

SCM Sample Assignment Problem Statement (Task 1.1)

Title: Implementing Git Basics

Problem Statement: You are part of a small development team working on a project. To ensure efficient version control, you are tasked with performing and demonstrating the following operations using Git and GitHub:

1. Repository Setup and Initial Commit:

Create a new GitHub repository for the project.


Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)


Required fields are marked with an asterisk ().*

Owner *

Repository name *

 AKsHaT075


/ Task-1.1

 Task-1.1 is available.


Great repository names are short and memorable. Need inspiration? How about [fluffy-octo-spork](#) ?

Description (optional)

This is Task 1.1

☒  **Public**

Anyone on the internet can see this repository. You choose who can commit.

☐  **Private**

You choose who can see and commit to this repository.

Initialize this repository with:

☐ **Add a README file**

This is where you can write a long description for your project. [Learn more about READMEs.](#)

Add .gitignore


.gitignore template: **None**

Choose which files not to track from a list of templates. [Learn more about ignoring files.](#)

Choose a license

License: **None**

A license tells others what they can and can't do with your code. [Learn more about licenses.](#)

 You are creating a public repository in your personal account.

Create repository

Clone the repository to your local system

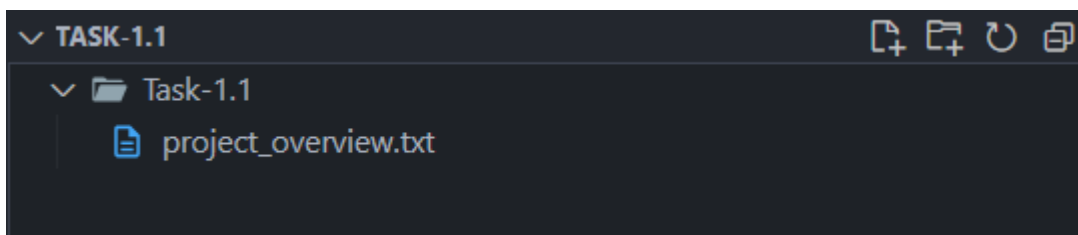
```
● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1> git clone https://github.com/AKsHaT075/Task-1.1.git
Cloning into 'Task-1.1'...
warning: You appear to have cloned an empty repository.
○ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1> █
```

initialize it with a main branch

```
● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git branch -M main
○ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> █
```

Create an initial commit that includes a file named project_overview.txt with a brief description of the project.

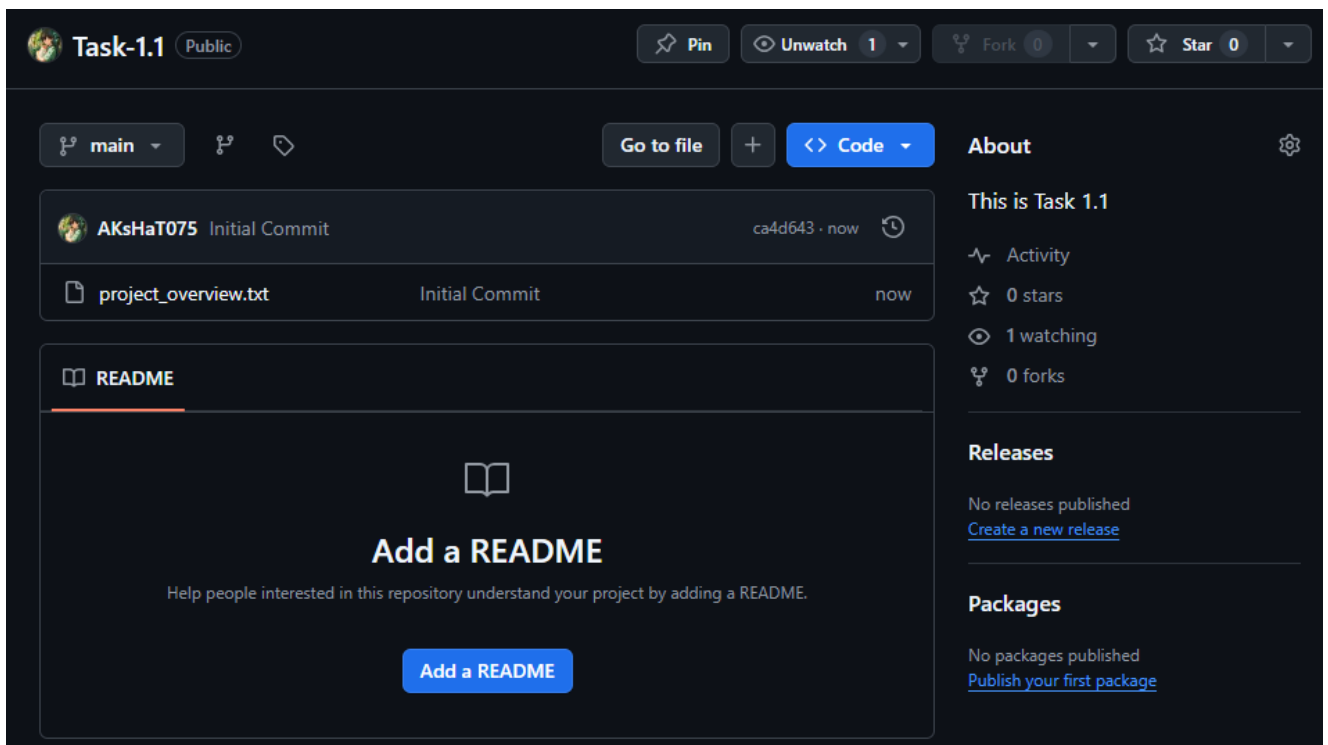
```
● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> echo "This is My Project Overview File" > project_overview.txt
○ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> █
```



```
● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git add project_overview.txt
❖ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> █
```

```
● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git commit -m "Initial Commit"
[main (root-commit) ca4d643] Initial Commit
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 project_overview.txt
○ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> █
```

```
● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git push origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 282 bytes | 282.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/AKsHaT075/Task-1.1.git
 * [new branch]      main -> main
○ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> █
```



