Install GIT & make sure it is added into PATH.

Use GIT as local VCS. Steps to follow:

- Create a directory 'project_dir' & cd to 'project_dir'.
- 2. Initialize git version database. (git init)
- 3. 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.
- 6. 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.
- 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/Tarun Krishna/project_dir
 arun Krishna@LAPTOP-4GSE1BRK MINGW64 ~ (master)
$ mkdir project_dir
 Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~ (master)
$ cd project_dir
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git init
Initialized empty Git repository in C:/Users/Tarun Krishna/project_dir/.git/
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master) 
$ touch index.html
 Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/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)
 Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git add .
 Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git status
On branch master
No commits yet
Changes to be committed:

(use "git rm --cached <file>..." to unstage)

new file: index.html
```

```
MINGW64:/c/Users/Tarun Krishna/project_dir
 Farun Krishna@LAPTOP-4GSE1BRK MINGw64 ~/project_dir (master)
i git commit -m "First Commit"
[master (root-commit) e3d0dcc] First Commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 index.html
 Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ vi index.html
 arun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ touch info.txt
 arun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git status
On branch master
 (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")
 arun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git add *.html
warning: LF will be replaced by CRLF in index.html.
The file will have its original line endings in your working directory
 'arun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git status
 n branch master
Changes to be committed:

(use "git restore --staged <file>..." to unstage)

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

```
MINGW64/c/Usen/Tarun Krishna/project_dir
Tarun KrishnaBLAPTOP-4GSEISRK MINGW64 -/project_dir (master)
S git log
commit eldOdccefba3f7dOl6314ed9Gef004b448b2ddd8b (HEAD -> master)
Author: Tarun <tkkhunteta8gmail.com>
Date: Tue feb 8 21:11:26 2022 +0530

First Commit

Tarun KrishnaBLAPTOP-4GSEISRK MINGW64 -/project_dir (master)
S vi index.html

Tarun KrishnaBLAPTOP-4GSEISRK MINGW64 -/project_dir (master)
S git status
On branch master
Changes to be committed:
(use "git restore --staged <file>..." to unstage)
modified: index.html

Changes not staged for commit:
(use "git add <file>..." to discard changes in working directory)
modified: index.html

Untracked files:
(use "git add <file>..." to include in what will be committed)
Tarun KrishnaBLAPTOP-4GSEISRK MINGW64 -/project_dir (master)
S git restore index.html

Tarun KrishnaBLAPTOP-4GSEISRK MINGW64 -/project_dir (master)
S git restore --staged <file>..." to unstage)
modified: index.html

Untracked files:
(use "git restore --staged <file>..." to unstage)
modified: index.html

Untracked files:
(use "git add <file>..." to include in what will be committed)
Tarun KrishnaBLAPTOP-4GSEISRK MINGW64 -/project_dir (master)
S vi index.txt

Tarun KrishnaBLAPTOP-4GSEISRK MINGW64 -/project_dir (master)
S vi index.txt
Tarun KrishnaBLAPTOP-4GSEISRK MINGW64 -/project_dir (master)
S vi index.html
```

```
MINGW64:/c/Users/Tarun Krishna/project_dir
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 -/project_dir (master)
$ git status
On branch master
Changes to be committed:
 (use "git restore --staged <file>..." to unstage)
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)
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git add index.html
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git status
On branch master
Changes to be committed:
 (use "git restore --staged <file>..." to unstage)
Untracked files:
 (use "git add <file>..." to include in what will be committed)
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git reset
Unstaged changes after reset:
        index.html
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git config --global alias.my-add add
```

```
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git my-add index.html
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:
                     index.html
Untracked files:
  (use "git add <file>..." to include in what will be committed)
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git commit -m "After changing add to my-add"
[master 2604d8d] After changing add to my-add
1 file changed, 6 insertions(+)
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/project_dir (master)
$ git reset
```

