

Assignment: Git and GitHub Fundamentals

Objective:

This assignment will help you reinforce your knowledge and practical skills in Git and GitHub. You will perform a series of tasks that involve initializing a repository, managing branches, merging changes, and interacting with GitHub.

Part 1: Git Tasks

1. Initialize a Git Repository:

- Create a new folder on your local machine called **my-git-project**.
- Initialize a Git repository inside the folder using **git init**.

2. Set Up Your Identity:

- Configure your username and email for Git:
- **git config --global user.name "Your Name"**
- **git config --global user.email "your.email@example.com"**

3. Create and Add Files:

- Inside the **my-git-project**, create a new file named **index.html**. Add the following content to the file:

```
<!DOCTYPE html>

<html>

<head>

  <title>My Git Project</title>

</head>

<body>

  <h1>Welcome to My Git Project</h1>

</body>

</html>
```

- Stage and commit the file using Git:

```
git add index.html
```

```
git commit -m "Added initial version of index.html"
```

4. Branching:

- Create a new branch named **feature/update-title**.

```
git branch feature/update-title
```

- Switch to the feature/update-title branch:

git checkout feature/update-title

5. Update the File:

- In the feature/update-title branch, update the title in the index.html file to My Awesome Git Project.
- Stage and commit the changes:

git add index.html

git commit -m "Update title to My Awesome Git Project"

6. Merging:

- Switch back to the master branch:

git checkout master

- Merge the feature/update-title branch into the master branch:

git merge feature/update-title

7. Pushing Code to Remote Repository:

- Create a new repository on your GitHub account (name it my-git-project).
- Link the local repository to the GitHub repository:

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

- Push your changes to the master branch:

git push origin master

Part 2: GitHub Tasks

1. Create a New Repository on GitHub:

- Log in to your GitHub account and create a new repository called **git-practice**.

2. Clone the Repository:

- Navigate to a folder for the cloning to be performed.
- Clone the repository to your local machine:

git clone https://github.com/your-username/git-practice.git

3. Add Files and Push Changes:

- In the git-practice repository, create a new file named README.md and add a brief description of the repository.
 - Stage, commit, and push the changes to GitHub.
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Submission Requirements:

1. A screenshot of the **git log** command showing your commit history.
 2. A screenshot of the GitHub repository page showing the main branch.
 3. A brief report summarizing:
 - What you learned about initializing a Git repository.
 - The purpose of branching and merging.
 - How to interact with a GitHub repository.
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Assessment Criteria:

- Completion of all Git and GitHub tasks.
- Proper use of Git commands and processes.
- Successfully creating branches, merging.
- Clear and concise report submission.