GIT Assignment

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1. Create and initialise local git repository having simple python calculator program
    git init
    //
    created calculator.py
    //
2. Add all the files into the staging area and commit the first draft code
    git add calculator.py
    git commit -m "commit1”
    //
    [main (root-commit) 9db13f5] commit1
     1 file changed, 21 insertions(+)
     create mode 100644 calculator.py
    //
3. Update the python calculator code adding the function to perform percentage operation
    //
    updated the codes
    //
4. Add the updated code and create another commit
    git add calculator.py
    git commit -m “2nd commit”
    //
    On branch main
    Changes not staged for commit:
      (use "git add <file>..." to update what will be committed)
      (use "git restore <file>..." to discard changes in working directory)
            modified: calculator.py

    Untracked files:
      (use "git add <file>..." to include in what will be committed)
            .idea/

    no changes added to commit (use "git add" and/or "git commit -a")
    //
5. Get the log of commits and show the updated files
    git log
    //
    commit 4002c62880db8672bbd9ced921801096d84d76e5 (HEAD -> main)
    Author: Affan <49243518+affanmohammed@users.noreply.github.com>
    Date: Mon Jun 17 22:54:26 2024 +0530

        2nd commit

    commit 9db13f5e099af238810ceaea4025db9ebfff7b2e

Author: Affan <49243518+affanmohammed@users.noreply.github.com>
Date: Mon Jun 17 22:45:51 2024 +0530

    commit1
//

6. Use hard reset to make repository code to initial commit

git reset --hard HEAD~1
//
HEAD is now at 9db13f5 commit1
//

7. See the hard commit changed the source code with python calculator application without percentage operation

cat calculator.py
//
```
while True:
    a = int(input("enter num 1: "))
    b = int(input("enter num 2: "))

    op = int(input("Select an option:\n1. Add\t2. Sub\t3. Mul\t4. Div\t5. Exit\n"))

    if op == 1:
        print("Sum is:",a+b)
    elif op == 2:
        print("Diff is:", a - b)
    elif op == 3:
        print("Product is:", a * b)
    elif op == 4:
        print("Quotient is:", a / b)
    elif op == 5:
        exit()
```
//

8. Create a new branch with the name ‘new_features’

git checkout -b new_features
//
Switched to a new branch 'new_features'
//

9. Add the new program advance calculator with few advance calculator function and commit it in new feature branch

git add advanced_calculator.py
git commit -m "Added advanced calculator functions"
//
[new_features 4ead052] Added advanced calculator
 1 file changed, 1 insertion(+)
 create mode 100644 advanced_calculator.py
//

10. Merge the branch with master branch

```
git checkout main
git merge new_features
//
Updating 9db13f5..4ead052
Fast-forward
 advanced_calculator.py | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 advanced_calculator.py
//
```

11. Remove the branch new features

```
git branch -d new_features
//
Deleted branch new_features (was 4ead052).
//
```

12. Commit the code in the master branch

```
git commit --allow-empty -m "Merged new_features branch into main"
//
[main a4cf7b5] Merged new_features into main
//
```

13. Create a remote link with your github newly created repository with name calculatorApp

```
git remote add origin affanmohammed/ustgit-assignment1 (github.com)
//
//
```

14. Push the changes into your github repository

```
git push -u origin main
//
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 6 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (7/7), 995 bytes | 995.00 KiB/s, done.
Total 7 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), done.
To https://github.com/affanmohammed/ustgit-assignment1
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
//
```

15. Create new folder in your harddrive and use pull command to get your calculatorApp from github repository

```
mkdir New_Calculator_folder
cd New_Calculator_folder/
git clone https://github.com/affanmohammed/ustgit-assignment1
//
Cloning into 'ustgit-assignment1'...
remote: Enumerating objects: 7, done.
remote: Counting objects: 100% (7/7), done.
remote: Compressing objects: 100% (4/4), done.
```

remote: Total 7 (delta 2), reused 7 (delta 2), pack-reused 0
Receiving objects: 100% (7/7), done.
Resolving deltas: 100% (2/2), done.
//

16. Make few changes into the code and push it back to the github repository

echo 'print("This is an updated version of the calculator.")' >> calculator.py
git add calculator.py
git commit -m "Updated calculator with a new print statement"
git push origin master
//
warning: in the working copy of 'calculator.py', LF will be replaced by CRLF the next time Git touches it

[main 94f6b69] Updated calculator.py
 1 file changed, 1 insertion(+)

Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 6 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 334 bytes | 334.00 KiB/s, done.
Total 3 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/affanmohammed/ustgit-assignment1
  a4cf7b5..94f6b69 main -> main

//