Assignment 2

1. **Repository Creation:** Create a repository named ***git-assignment-[your-roll-no]*** within the **assignment folder as discussed in the class** with the following specific initial structure and required Initial Commits (must be created in this exact order):

    a. Initial commit with **README.md** containing your roll number and current timestamp
    b. Add **src/calculator.py** with basic addition function
    c. Add **src/utils.py** with helper functions
    d. Create **.gitignore** excluding ***.log and temp/ directory**
    e. Add **docs/usage.md** with placeholder content

Do the following:

a. Take the screenshot of the command git log --oneline --graph showing exact commit sequence
b. Each commit message must follow the format: [***Qno] Description***. Here Qno for first question is Q1, for second it is Q2 and so on.

2. **Revision selection:** Write the **exact Git commands** for the following
    a. Show the content of **calculator.py** from 2 commits before **HEAD**
    b. Display the commit message of the second parent of a merge commit (if exists)
    c. Find the commit that introduced the word "**function**" in any file
    d. Show differences between the commit where .gitignore was added and its immediate predecessor
    e. List all commits that modified **src/utils.py** specifically

Attach the screenshot of the output of all the commands.

3. **Commit:** Attach the screenshot of the outputs for each step.
    a. Create 5 commits with intentionally poor commit messages like "stuff", "fixes", "change"
    b. Use interactive rebase to:
    i. Rewrite 3 commit messages to be descriptive
    ii. Squash 2 commits into 1
    iii. Reorder commits to make logical sense
    c. Document each step of the interactive rebase process

4. **Mistake:** Attach the screenshot of the outputs for each step.
    a. Accidentally commit 10 files where only 5 should be committed (You can use dummy files as well such as dummy1.py, dummy2.py, etc
    b. The commit was NOT pushed yet
    c. Use git reset to uncommit, then re-commit correctly

d. Show working directory and staging area status throughout
e. Show difference between **git reset --soft, --mixed, and --hard**

All the screenshots should be compiled into a single PDF file(rollno_assignment_2.pdf) and need to be uploaded on LMS. The evaluation happens using your uploaded PDF and Git commit messages.