**Demo Resolving Merge Conflicts on File Modifications**

**Objective:** To demonstrate the resolution of merge conflicts when resolving conflicts in Git when the same file is modified on different branches

**Tools required:** Git and GitHub

**Prerequisites:** To create a Git repository

Steps to be followed:

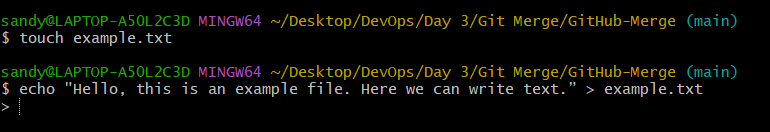
1. Create a new branch
2. Create a new file and commit changes
3. Switch back to the main branch
4. Make different changes to the same file
5. Merge the branches and resolve the conflict

**Step 1: Create a new branch**

1. Execute the following commands to create and modify a new file in the main branch:

**touch example.txt**

**echo "Hello, this is an example file. Here we can write text.” > example.txt**

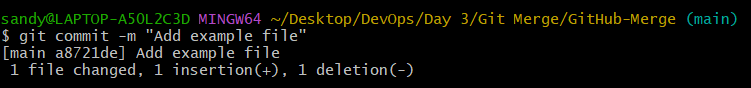


1. Run the following commands to add and commit the changes:

**git add example.txt**

**git commit -m "Add example file"**

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1. Run the command below to create and switch to a **new-branch** branch:

**git checkout -b new-branch**

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**Step 2: Create a new file and commit changes**

1. Execute the following commands to create a new file in the **new-branch**:

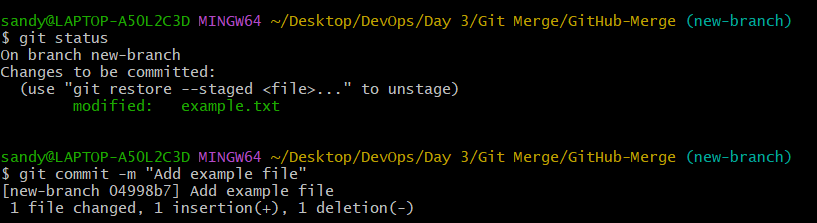
**echo "Hello, this is an example code." > example.txt**

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1. Run the following commands to add and commit the changes:

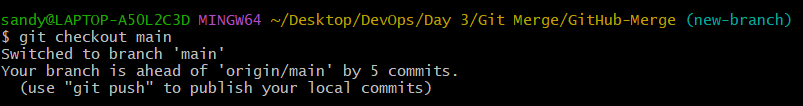
**git add example.txt**

**git commit -m "Add example file"**

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**Step 3: Switch back to the main branch**

1. Use the command below to switch to the main branch: **git checkout master**

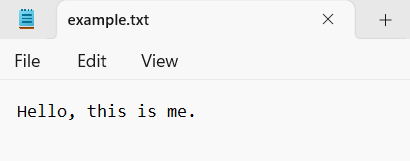


**Step 4: Make different changes to the same file**

1. Execute the following command to modify the **example.txt** file in the main branch:

**echo "Hello, this is me." > example.txt**

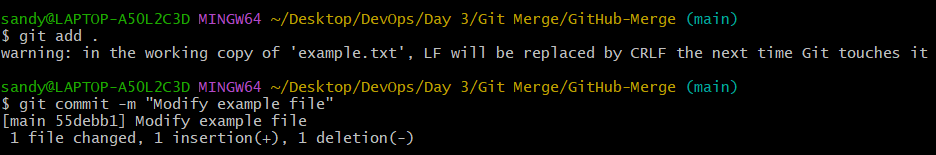




1. Run the following commands to add and commit the changes:

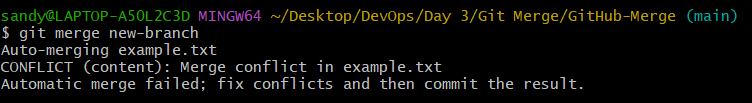
**git add example.txt**

**git commit -m "Modify example file"**



**Step 5: Merge the branches and resolve the conflict**

* 1. Merge the branchusing the following command: **git merge new-branch**

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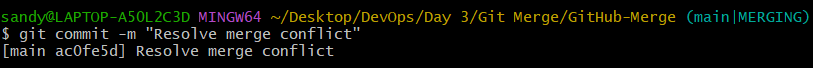
**Note:** Altering the same file differently on two branches will result in a merge conflict. Resolve it, open the conflicted file in a text editor and choose which changes to retain.

* 1. After editing, add the resolved file to the staging area using the following command:

**git add example.txt**

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* 1. Use the following command to commit the resolved changes: **git commit -m "Resolve merge conflict"**

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By following these steps, you have successfully demonstrated the resolution of merge conflicts for resolving conflicts in Git when the same file is modified on different branches.

