GIT and GitHub Workshop Assignment

Complete the following tasks to practice Git core Git commands. Answer each question and perform the associated Git operations.

1. Setup and Initialize: - What command do you use to create a new directory named mkdir git-workshop?

cd git-workshop

Here's what each command does:

* mkdir git-workshop: Creates a new directory called git-workshop.
* cd git-workshop: Changes your current working directory to git-workshop.

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2. 2. Initialize a Git Repository: - What command initializes a Git repository in your directory?

git init

This command creates a new .git subdirectory in your project folder,

3. 3. Create and Modify Files: - How do you create a new file named `hello.txt` and add the content 'Hello, Git Workshop!' to it using a single command?

echo "Hello, Git Workshop!" > hello.txt

4. 4. Check the Status of Your Repository: - What command displays the status of your repository?

On branch main

Your branch is up to date with 'origin/main'.

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: hello.txt

Untracked files:

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

newfile.txt

5. 5. Stage and Commit Changes: - What command stages the file `hello.txt`? - What command commits the staged file with the message 'Add hello.txt with welcome message'?

git commit -m "Add hello.txt with welcome message"

git commit -m "Add hello.txt with welcome message"

6. 6. Branching: - What command creates a new branch named `update-content`? - How do you switch to the `update-content` branch?

git checkout -b update-content

7. 7. Make Changes on the Branch: - What command would you use to append the text 'This is a simple Git assignment.' to `hello.txt`? - What command stages and commits the changes with the message 'Update hello.txt with additional message?

echo "This is a simple Git assignment." >> hello.txt

git add hello.txt

git commit -m "Update hello.txt with additional message"

8. 8. Merge Changes: - What command switches you back to the `main` branch? - How do you merge the `update-content` branch into `main`?

git checkout main

git switch main

git merge update-content

9. 9. View Commit History: - What command shows the commit history?

git log

10. 10. Undo and Reset (Practice Safely): - If you make a change to `hello.txt` that you want to revert before committing, what command would you use? - How can you reset your branch to a previous commit (optional, for advanced practice)?

git restore hello.txt

git restore --staged hello.txt

git reset --hard <commit-hash>

git reset --hard a1b2c3d

11. 11. Push to a Remote Repository (Optional): - What command adds a remote repository named `origin`? - What command pushes your local `main` branch to the remote repository?

git remote add origin <repository-url>

**Explanation:**

* git remote add: Adds a new remote repository.
* origin: This is the conventional name used for the primary remote repository, but you could name it differently if you prefer.
* <repository-url>: This is the URL of the remote repository. It could be an HTTPS URL (e.g., https://github.com/username/repository.git) or an SSH URL (e.g., git@github.com:username/repository.git).

Example:

bash

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git remote add origin https://github.com/username/my-repo.git

**2. Push Your Local main Branch to the Remote Repository:**

Once you've added the remote repository, you can push your local main branch to the remote repository using the following command:

bash

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git push -u origin main