2. Branch Creation and Updates:

Create a new branch named feature-update from the main branch.

```
PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git checkout -b feature-update
Switched to a new branch 'feature-update'
PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1>
```

In this branch, add a file named feature_details.txt containing details of a new feature you plan to implement.

```
PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> echo "Added Some New Features" > feature_details.txt
PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1>
```

Commit your changes to the feature-update branch.

```
PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git add feature_details.txt
PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1>

PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git commit -m "Added New Features feature_details.txt"
[feature-update fe23a9c] Added New Features feature_details.txt
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 feature_details.txt
PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1>
```

```

● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git push origin feature-update
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 360 bytes | 180.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature-update' on GitHub by visiting:
remote:   https://github.com/AKsHaT075/Task-1.1/pull/new/feature-update
remote:
To https://github.com/AKsHaT075/Task-1.1.git
 * [new branch]      feature-update -> feature-update
💡 PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1>

```

3. Merge and Conflict Resolution:

While working on the feature-update branch, simulate a merge conflict:

o Modify the feature_details.txt file in the main branch.

```

● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
○ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1>

```

o Attempt to merge the feature-update branch into the main branch and resolve the conflict using Git Bash.

```

● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> echo "Made changes In Main Branch" > feature_details.txt
○ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1>

```

```

● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git add feature_details.txt
❖ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1>

```

o Commit the resolved changes to complete the merge.

```

● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git commit -m "Added Changes in Main Branch feature_details.txt"
[main 7ea611a] Added Changes in Main Branch feature_details.txt
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 feature_details.txt
○ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1>

```

```

PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git merge feature-update

```

```
PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git add feature_details.txt
PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git commit -m "Resolved Changes"
```

```
● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git push origin main
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 12 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 474 bytes | 237.00 KiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/AKsHaT075/Task-1.1.git
   ca4d643..2d6510f  main -> main
○ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> █
```

