**Lesson 4 Lesson-End Project**

**Create a new branch and merge the branch in Git**

**Project Agenda:** To create a new branch and merge it in Git

**Description:** You are working in a IT company. Your company is working on a project which contains three modules and you have been asked to work on one of the module. Your company asked you to upload all the project files in the GitHub repository. You can create a new branch and work on it so that you don't impact the main code base. After you complete your module you can merge it into the master branch.

**Tools required:** Git

**Pre-requisites:** You must have installed Git in the lab in order to proceed. In case you do not have it please refer to Lesson 4 Demo 1 to install and setup Git.

**Expected Deliverables:**  Create a GitHub repository, clone the GitHub repository, create a new branch, switch between the branches, and merge the branch

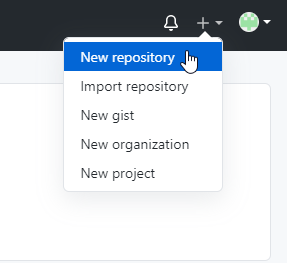
**Steps to be followed:**

1. Create a new repository
2. Clone the GitHub repository
3. Create a new branch and verify the creation of the new branch
4. Rename an existing branch and list all the branches in your repository
5. Create a new branch and switch to the new branch
6. Create a file and commit the changes
7. Check the status of the new branch
8. Delete the branch and verify the deletion of the branch
9. Switch back to the main branch
10. Merge the branches

**Step 1: Creating a new repository**

1.1 Open the browser in your lab, go to **github.com,** and log in to your account

1.2 Click on the **+** icon from the upper-right corner of the page and select **New repository** from the drop-down menu

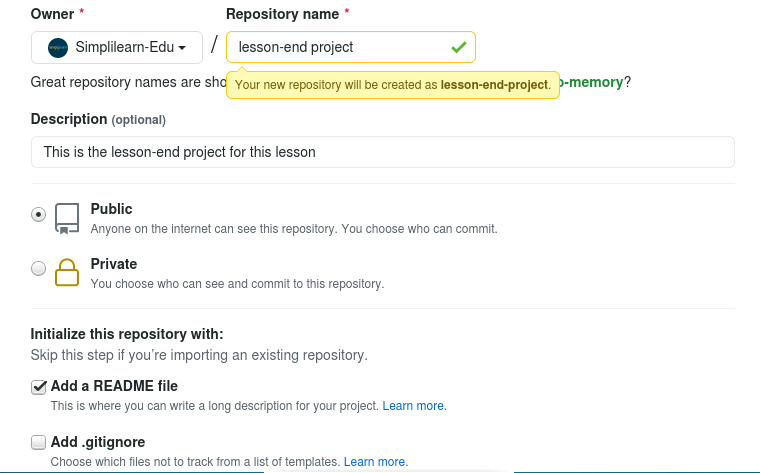


1.3 Enter *lesson-end project* the **Repository name.** Entering **Description** is optional.

1.4 Choose **Public** for the repository type

1.5 Select **Initialize this repository with a README** to include a *README* file for the repository

1.6 Click on the **Create Repository** button

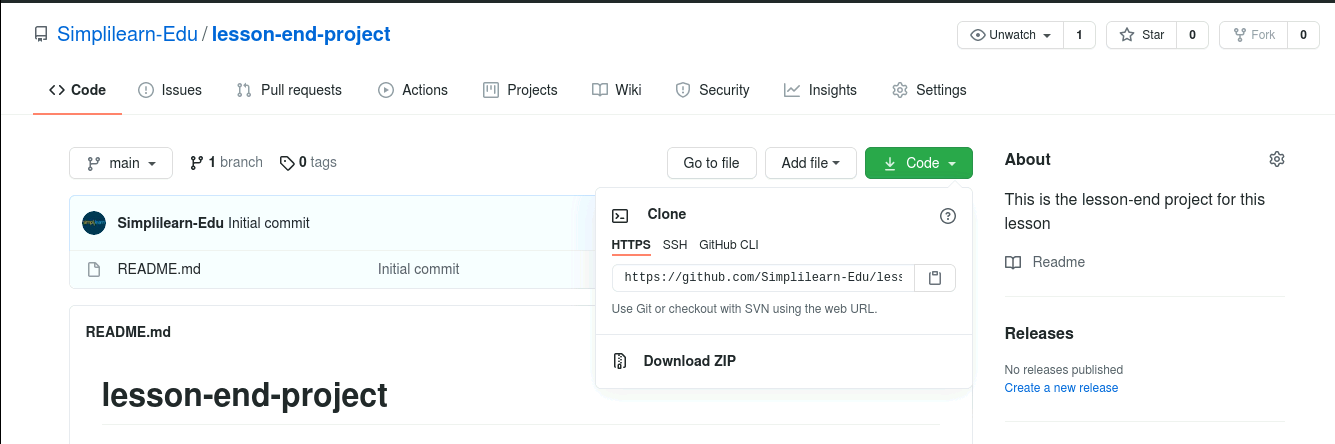
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**Step 2: Clone the GitHub repository**

2.1 Open the browser in your lab, Go to **github.com,** and log in to your account

2.2 Open the **lesson-end-project** repo and click on the **Code** button

2.3 Click on the icon as shown in the following image to copy the **URL** provided under **HTTPS**

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2.4 Open the **Terminal** tab on your lab and use the following command to clone the repository:

