

## Module 6: Git Server Administration

## Source Code Management using GIT

Demo 4:

**Problem Statement:** Demonstrate managing git lab.

This section will guide you to:

- What is Git lab
- Creation of account on Git Lab
- Creation of new project on Git Lab
- Pushing commit to Git Lab Project

### Solution:

Gitlab provides services to host the developers code as well as provide the access to remote git repositories.

#### 1) Creating Git Lab account.

For using Git Lab users are required to create account on [GitLab](#). For new users click on registered and fill the requested details. For existing users, it is required to Sign in to make use of services.

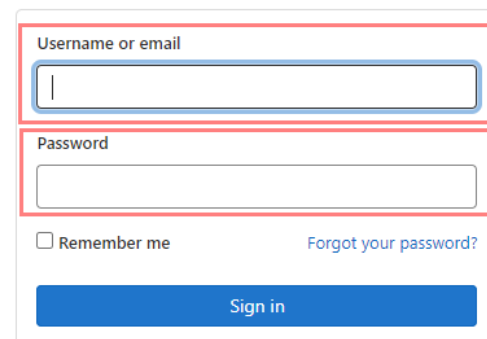
## GitLab.com

GitLab.com offers free unlimited (private) repositories and unlimited collaborators.

- [Explore projects on GitLab.com](#) (no login needed)
- [More information about GitLab.com](#)
- [GitLab Community Forum](#)
- [GitLab Homepage](#)

By signing up for and by signing in to this service you accept our:

- [Privacy policy](#)
- [GitLab.com Terms.](#)



Username or email


Password


☐ Remember me [Forgot your password?](#)


Sign in


Don't have an account yet? [Register now](#)

Sign in with

 Google

 GitHub

 Twitter

 Bitbucket

## Source Code Management using GIT

Once information will be submitted, user will be requested to confirm the account by clicking on the link provided in mail.



# Almost there...


Please check your email to confirm your account

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No confirmation email received? Please check your spam folder or

[Request new confirmation email](#)

- 2) Create project on Git Lab by following 3 steps process for new Users.
  - i) Define your profile and use case to Git Lab.

 GitLab

1. Your profile

2. Your GitLab group

3. Your first project

## Welcome to GitLab, zeal !

To personalize your GitLab experience, we'd like to know a bit more about you.  
We won't share this information with anyone.

Role

Devops Engineer

Who will be using GitLab?

☒ My company or team


☐ Just me

I'm signing up for GitLab because:

I want to explore GitLab to see if it's worth switching to

Continue

- ii) Select the Group name and visibility of project to organization.

 GitLab

1. Your profile

2. Your GitLab group

3. Your first project

### Create your group

A group represents your organization in GitLab. Groups allow you to manage users and collaborate across multiple projects.

**Group name (your organization)**  
  
You can always edit this later

**Group URL**


**Visibility level**

**GitLab Ultimate trial (optional)**  
Try all GitLab features for free for 30 days.  
No credit card required.  
☒  
We will activate your trial on your group after you complete this step. After 30 days, you can:

- Upgrade to Ultimate to keep using GitLab with advanced features.
- Continue using the basic features of GitLab for free.

Create group

- iii) Provide the project name and click on create project.

 GitLab

[1. Your profile](#)   [2. Your GitLab group](#)   [3. Your first project](#)

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### Create/import your first project

This project will live in your group **zeallearn**. A project is where you house your files (repository), plan your work (issues), publish your documentation (wiki), and so much more.