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'.
- 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.
- Switch to master.
- Merge 'html-assignments' branch into master. Confirm all html assignments are shown in master.
- 38. Finally delete the 'html-assignments' branch.

```
NINGW64:/c/Users/Tarun Krishna/assignments
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~ (master)
$ mkdir assignments
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~ (master)
$ cd assignments
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git init
Initialized empty Git repository in C:/Users/Tarun Krishna/assignments/.git/
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ touch README.txt
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git add README.txt
Tarun Krishna@LAPTOP-4GSE1BRK MINGw64 ~/assignments (master)
$ git commit -m "commiting README"
[master (root-commit) f16161f] commiting README
1 file changed, 2 insertions(+)
create mode 100644 README.txt
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git branch html-assignments
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git status
On branch master
nothing to commit, working tree clean
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git checkout html-assignments
Switched to branch 'html-assignments'
```

```
NINGW64:/c/Users/Tarun Krishna/assignments
Tarun Krishna@LAPTOP-4GSE18RK MING#64 ~/assignments (master)
$ git branch -d html-assignments
Deleted branch html-assignments (was f16161f).
Tarun Krishna@LAPTOP-4GSE18RK MINGw64 ~/assignments (master) $ touch index.html
Tarun Krishna@LAPTOP-4GSEIBRK MINGM64 -/assignments (master)
$ git add index.html
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
new file: index.html
Tarun Krishna@LAPTOP-4GSELERK MINGW64 ~/assignments (master)
$ git branch html-assignments
Tarun KrishnaBLAPTOP-4GSEIBRK MINGw64 ~/assignments (master)
$ git checkout html-assignments
Switched to branch 'html-assignments'
A index.html
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (html-assignments)
S git add ".html
                                                W64 ~/assignments (html-assignments)
$ git status
On branch html-assignments
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
new file: index.html
Tarun KrishnaBLAPTOP-4GSE1BRK MINGW64 ~/assignments (html-assignments)
$ vim index.html
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (html-assignments)
$ vim index.html
Tarun Krishna0LAPTOP-4GSE1BRK MINGW64 ~/assignments (html-assignments)
S git status
On branch html-assignments
Changes to be committed:
(use "git restore --staged <file>..." to unstage)
```

```
MINGW64:/c/Users/Tarun Krishna/assignments
$ vim index.html
 Tarun Krishna@LAPTOP-4GSE18RK MINGW64 -/assignments (html-assignments)
S git status
on branch html-assignments
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
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)
 Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 -/assignments (html-assignments)
S git add index.html
warning: LF will be replaced by CRLF in index.html.
The file will have its original line endings in your working directory
S git commit -m "comminting after changing in html"
[html-assignments 233fa6a] comminting after changing in html
1 file changed, 3 insertions(+)
create mode 100644 index.html
          (rishna@LAPTOP-4GSE1BRK MINGW64 -/assignments (html-assignments)
§ git checkout master
Switched to branch 'master'
              shna@LAPTOP-4GSE1BRK MING
                                                     64 -/assignments (master)
S vim README. txt
                                                      64 -/assignments (master)
S git status
On branch master

Changes not staged for commit:

(use "git add cfile>..." to update what will be committed)

(use "git restore cfile>..." to discard changes in working directory)
no changes added to commit (use "git add" and/or "git commit -a")
 arun KrishnaRLAPTOP-4GSEIBRK MINGWS4 -/assignments (master)
S git add README.txt
Tarun Krishna0LAPTOP-465518RK MINGM64 ~/assignments (master)
$ git commit -m "After readme change"
[master 912e95e] After readme change
```

```
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)

$ git merge html-assignments

Merge made by the 'ort' strategy.
index.html | 3 +++

1 file changed, 3 insertions(+)
create mode 100644 index.html

Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)

$ git branch -d html-assignments
Deleted branch html-assignments (was 233fa6a).
```

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.
- 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.
- 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.
- Merge 'css-assignments' branch into master. Confirm all css assignments are shown in master.
- 14. Finally delete the 'css-assignments' branch.

```
MINGW64:/c/Users/Tarun Krishna/assignments
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git branch css-assignments
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git checkout css-assignments
Switched to branch 'css-assignments'
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 -/assignments (css-assignments)
$ git status
On branch css-assignments
nothing to commit, working tree clean
Tarun Krishna@LAPTOP-4GSE1BRK MINGM64 ~/assignments (css-assignments)
$ checkout master
bash: checkout: command not found
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 -/assignments (css-assignments)
$ git checkout master
Switched to branch 'master'
Tarun Krishna@LAPTOP-4GSE1BRK MINGw64 ~/assignments (master) $ touch sample.css
Tarun Krishna@LAPTOP-4GSE18RK MINGW64 -/assignments (master)
$ git checkout css-assignments
Switched to branch 'css-assignments'
Tarun KrishnaßLAPTOP-4GSE1BRK MINGM64 ~/assignments (css-assignments)
$ git status
On branch css-assignments
  (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
Tarun Krishna@LAPTOP-4GSE1BRK MINGM64 ~/assignments (css-assignments)
$ git add sample.css
Tarun KrishnaßLAPTOP-4GSE1BRK MING#64 ~/assignments (css-assignments)
$ git status
On branch css-assignments
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
  new file: sample.css
```

```
MINGW64:/c/Users/Tarun Krishna/assignments
Tarun Krishna0LAPTOP-4GSE1BRK MINGWG4 ~/assignments (css-assignments)
$ git commit -m "commit css"
[css-assignments 7ed97b5] commit css
1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 sample.css
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (css-assignments)
$ vim sample.css
   urun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (css-assignments)
$ vim README.txt
 Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 -/assignments (css-assignments)
$ git status
On branch css-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")
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 -/assignments (css-assignments)
$ git add .
warning: LF will be replaced by CRLF in sample.css.
The file will have its original line endings in your working directory
Tarun Krishna0LAPTOP-4GSE18RK MINGw64 ~/assignments (css-assignments)
$ git commit -m "commiting both file"
[css-assignments 5f507f4] commiting both file
2 files changed, 4 insertions(+), 1 deletion(-)
Tarun Krishna@LAPTOP-4GSE18RK MINGw64 -/assignments (css-assignments)
$ git checkout master
Switched to branch 'master'
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git status
On branch master
nothing to commit, working tree clean
Tarun Krishna@LAPTOP-4GSEIERK MINGW64 -/assignments (master)
$ git checkout css-assignments
Switched to branch 'css-assignments'
    run Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (css-assignments)
$ vim sample.css
```

```
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (css-assignments)
$ git add sample.css
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (css-assignments)
$ git commit -m "commiting css"
[css-assignments 204dca6] commiting css
1 file changed, 1 insertion(+), 1 deletion(-)
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (css-assignments)
$ git merge css-assignments
Already up to date.
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (css-assignments)
$ git checkout master
Switched to branch 'master'
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git merge css-assignments
Updating cf1fcb1..204dca6
Fast-forward
 README.txt | 2 +-
 sample.css | 3 +++
 2 files changed, 4 insertions(+), 1 deletion(-)
 create mode 100644 sample.css
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ fit branch -d css-assignments
bash: fit: command not found
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git branch -d css-assignments
Deleted branch css-assignments (was 204dca6).
```