4. **Repository Audit:** Use Git commands such as `git status` and `git log` to review the repository status and commit history. Document the key actions performed, including branch creation, commits, merges, and conflict resolutions.

```
● PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
○ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> █
```

```
○ PS C:\Users\AKsHaT\Desktop\TASK\Task-1.1\Task-1.1> git log
commit 2d6510fdceab5c7e3c7d1af506e3caffbe4b057f (HEAD -> main, origin/main)
Merge: 7ea611a fe23a9c
Author: Akshat Anand <akshatanand5105@gmail.com>
Date: Thu Feb 6 15:10:24 2025 +0530

    Added Changes in Main Branch feature_details.txt

commit 7ea611ab82b66d28884aae41062d67caf3db1292
Author: Akshat Anand <akshatanand5105@gmail.com>
Date: Thu Feb 6 15:08:56 2025 +0530

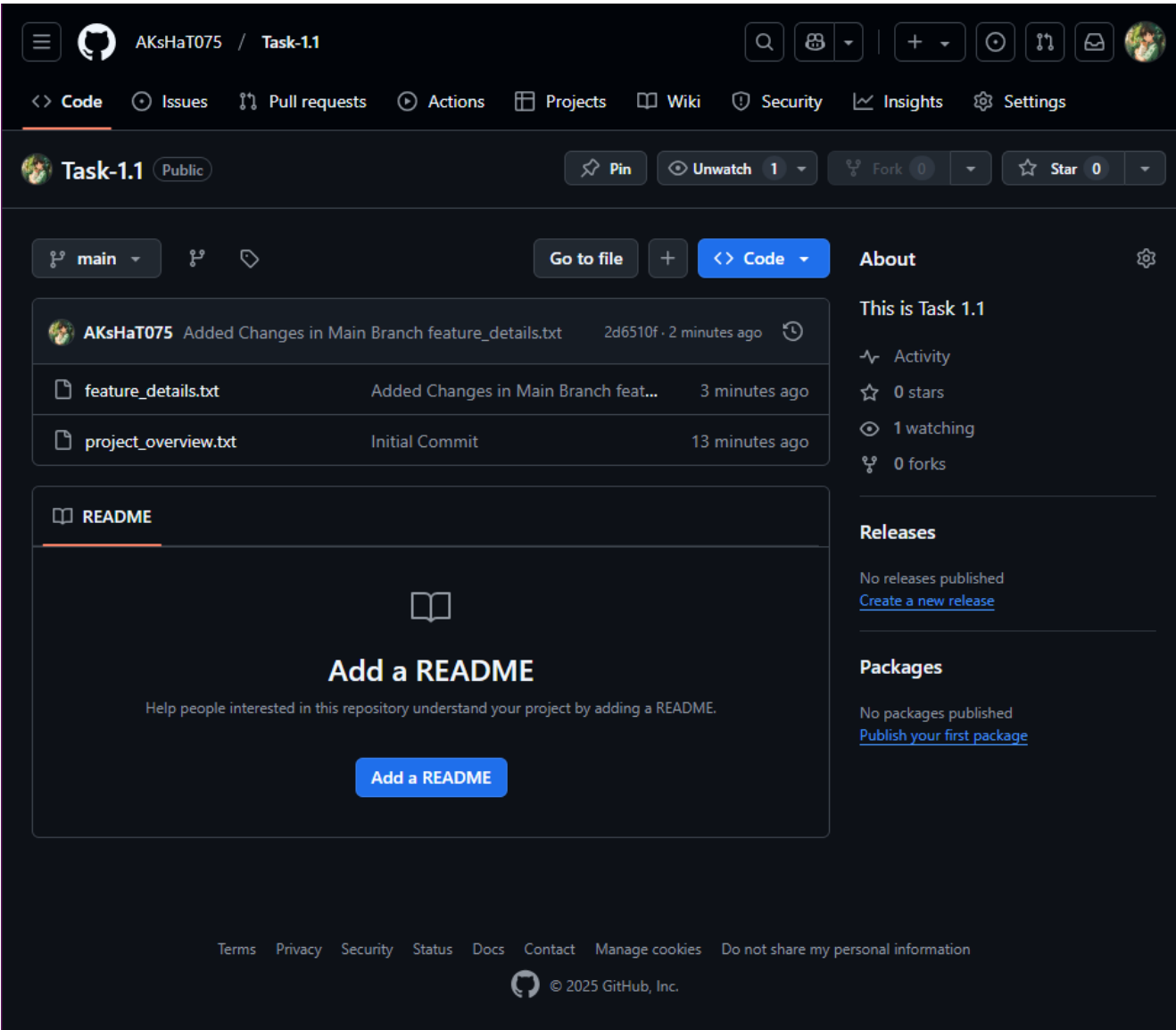
    Added Changes in Main Branch feature_details.txt

commit fe23a9c14d70b1ce39578ddc1e85d8ed06429a26 (origin/feature-update, feature-update)
Author: Akshat Anand <akshatanand5105@gmail.com>
commit 2d6510fdceab5c7e3c7d1af506e3caffbe4b057f (HEAD -> main, origin/main)
Merge: 7ea611a fe23a9c
Author: Akshat Anand <akshatanand5105@gmail.com>
Date: Thu Feb 6 15:10:24 2025 +0530

    Added Changes in Main Branch feature_details.txt

commit 7ea611ab82b66d28884aae41062d67caf3db1292
Author: Akshat Anand <akshatanand5105@gmail.com>
Date: Thu Feb 6 15:08:56 2025 +0530

    Added Changes in Main Branch feature_details.txt
```



Evaluation Criteria:

- ❓ Proper implementation of Git commands.
- ❓ Successful resolution of merge conflicts.