Exercise 8 ASDT GIT 17.01.2025

By Kateryna Kononikhina 77610

1. Create a new repository. Push all commits from Exercise 6a/6b to the remote repository. Because a remote named origin has already been set up in my local repository, I rename the Existing Remote and add the new remote.

```
mt@users-MacBook-Air git_reset_test % git remote rename origin old_origin

Renaming remote references: 100% (3/3), done.
mt@users-MacBook-Air git_reset_test % git remote add origin https://github.com/Speedkon/exercise_8.git

mt@users-MacBook-Air git_reset_test % git remote -v

old_origin      https://github.com/Speedkon/git_reset_test.git (fetch)
old_origin      https://github.com/Speedkon/git_reset_test.git (push)
origin  https://github.com/Speedkon/exercise_8.git (fetch)
origin  https://github.com/Speedkon/exercise_8.git (push)
```

2. Push all commits to the remote repository. Confirm the remote is set up correctly.

```
mt@users-MacBook-Air git_reset_test % git push -u origin main

git: 'credential-manager' is not a git command. See 'git --help'.
Enumerating objects: 20, done.
Counting objects: 100% (20/20), done.
Delta compression using up to 8 threads
Compressing objects: 100% (15/15), done.
Writing objects: 100% (20/20), 315.74 KiB | 31.57 MiB/s, done.
Total 20 (delta 5), reused 3 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (5/5), done.
To https://github.com/Speedkon/exercise_8.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
mt@users-MacBook-Air git_reset_test % git remote -v

old_origin      https://github.com/Speedkon/git_reset_test.git (fetch)
old_origin      https://github.com/Speedkon/git_reset_test.git (push)
origin  https://github.com/Speedkon/exercise_8.git (fetch)
origin  https://github.com/Speedkon/exercise_8.git (push)
```

3. Play with git remote . Check remotes. Rename the remote.

```
mt@users-MacBook-Air git_reset_test % git remote -v

old_origin      https://github.com/Speedkon/git_reset_test.git (fetch)
old_origin      https://github.com/Speedkon/git_reset_test.git (push)
origin  https://github.com/Speedkon/exercise_8.git (fetch)
origin  https://github.com/Speedkon/exercise_8.git (push)
mt@users-MacBook-Air git_reset_test % git remote rename origin upstream
git remote -v

Renaming remote references: 100% (1/1), done.
old_origin      https://github.com/Speedkon/git_reset_test.git (fetch)
old_origin      https://github.com/Speedkon/git_reset_test.git (push)
upstream        https://github.com/Speedkon/exercise_8.git (fetch)
upstream        https://github.com/Speedkon/exercise_8.git (push)
```

4. Play with git fetch. Fetch the remote changes

```
mt@users-MacBook-Air git_reset_test % git fetch upstream
```

5. Play with git pull. Pull the changes to update my local branch.

```
mt@users–MacBook–Air git_reset_test % git pull upstream main

From https://github.com/Speedkon/exercise_8
 * branch              main        -> FETCH_HEAD
Already up to date.
```

6. Play with git push. Make a local change and push it.

```
mt@users–MacBook–Air git_reset_test % echo "Testing push" >> test_file.txt
git add test_file.txt
git commit -m "Test push"
git push upstream main

[main cdb79ae] Test push
 1 file changed, 1 insertion(+)
 create mode 100644 test_file.txt
git: 'credential-manager' is not a git command. See 'git --help'.
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 290 bytes | 290.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Speedkon/exercise_8.git
   f7ababe..cdb79ae  main -> main
```

7. Play with git branch. List all branches. Create a new branch and push it.

```
mt@users–MacBook–Air git_reset_test % git branch -a

* main
  remotes/old_origin/HEAD -> old_origin/main
  remotes/old_origin/main
  remotes/upstream/main
mt@users–MacBook–Air git_reset_test % git checkout -b feature/test_branch
git push upstream feature/test_branch

Switched to a new branch 'feature/test_branch'
git: 'credential-manager' is not a git command. See 'git --help'.
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature/test_branch' on GitHub by visiting:
remote:      https://github.com/Speedkon/exercise_8/pull/new/feature/test_branch
remote:
To https://github.com/Speedkon/exercise_8.git
 * [new branch]      feature/test_branch -> feature/test_branch
```

