Practice Questions for Students:

1. Create a new Git repository on your local machine and make an initial commit.

```
PS C:\Users\Abhishek> cd USTAssignments
PS C:\Users\Abhishek\USTAssignments> git init
Initialized empty Git repository in C:/Users/Abhishek/USTAssignments/.git/
PS C:\Users\Abhishek\USTAssignments> echo " My new repository " > Assignment2.txt
PS C:\Users\Abhishek\USTAssignments> git add Assignment2.txt
PS C:\Users\Abhishek\USTAssignments> git commit -m "Initial commit"
[master (root-commit) 2e20a66] Initial commit
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Assignment2.txt
```

2. Push the changes from your local repository to a remote repository on a hosting platform (e.g., GitHub).

```
PS C:\Users\Abhishek\USTAssignments> git remote add origin https://github.com/Abhisheksk06/USTClassAssignments.git
PS C:\Users\Abhishek\USTAssignments> git push -u origin main
error: src refspec main does not match any
error: failed to push some refs to 'https://github.com/Abhisheksk06/USTClassAssignments.git'
PS C:\Users\Abhishek\USTAssignments> git push -u origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 258 bytes | 258.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:      https://github.com/Abhisheksk06/USTClassAssignments/pull/new/master
remote:
To https://github.com/Abhisheksk06/USTClassAssignments.git
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.
```

3. Clone an existing repository from a remote source to your local machine.

```
C:\Users\Abhishek\USTAssignments>git clone https://github.com/Abhisheksk06/my-first-repo.git
Cloning into 'my-first-repo'...
remote: Enumerating objects: 24, done.
remote: Counting objects: 100% (24/24), done.
remote: Compressing objects: 100% (16/16), done.
remote: Total 24 (delta 5), reused 20 (delta 4), pack-reused 0 (from 0)
Receiving objects: 100% (24/24), done.
Resolving deltas: 100% (5/5), done.

C:\Users\Abhishek\USTAssignments>cd my-first-repo

C:\Users\Abhishek\USTAssignments\my-first-repo>
```

4. Fork a repository on GitHub, make changes, and submit a pull request.

```
PS C:\Users\Abhishek> git clone https://github.com/Abhisheksk06/DBMS_SQL-Notes.git
Cloning into 'DBMS_SQL-Notes'...
remote: Enumerating objects: 39, done.
remote: Counting objects: 100% (39/39), done.
remote: Compressing objects: 100% (38/38), done.
remote: Total 39 (delta 10), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (39/39), 10.00 KiB | 853.00 KiB/s, done.
Resolving deltas: 100% (10/10), done.
PS C:\Users\Abhishek> cd DBMS_SQL-Notes
PS C:\Users\Abhishek\DBMS_SQL-Notes> echo "Updated content" >> README.md
PS C:\Users\Abhishek\DBMS_SQL-Notes> git add README.md
PS C:\Users\Abhishek\DBMS_SQL-Notes> git commit -m "Updated README.md"
[main 76376ee] Updated README.md
 1 file changed, 0 insertions(+), 0 deletions(-)
PS C:\Users\Abhishek\DBMS_SQL-Notes> git push origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 16 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 408 bytes | 408.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Abhisheksk06/DBMS_SQL-Notes.git
   f1f3b26..76376ee  main -> main
PS C:\Users\Abhishek\DBMS_SQL-Notes> |
```

5. Perform a basic merge operation, resolving any conflicts that arise.

```
PS C:\Users\Abhishek\USTAssignments> git checkout -b feature-branch
Switched to a new branch 'feature-branch'
PS C:\Users\Abhishek\USTAssignments> echo "Feature content" > feature.txt
PS C:\Users\Abhishek\USTAssignments> git add feature.txt
PS C:\Users\Abhishek\USTAssignments> git commit -m "Added feature content"
[feature-branch f98efb9] Added feature content
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 feature.txt
PS C:\Users\Abhishek\USTAssignments> git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
PS C:\Users\Abhishek\USTAssignments> git merge feature-branch
Updating 2e20a66..f98efb9
Fast-forward
 feature.txt | Bin 0 -> 36 bytes
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 feature.txt
```

```
PS C:\Users\Abhishek\USTAssignments> git add feature.txt
PS C:\Users\Abhishek\USTAssignments> git commit "Added feature"
error: pathspec 'Added feature' did not match any file(s) known to git
PS C:\Users\Abhishek\USTAssignments> git commit -m "Added feature"
On branch feature-branch
nothing to commit, working tree clean
PS C:\Users\Abhishek\USTAssignments> git push -u origin feature-branch
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 318 bytes | 159.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature-branch' on GitHub by visiting:
remote:      https://github.com/Abhisheksk06/USTClassAssignments/pull/new/feature-branch
remote:
To https://github.com/Abhisheksk06/USTClassAssignments.git
 * [new branch]      feature-branch -> feature-branch
branch 'feature-branch' set up to track 'origin/feature-branch'.
PS C:\Users\Abhishek\USTAssignments> |
```