**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"**

1. **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**

1. **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"**

1. **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**

1. **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**

1. **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.

**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.

**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.