

## Lesson 02 Demo 02

### Pushing a File to the GitHub Repository

**Objective:** To demonstrate the process of pushing a file to a GitHub repository using Git commands for version control and collaboration

**Tools required:** Git and GitHub

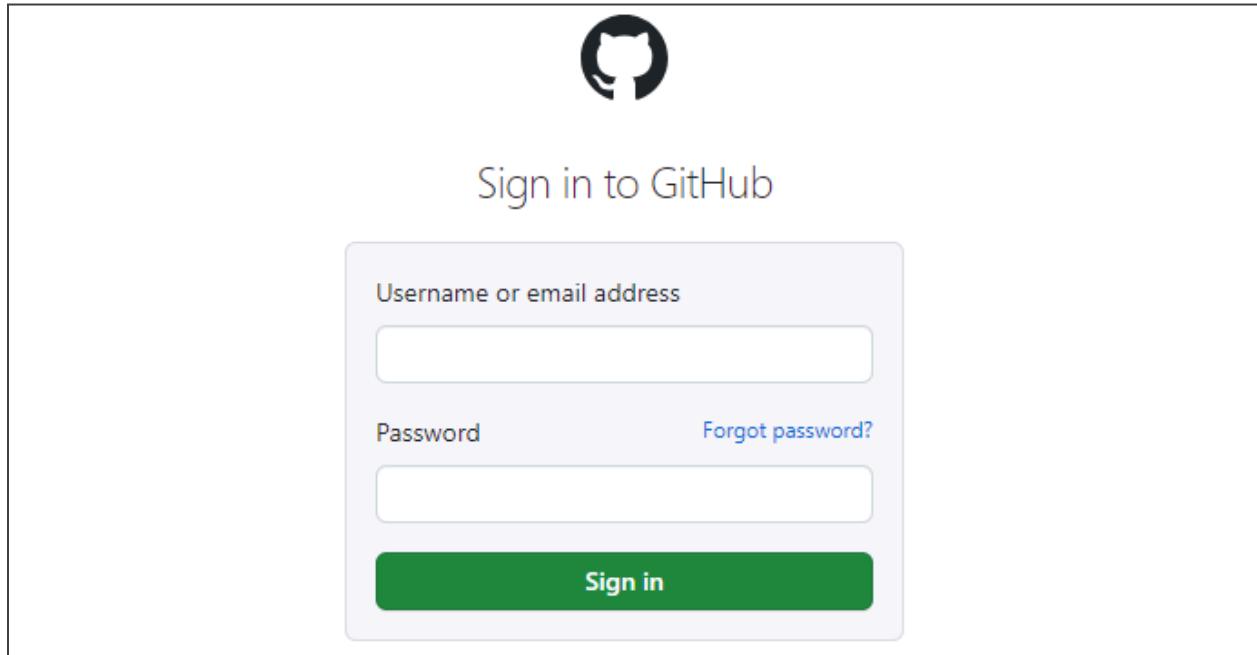
**Prerequisites:** You need to have Git installed to proceed with this demo.

Steps to be followed:

1. Create a GitHub repository
2. Create a repository on the local machine
3. Push the changes in the local repository to GitHub
4. Check the status of the local and remote repository

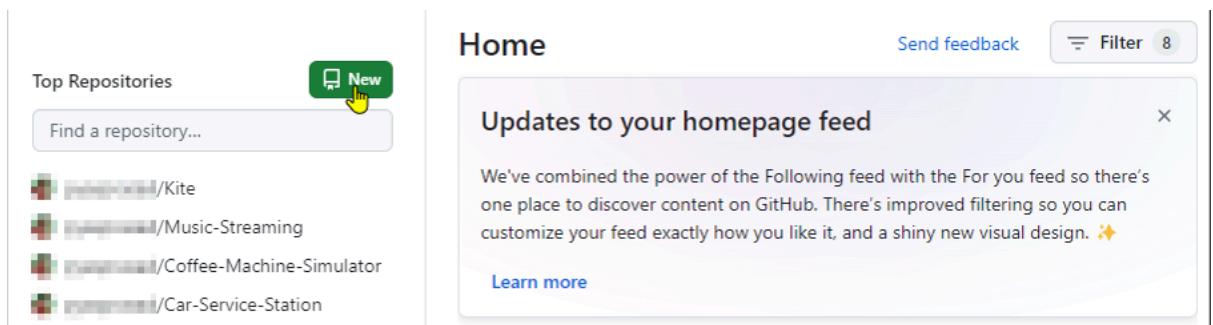
#### Step 1: Create a GitHub repository

1.1 Open the browser in your lab, go to [github.com](https://github.com), and log in to your account



**Note:** If you do not have a GitHub account, visit the official website at <https://github.com/signup> and create a new account