8. Execute fast-forward merge. Create a New Branch and Make Changes. Switch Back to main and Merge.

```
● mt@users-MacBook-Air git_reset_test % git checkout -b feature/fast_forward
  echo "Fast-forward example" > ff_example.txt
  git add ff_example.txt
  git commit -m "Add fast-forward example"

  Switched to a new branch 'feature/fast_forward'
  [feature/fast_forward 178666e] Add fast-forward example
   1 file changed, 1 insertion(+)
   create mode 100644 ff_example.txt
● mt@users-MacBook-Air git_reset_test % git checkout main
  git merge feature/fast_forward

  Switched to branch 'main'
  Your branch is up to date with 'upstream/main'.
  Updating cdb79ae..178666e
  Fast-forward
   ff_example.txt | 1 +
   1 file changed, 1 insertion(+)
   create mode 100644 ff_example.txt
```

9. Execute a 3-way merge. Create Two Branches with Conflicting Changes. Merge the Branches.

```
● mt@users-MacBook-Air git_reset_test % git checkout -b feature/three_way_branch1
  echo "Change from branch 1" > merge_example.txt
  git add merge_example.txt
  git commit -m "Change from branch 1"

  Switched to a new branch 'feature/three_way_branch1'
  [feature/three_way_branch1 468bfbf] Change from branch 1
   1 file changed, 1 insertion(+)
   create mode 100644 merge_example.txt
● mt@users-MacBook-Air git_reset_test % git checkout -b feature/three_way_branch2 main
  echo "Change from branch 2" > merge_example.txt
  git add merge_example.txt
  git commit -m "Change from branch 2"

  Switched to a new branch 'feature/three_way_branch2'
  [feature/three_way_branch2 2656ecf] Change from branch 2
   1 file changed, 1 insertion(+)
   create mode 100644 merge_example.txt
● mt@users-MacBook-Air git_reset_test % git checkout main
  git merge feature/three_way_branch1

  Switched to branch 'main'
  Your branch is ahead of 'upstream/main' by 1 commit.
    (use "git push" to publish your local commits)
  Updating 178666e..468bfbf
  Fast-forward
   merge_example.txt | 1 +
   1 file changed, 1 insertion(+)
   create mode 100644 merge_example.txt
⊗ mt@users-MacBook-Air git_reset_test % git merge feature/three_way_branch2

  Auto-merging merge_example.txt
  CONFLICT (add/add): Merge conflict in merge_example.txt
  Automatic merge failed; fix conflicts and then commit the result.
```
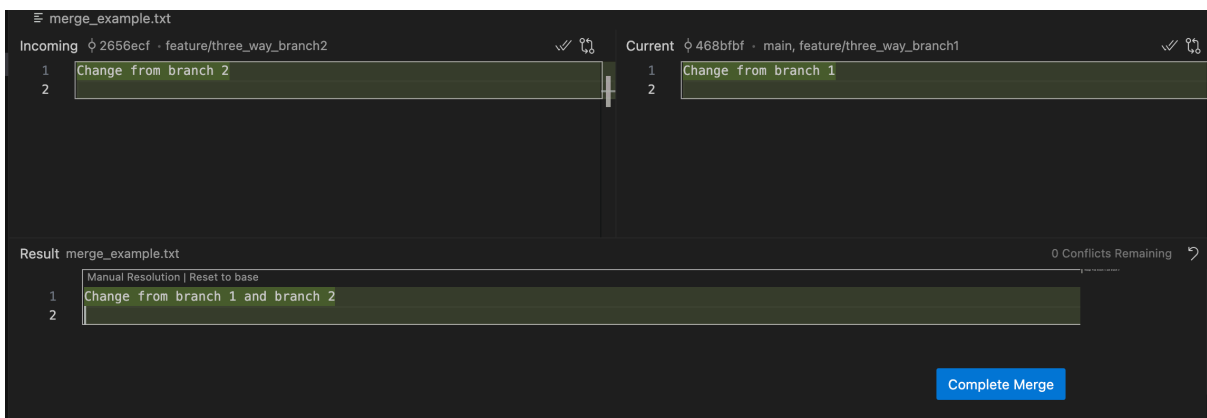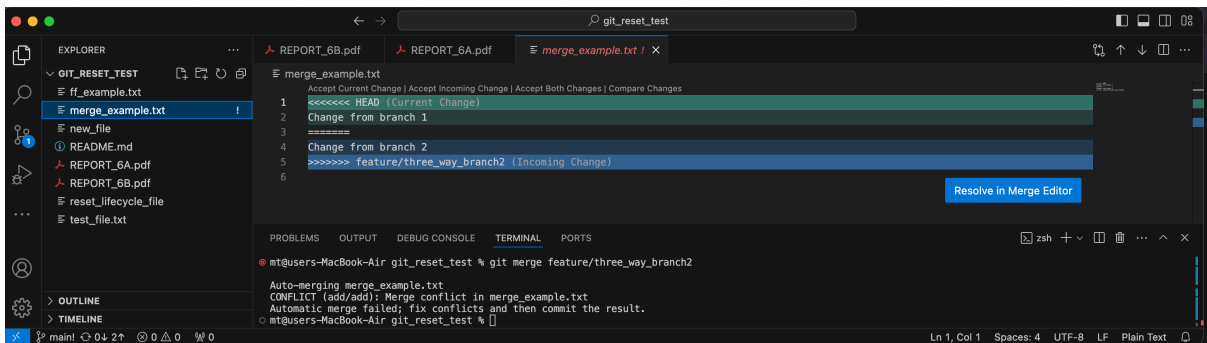
10. Resolve the Conflict . Resolve the conflict manually by choosing or combining the changes. Add the resolved file. Complete the merge.