Create

Import


Project name


zeallearn

You can always edit this later

Project URL

https://gitlab.com/zeallearn/   zeallearn

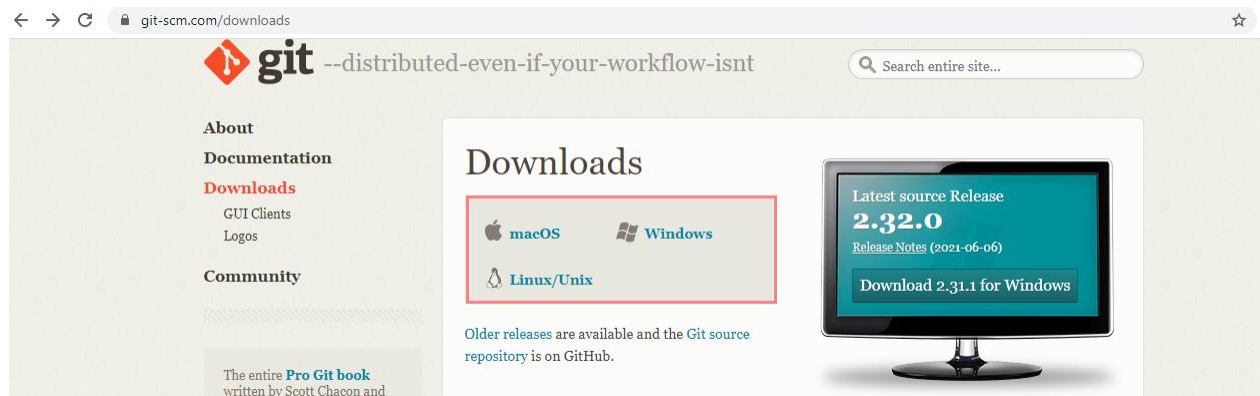
Visibility Level 

☒  Private  
Project access must be granted explicitly to each user. If this project is part of a group, access will be granted to members of the group.

Create project

- 3) Now users can create project on GitLab. These will work as remote repository. To start working with remote repository we need to [download and install Git](#) on local machines. Downloads will provide git executable for Windows, Mac, and Linux distributions.

## Source Code Management using GIT



- 4) Once Git is installed, Configure the GitLab configuration using terminal or Git bash using below commands.

- i) Check for git version by using command  
*git --version*

```
$ git --version
git version 2.31.1.windows.1
```

- ii) Run below commands to configure Git Lab account in local machine.  
*git config --global user.name "username"*

```
sandy@DESKTOP-MUQKUHO MINGW64 ~
$ git config --global user.name "zeallearn123"

sandy@DESKTOP-MUQKUHO MINGW64 ~
$ git config --global user.name
zeallearn123

sandy@DESKTOP-MUQKUHO MINGW64 ~
$ |
```

- iii) Similarly, users are required to add email address created on Git Lab.

*git config --global user.email "email address"*

## Source Code Management using GIT

```
$ git config --global user.email "khwahish1708@gmail.com"

sandy@DESKTOP-MUQKUHO MINGW64 ~
$ git config --global user.email
khwahish1708@gmail.com

sandy@DESKTOP-MUQKUHO MINGW64 ~
$ |
```

- iv) To verify the configured account run below command on terminal.  
*git config --global --list*

```
$ git config --global --list
user.name=zeallearn123
user.email=khwahish1708@gmail.com
```

- 5) Add a project on local machine which can be pushed to GitLab.

- i) Create a directory on local machine and run below command to initialize it as Git repository.  
*git init*

```
$ git init
Initialized empty Git repository in C:/Zeallearn/FirstProject/.git/
```

- ii) Check if any untracked files are required to be added to staging area by using below command.

*git status*



## Source Code Management using GIT

```
sandy@DESKTOP-MUQKUH0 MINGW64 /c/Zealearn/FirstProject (master)
$ git status
On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)

sandy@DESKTOP-MUQKUH0 MINGW64 /c/Zealearn/FirstProject (master)
$ |
```

- iii) Perform changes in code and commit the changes by passing meaningful message in commit command.  
*git commit -m "commit message"*

```
$ touch file2

sandy@DESKTOP-MUQKUH0 MINGW64 /c/Zealearn/FirstProject (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        file1
        file2

nothing added to commit but untracked files present (use "git add" to track)

sandy@DESKTOP-MUQKUH0 MINGW64 /c/Zealearn/FirstProject (master)
$ git add .

sandy@DESKTOP-MUQKUH0 MINGW64 /c/Zealearn/FirstProject (master)
$ git commit -m "first commit"
[master (root-commit) b227fee] first commit
2 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 file1
create mode 100644 file2

sandy@DESKTOP-MUQKUH0 MINGW64 /c/Zealearn/FirstProject (master)
$ |
```

- iv) Now copy the project URL from GitLab account to push the changes.

## Source Code Management using GIT

**zeallearn** Project ID: 27216752

🔔 Star 0

### Invite your team

Add members to this project and start collaborating with your team.

[Invite members](#)

### The repository for this project is empty

You can get started by cloning the repository or start adding files to it with one of the following options.