## 1.2 Click on the **New** button to create a new GitHub repository



## 1.3 Enter the repository name and description, then click the **Create repository** button

A screenshot of the "Create a new repository" form. It starts with a title "Create a new repository" and a note about what a repository contains. Below is a "Required fields are marked with an asterisk (\*)." section. The "Owner" field shows a user icon and a dropdown menu. The "Repository name \*" field is filled with "lesson-end project" and has a red border, indicating it's the current focus. A note below says "Your new repository will be created as lesson-end-project." The "Description (optional)" field contains the text "This is the lesson-end project for this lesson." with a red border. At the bottom, there's a note about setting the default branch, a warning about creating a public repository in a personal account, and a large green "Create repository" button with a yellow cursor pointing to it.A continuation of the previous screenshot, focusing on the bottom of the form. It shows the note about the default branch, the warning about creating a public repository, and the large green "Create repository" button with a yellow cursor pointing to it.

## Step 2: Create a repository on the local machine

- 2.1 Open the terminal tab in your lab, and execute the following command to create a new project directory:

```
mkdir createnewproject
```

```
priyanshurajsim@ip-172-31-28-201:~/Priyanshu$ mkdir createnewproject  
priyanshurajsim@ip-172-31-28-201:~/Priyanshu$
```

- 2.2 Run the following command to change the directory:

```
cd createnewproject
```

```
priyanshurajsim@ip-172-31-28-201:~/Priyanshu$ cd createnewproject  
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$
```

- 2.3 Create a README file using the following command:

```
echo "# create new file for my project" >> README.md
```

```
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$ echo "# create new file for my project" >> README.md  
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$
```

- 2.4 Initialize the Git repository using the following command:

```
git init
```

```
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$ git init  
hint: Using 'master' as the name for the initial branch. This default branch name  
hint: is subject to change. To configure the initial branch name to use in all  
hint: of your new repositories, which will suppress this warning, call:  
hint:  
hint:   git config --global init.defaultBranch <name>  
hint:  
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and  
hint: 'development'. The just-created branch can be renamed via this command:  
hint:  
hint:   git branch -m <name>  
Initialized empty Git repository in /home/priyanshurajsim/Priyanshu/createnewproject/.git/  
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$
```

- 2.5 Add the README file using the command given below:

```
git add .
```

```
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$ git add .  
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$
```

2.6 Use the following command to commit the changes:

```
git commit -m "Added README file"
```

```
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$ git commit -m "Added README file"
[master (root-commit) c5f0069] Added README file
 1 file changed, 1 insertion(+)
 create mode 100644 README.md
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$ █
```

### Step 3: Push the changes in the local repository to GitHub

3.1 Open the **Terminal** and add a remote repository using the following command:

```
git remote add origin <URL>
```

```
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$ git remote add origin https://github.com/pyasprasad/lesson-end-project.git
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$ █
```

**Note:** While creating the remote repository, copy the HTTPS URL

3.2 Push the changes to the remote repository using the following command:

```
git push -u origin master
```

```
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$ git push -u origin master
Username for 'https://github.com': pyasprasad
Password for 'https://pyasprasad@github.com':
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 261 bytes | 261.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:     https://github.com/pyasprasad/lesson-end-project/pull/new/master
remote:
To https://github.com/pyasprasad/lesson-end-project.git
 * [new branch]      master -> master
% branch 'master' set up to track 'origin/master'.
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$
```

**Note:** After executing the Git push command, you will be asked to enter the username and password for your GitHub account.

## Step 4: Check the status of the local and remote repository

4.1 Run the following command to check the status of the local repository:

```
git status
```

```
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean
priyanshurajsim@ip-172-31-28-201:~/Priyanshu/createnewproject$
```

4.2 Visit [github.com](https://github.com) to inspect the remote repository

The screenshot shows a GitHub repository page for 'lesson-end-project' owned by 'pyasprasad'. The repository has 2 branches and 0 tags. There is one commit labeled 'Initial commit' from 22 minutes ago. The 'About' section states: 'This is the lesson-end project for this lesson.' The 'Releases' section says 'No releases published' and has a link to 'Create a new release'. The 'Packages' section is empty.

By following these steps, you have effectively demonstrated the process of pushing a file to a GitHub repository using Git commands for version control and collaboration.