11. Push all the merged changes to the remote repository. Push any branches you worked on.

```
mt@users-MacBook-Air git_reset_test % git push upstream main
git: 'credential-manager' is not a git command. See 'git --help'.
Enumerating objects: 13, done.
Counting objects: 100% (13/13), done.
Delta compression using up to 8 threads
Compressing objects: 100% (8/8), done.
Writing objects: 100% (12/12), 1000 bytes | 1000.00 KiB/s, done.
Total 12 (delta 5), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (5/5), completed with 1 local object.
To https://github.com/Speedkon/exercise_8.git
   cdb79ae..91fc74f  main -> main
mt@users-MacBook-Air git_reset_test % git push upstream feature/fast_forward
git: 'credential-manager' is not a git command. See 'git --help'.
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature/fast_forward' on GitHub by visiting:
remote:      https://github.com/Speedkon/exercise_8/pull/new/feature/fast_forward
remote:
To https://github.com/Speedkon/exercise_8.git
 * [new branch]      feature/fast_forward -> feature/fast_forward
mt@users-MacBook-Air git_reset_test % git push upstream feature/three_way_branch1
git: 'credential-manager' is not a git command. See 'git --help'.
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature/three_way_branch1' on GitHub by visiting:
remote:      https://github.com/Speedkon/exercise_8/pull/new/feature/three_way_branch1
remote:
To https://github.com/Speedkon/exercise_8.git
 * [new branch]      feature/three_way_branch1 -> feature/three_way_branch1
mt@users-MacBook-Air git_reset_test % git push upstream feature/three_way_branch2
git: 'credential-manager' is not a git command. See 'git --help'.
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature/three_way_branch2' on GitHub by visiting:
remote:      https://github.com/Speedkon/exercise_8/pull/new/feature/three_way_branch2
remote:
To https://github.com/Speedkon/exercise_8.git
 * [new branch]      feature/three_way_branch2 -> feature/three_way_branch2
mt@users-MacBook-Air git_reset_test %
```