**$ git clone URL**

**Note:** Replace URL with the copied URL from the repository

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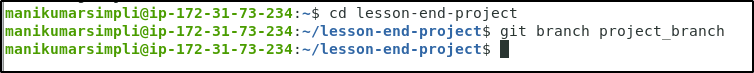
**Step 3: Create a new branch and verify the creation of the new branch**

3.1 Navigate to the **lesson-end-project**

***cd lesson-end-project***

3.2 Use the following command to create a new branch in your repository:

***git branch project\_branch***



3.3 Verify the creation of the new branch

***git branch***



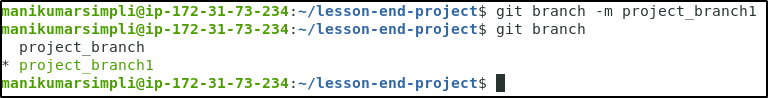
**Step 4: Rename an existing branch and list all the branches in your repository**

4.1 Use the following command to rename the new\_branch:

***git branch -m project\_branch1***

4.2 Use the following command to list the branches to verify the new name of the branch:

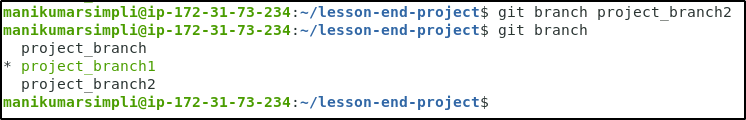
***git branch***



**Step 5: Create a new branch and switch to the new branch**

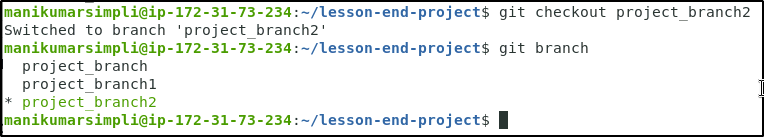
5.1 Execute the following command to create a new branch:

***git branch project\_branch2***

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5.2 Use the following command to switch to the newly created **project\_branch2**:

***git checkout project\_branch2***

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**Step 6: Create a file and commit the changes**

6.1 Use the following command to create a file:

***vi index.html***



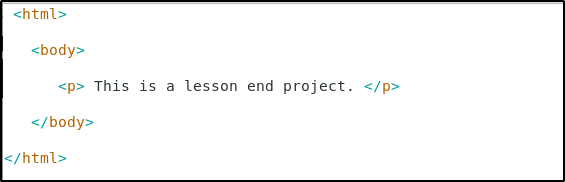
6.2 Add the following code in the **index.html** file  
  
 **<html>**

**<body>**

**<p> This is a lesson end project. </p>**

**</body>**

**</html>**

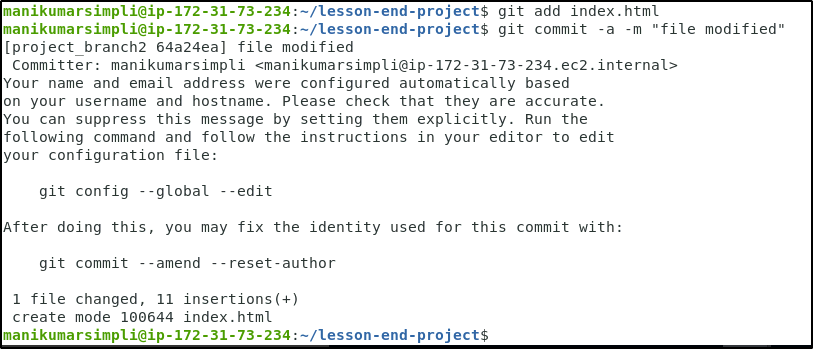
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**Note:** Press **Esc** button and enter **:wq** to save the file.

6.3 Use the following commands to add the file to the **project\_branch2** and commit the changes:

***git add index.html***

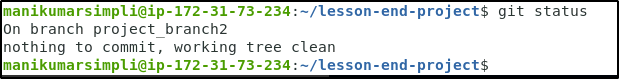
***git commit -a -m "file modified"***



**Step 7: Check the status of the new branch**

7.1 Check the status of the new branch using the following command:

***git status***



**Step 8: Delete the branch and verify the deletion of the branch**

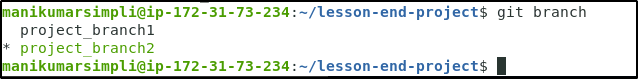
8.1 Use the following command to delete the newly created branch:

***git branch -d project\_branch***



8.2Verify the deletion of the branch

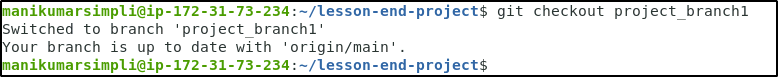
***git branch***

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**Step 9: Switch back to the main branch**

9.1 Use the following command to switch back to the main branch:

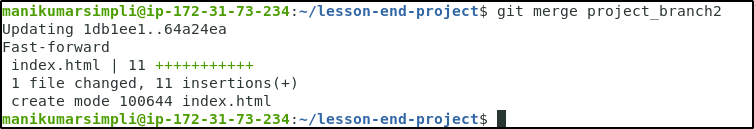
***git checkout project\_branch1***

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**Step 10: Merge the branches**

10.1 Use the following command to merge the test\_branch to the main branch:

***git merge project\_branch2***

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