Assignment #4 Part 2: Version Control

Due Date: Friday, February 18 at 11:59 PM

Type of Assignment: Group

Submission Procedure:

Each group member must upload their assignment reports to their respective private git repositories in the directory:
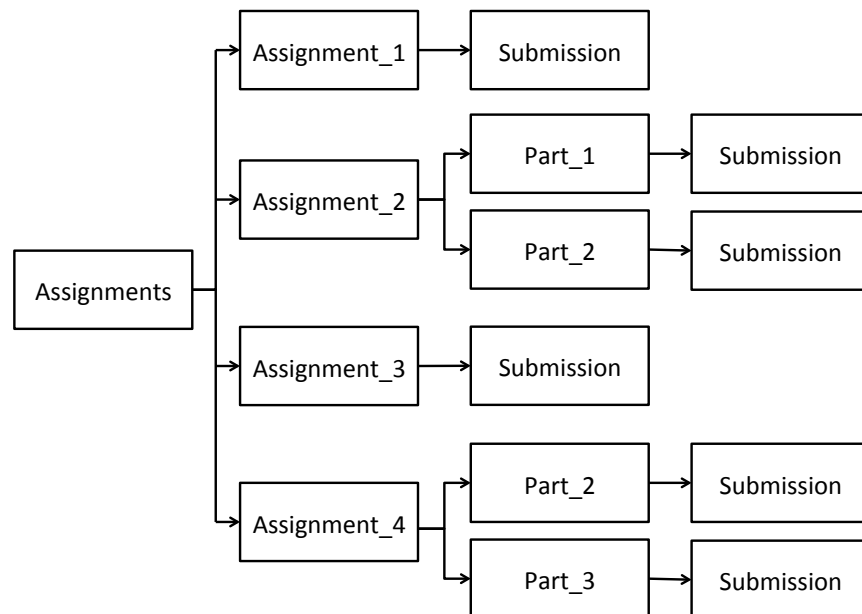`Assignments/Assignment_4/Part_3/Submission`.

Instructions:

This assignment consists of three sub-assignments: "Construction of a Repository Directory Structure", "Group Collaborative Document Editing", and "Class Collaborative Document Editing". Each of these sub-assignments involve a number of tasks, and for each task that requires git commands, copy and paste the git commands into your report and any corresponding output.

I: Construction of a Repository Directory Structure:

Each group member must construct the following directory structure:

Add, commit, and push (to GitHub) your previously submitted assignment files into the appropriate directories within the member's repository(i.e., Assignments 1, 2, and 3).

II: Group Collaborative Document Editing

Complete the following tasks:

1. One of the group members should create a new branch `Current_Assignment` within his or her local repository. The group member who initializes this branch shall be referred to henceforth as Member #1 and the other as Member #2. Member #1 should push the new branch to GitHub.

2. Member #1 should create the directory:

   `Assignments/Assignment_4/Part_3/Submission`

   within the `Current_Assignment` branch of his or her local repository.

3. Member #1 should create a new file, `README.md`, containing the text "Member #1 of Group # edited this file." within the new directory.

4. Member #1 should add, commit, and push the file `README.md` to the branch `Current_Assignment`.

5. Member #2 should clone Member #1's repository from GitHub.

6. Member #2 should locally edit the file `README.md` in

   `Assignments/Assignment_4/Part_3/Submission`

   within the `Current_Assignment` branch by adding the line "Member #2 of Group # edited this file.".

7. Member #2 should add, commit, and push the file `README.md` to the branch `Current_Assignment`.

8. Member #1 should locally edit the file `README.md` in

   `Assignments/Assignment_4/Part_3/Submission`

   within the `Current_Assignment` branch by adding the line "Member #1 of Group # edited this file."

9. Member #1 should add and commit the file `README.md` to the local branch `Current_Assignment`.

10. Member #1 should attempt to locally pull Member #2's changes to the branch `Current_Assignment`. Explain why an error arises.

11. Member #1 should execute the necessary commands to incorporate both Member #1's and Member #2's edits to `README.md`, and add, commit, and push the modified file `README.md` to the branch `Current_Assignment`.

12. Member #2 should locally pull Member #1's changes to the branch `Current_Assignment`.

13. Member #2 should locally merge the branch `Current_Assignment` into `master`.

14. Member #2 should push the file `README.md` to the remote branch `master`.

Following the preceding tasks, Member #2 should also create the directory

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`Assignments/Assignment_4/Part_3/Submission`

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within his or her own private git repository, and copies of the assignment report should be uploaded to both members' local and remote repositories within this directory. However, the file `README.md` created above should *only* exist in Member #1's repository.

III: Class Collaborative Document Editing

Both group members should clone the Shared repository from GitHub. Within his or her local version of the repository, each group member should edit the file `README.md` by adding the following line to the file:

"Last Name", "First Name" changed the file at "hh:mm:ss(time), DDDD-MM-DD(date)"

Once edited, each group member should pull a working version of the file to ensure no conflict is detected. If no conflict is detected (the group member is the first person to commit a change since he or she cloned or last pulled the repository), the group member should add, commit, and push his or her working copy. Otherwise, the group member must resolve conflicts between the local and remote copies of the file, appending his or her local changes to the end of the file. Then, the group member should add, commit, and push the modified `README.md`.