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

- 1. Create a new branch 'js-assignments'.
- 2. Switch to 'js-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.

- 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.
- Switch to master.
- Merge 'js-assignments' branch into master. Confirm all JavaScript assignments are shown in master.
- 14. Finally delete the 'js-assignments' branch.

```
MINGW64:/c/Users/Tarun Krishna/assignments
Tarun Krishna@LAPTOP-4GSEIERK MINGW64 -/assignments (master) $ git branch js-assignments
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git checkout js-assignments
Switched to branch 'js-assignments'
                                           #64 ~/assignments (js-assignments)
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 -/assignments (js-assignments)
$ git status
On branch js-assignments
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)
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (js-assignments)
$ git add sample.js
 Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 -/assignments (js-assignments)
$ git commit -m "commit js"
[js-assignments f0239a6] commit js
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 sample.js
Tarun KrishnaBLAPTOP-4GSEIBRK MINGW64 ~/assignments (js-assignments) $ git add README.txt
Tarun Krishna@LAPTOP-AGSE1BRK MINGW64 -/assignments (js-assignments)
$ git commit -m "commit README"
On branch js-assignments
nothing to commit, working tree clean
Tarun KrishnaBLAPTOP-4GSE1BRK MINGW64 -/assignments (js-assignments)
$ vim README.txt
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (js-assignments)
S git status
On branch js-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")
```

```
MINGW64:/c/Users/Tarun Krishna/assignments
no changes added to commit (use "git add" and/or "git commit -a")
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (is-assignments)
$ git add README.txt
                                               4 ~/assignments (js-assignments)
$ git commit -m "after 1 line change"
[js-assignments cb6be6a] after 1 line change
1 file changed, 1 insertion(+), 1 deletion(-)
         Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (js-assignments)
$ git checkout master
Switched to branch 'master'
Tarun KrishnaBLAPTOP-4GSE1ERK MINGW64 ~/assignments (master)
$ vim README.txt
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 -/assignments (master)
$ git add README.txt
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
S git commit -m "after 1 line change"
[master 6ff2542] after 1 line change
1 file changed, 1 insertion(+), 1 deletion(-)
Tarun Krishna@LAPTOP-4GSE1BRK MIN
                                               4 ~/assignments (master)
$ git checkout js-assignments
Switched to branch 'js-assignments'
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (js-assignments)
$ vim README.txt
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 -/assignments (js-assignments)
$ git add README.txt
                            4GSE1BRK MINGW64 -/assignments (js-assignments)
$ git commit -m "Finalchange"
[js-assignments Oa5eBbc] Finalchange
1 file changed, 1 insertion(+), 1 deletion(-)
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 -/assignments (js-assignments)
$ git checkout master
Switched to branch 'master'
 arun Krishna@LAPTOP-4GSE1BRK MINGW64 -/assignments (master)
$ git merge js-assignments
Merge made by the 'ort' strategy.
sample.js | 0
 I file changed, 0 insertions(+), 0 deletions(-) create mode 100644 sample.js
```

```
Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git status
On branch master
nothing to commit, working tree clean

Tarun Krishna@LAPTOP-4GSE1BRK MINGW64 ~/assignments (master)
$ git branch -d js-assignments
Deleted branch js-assignments (was Oa5e8bc).
```