# Git Tasks

**Note:** Make sure you use proper commit messages. In case you face any issue in the middle of the task, try to figure out where you went wrong, find the issue and resolve it without starting this task from scratch. If you have any questions, feel free to ask.

**Time:** 1 day

## Task A

Go through the following steps in the given order.

1. Create a local git repository by the name of **git-tasks**
2. Create a directory by the name of **src**
3. Create two files in the **src** directory by name of **src\_file\_1.txt** and **src\_file\_2.txt**
4. Commit your changes
5. Change your commit message
6. Create 2 new branches (from main branch) **feature/add-feature-1** and **feature/add-feature-2**.
7. In **feature/add-feature-1** branch, add 5 lines of some random **text to src\_file\_1.txt**. Do this in multiple commits i.e. add text to first line and then commit, add text to second line and then commit and so on
8. In **feature/add-feature-2** branch, repeat the above step but for **src\_file\_2.txt**
9. In the main branch, add 2 lines of text to each of the src files and commit your changes
10. Push these local changes to a remote repository (of the same name) in Github
11. Change the last commit message of the **main** branch.
12. From GitHub GUI create pull requests to merge **feature/add-feature-1** and **feature/add-feature-2** into **main**. You should expect conflicts in both branches, use **git merge** command to resolve conflict in **feature/add-feature-1** branch and use **git rebase** command to resolve conflict in **feature/add-feature-2** branch
13. Make sure that your local repository is completely in sync with the remote repository

## Task B

1. Create a local repo
2. Checkout to **main** branch
3. Create a file **src.txt**
4. Add some text in the file **src.txt**
5. Checkout **feature/feature-1** from **main**
6. Add some text in the file **src.txt**
7. Checkout **feature/feature-2** from **feature/feature-1**
8. Add some text in the file **src.txt**
9. Merge **feature/feature-1** into **main**
10. Rebase **feature/feature-2** on **main** and merge it into **main** (Remember to use -i flag with rebase command)

## Task C

1. Create local repo
2. Checkout to **main** branch
3. Create a file **src.txt**
4. Add some text in the file **src.txt**
5. Checkout **feature/feature-1** from **main**
6. Add some commits to **feature/feature-1**
7. Add some commits to **main**
8. Push everything to remote repo
9. Clone this repo again in different location in your PC
10. In the first clone, rebase **feature/feature-1** onto **main** and push changes to remote
11. In the second clone, pull the changes and try to see how **feature/feature-1** has changed remotely and locally and how would you handle it in the second clone. (Note: Try to explore multiple ways to handle this)