[Clone](#) [Upload File](#) [New file](#) [Add README](#) [Add LICENSE](#) [Add CHANGELOG](#) [Add CONTRIBUTING](#)

Clone with SSH  
git@gitlab.com:zeallearn/zeallearn

Clone with HTTPS  
https://gitlab.com/zeallearn/zeall

Open in your IDE  
Visual Studio Code (SSH)  
Visual Studio Code (HTTPS)

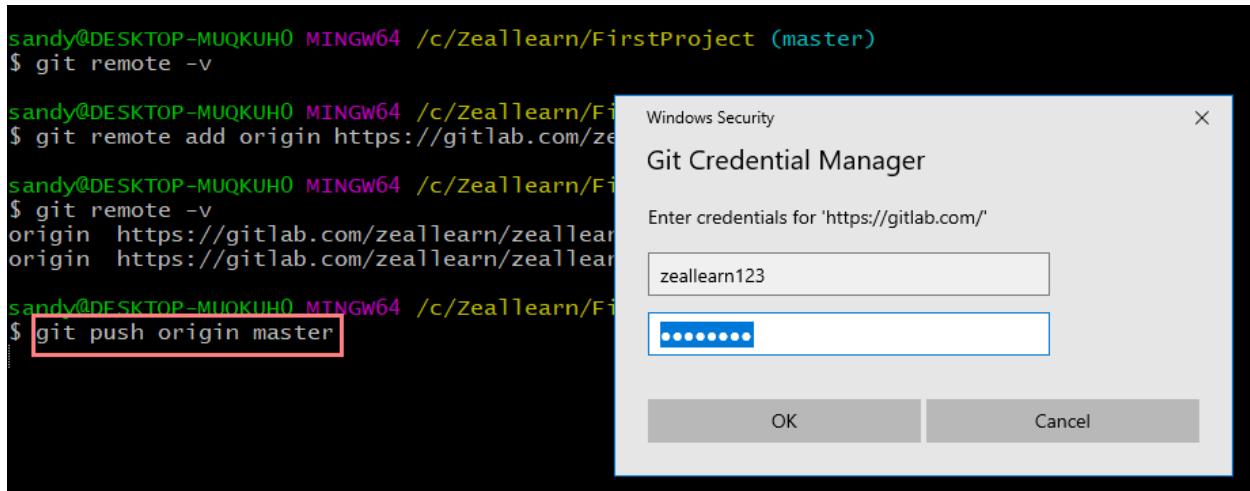
```
git clone https://gitlab.com/zeallearn/zeallearn.git
```

- v) Add the clone repository to local machine by passing the copied URL in command.

```
sandy@DESKTOP-MUQKUHO MINGW64 /c/Zeallearn/FirstProject (master)
$ git remote add origin https://gitlab.com/zeallearn/zeallearn.git
sandy@DESKTOP-MUQKUHO MINGW64 /c/Zeallearn/FirstProject (master)
$ git remote -v
origin https://gitlab.com/zeallearn/zeallearn.git (fetch)
origin https://gitlab.com/zeallearn/zeallearn.git (push)
```

- vi) Now committed changes can be pushed to Remote repository created on Git Lab using command given below, it will prompt to enter the GitLab credentials.

## Source Code Management using GIT



Once credentials will be accepted, committed changes can be successfully added to GitLab project.

```
$ git push origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 216 bytes | 11.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://gitlab.com/zeallearn/zeallearn.git
 * [new branch]      master -> master
```

vii) On Git Lab user can see the files added to remote Project.


## Source Code Management using GIT

zeallearn > zeallearn

 **zeallearn**   
Project ID: 27216752


  Star 0  Fork 0



1 Commit 1 Branch 0 Tags 143 KB Files 143 KB Storage






**Auto DevOps**  
It will automatically build, test, and deploy your application based on a predefined CI/CD configuration.  
[Learn more in the Auto DevOps documentation](#)  
[Enable in settings](#)

master zeallearn / + History Find file Web IDE Clone

 **first commit**  
zeal learn authored 19 minutes ago

 b227fee0 

-  Upload File  Add README  Add LICENSE  Add CHANGELOG  Add CONTRIBUTING  Add Kubernetes cluster
-  Set up CI/CD  Configure Integrations

Name	Last commit	Last update
 file1	first commit	19 minutes ago
 file2	first commit	19 minutes ago