGW64 ~/desktop/Assignments (master|MERGING)

§ git branch -D css-assignment (was e3375f1).
```

SECTION-3 - (JavaScript assignments) Steps to follow:

- 1. Create a new branch 'js-assignments'.
- 2. Switch to 'is-assignments' branch.
- 3. Copy all JavaScript assignments inside 'Assignments' folder.
- 4. Commit JavaScript assignments into 'js-assignments' branch.
- 5. Make minor changes into README.txt file on line 1 belonging to 'js-assignments' branch.
- 6. Commit those changed files.
- 7. Switch to master branch.
- 8. Make minor changes into README.txt file on line 1 & commit those changes into master.
- 9. Again switch to 'js-assignments' branch.
- 10. Make minor changes into few files belonging to 'js-assignments' branch.
- 11. Commit those changes.
- 12. Switch to master.
- 13. Merge 'js-assignments' branch into master. Confirm all JavaScript assignments are shown in master.
- 14. Finally delete the 'js-assignments' branch.

```
MINGW64:/c/Users/ABHISHEK JHA/desktop/Assignments
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git branch js-assignment
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git checkout js-assignment
Switched to branch 'js-assignment'
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (js-assignment)
$ git status
On branch js-assignment
nothing to commit, working tree clean
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (js-assignment)
$ git status
On branch js-assignment
Untracked files:
  (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (js-assignment)
$ git add --a
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (js-assignment)
$ git commit -m "js file added"
[js-assignment 819bf9e] js file added
 1 file changed, 15 insertions(+)
 create mode 100644 Assignments/js-Assignment.js
```

```
MINGW64:/c/Users/ABHISHEK JHA/desktop/Assignments
                                                                                                  \times
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (js-assignment)
$ git checkout master
Switched to branch 'master'
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
(use "git restore <file>..." to discard changes in working directory)
no changes added to commit (use "git add" and/or "git commit -a")
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git add --a
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git commit -m " Changed README.txt"
[master e350026] Changed README.txt
 1 file changed, 2 insertions(+)
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git checkout js-assignment
Switched to branch 'js-assignment'
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (js-assignment)
$ git status
On branch js-assignment
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
no changes added to commit (use "git add" and/or "git commit -a")
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (js-assignment)
$ git add --a
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (js-assignment)
$ git commit -m " Changed README.txt for js branch"
[js-assignment c539a28] Changed README.txt for js branch
 1 file changed, 1 insertion(+), 1 deletion(-)
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (js-assignment)
$ git checkout master
Switched to branch 'master'
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git merge master js-assignment
Auto-merging Assignments/README.txt.txt
 ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master|MERGING)
$ git add --a
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master|MERGING)
$ git commit -m " last commit for js branch"
[master fd5c42e] last commit for js branch
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git branch
   js-assignment
  master
ABHISHEK JHA@AJsSystem MINGW64 ~/desktop/Assignments (master)
$ git branch -d js-assignment
Deleted branch js-assignment (was c539a28).
```

Git Remoting

Objective: Pushing source code into GITHUB & collaborate team members.

SECTION-1 (Pushing assignments to remote repository) –

Steps to follow:

- 39. Create a github account if you do not have already.
- 40. Login on into github account.
- 41. Create new public repository 'freshersbatch-oct16'.
- 42. Commit & push any sample file to this repository under 'Assignments' directory.

