Git Resolving Conflict

Creating and Switching Branches

1. Create a new branch:
   - git branch dev-feature
2. Switch to the new branch:
   - git checkout dev-feature

Merging Branches:

1. Make changes in the dev-feature branch:
2.
   - echo "This is a dev feature." >> feature.txt
   - git add feature.txt
   - git commit -m "Add new feature"

3. Switch back to the master branch:

   - git checkout master

2. Merge the new-feature branch into master:

   - git merge dev-feature

Create a merge conflict by editing the same line in both branches:

1. In master branch, edit feature.txt

   - echo "This is the master branch edit." >> feature.txt

   - git commit -am "Edit feature.txt in main branch"

2. In dev-feature branch, edit feature.txt

   - git checkout dev-feature
   - echo "This is the dev-feature branch edit." >> feature.txt
   - git commit -am "Edit feature.txt in dev-feature branch"

3. Switch back to main and merge dev-feature

- git checkout master
- git merge dev-feature

the result is:

```
Auto-merging feature.txt

CONFLICT (content): Merge conflict in feature.txt
Automatic merge failed; fix conflicts and then commit the result.
```

4. Resolve the conflict in feature.txt manually, then add and commit:
   - git diff

```
diff --cc feature.txt
index fa4df13,1d00f4f..0000000
--- a/feature.txt
+++ b/feature.txt
@@@ -1,2 -1,2 +1,6 @@@
  Hello MST student!
++<<<<<<< HEAD
 +This is the master branch edit.
++=======
+ This is the dev-feature branch edit.
++>>>>>>> dev-feature
```

   - Open feature.txt to View the Conflict by typing
     i. **cat feature.txt**

     The content:

```
<<<<<<< HEAD
This is the master branch edit.
=======
This is the new-feature branch edit.
>>>>>>> dev-feature
```

   - Edit feature.txt to Resolve the Conflict

```
This is the master  branch edit.
This is the dev-feature branch edit.
```

   - Add the Resolved File to the Staging Area by typing
     i. **git add feature.txt**

   - Complete the Merge with a Commit by typing
     i. **git commit -m "Resolve merge conflict in feature.txt"**