




# **GITLAB**

# **PENGURUSAN REPOSITORI**

# **KOD SUMBER**

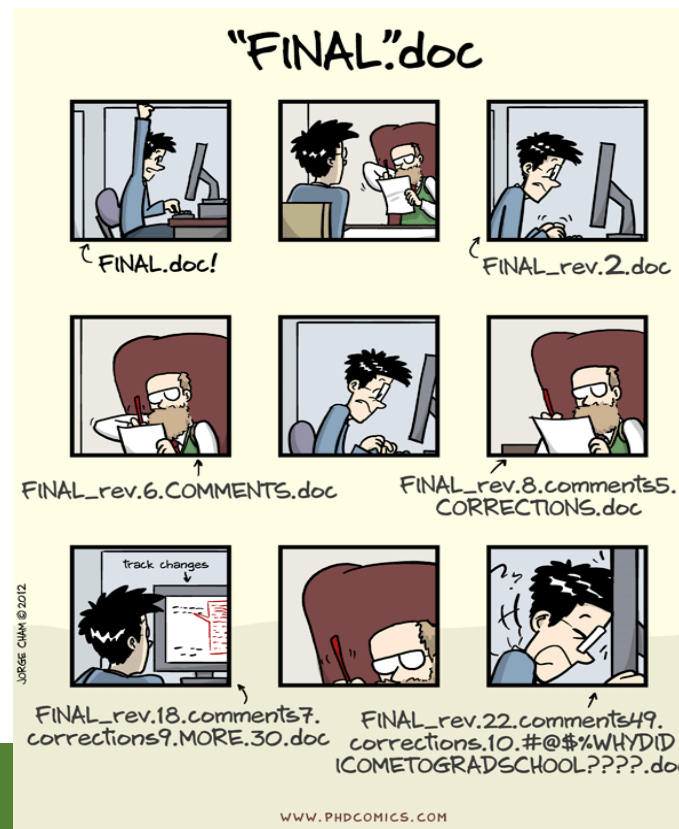
**Mohd Rizal Kadis**  
**Jabatan Kemajuan Islam Malaysia (JAKIM)**  
**4 Mei 2020**

# KANDUNGAN


- 
1. Apakah Version Control System (VCS)?
  2. Apakah kaitan antara Git dan GitLab?
  3. Asas Penggunaan GIT dan GitLab.

# VERSION CONTROL SYSTEM (VCS)

“ Sistem yang mencatat perubahan pada fail dari waktu ke waktu supaya kita boleh menjejak semula versi fail tersebut ”



# KELEBIHAN VCS

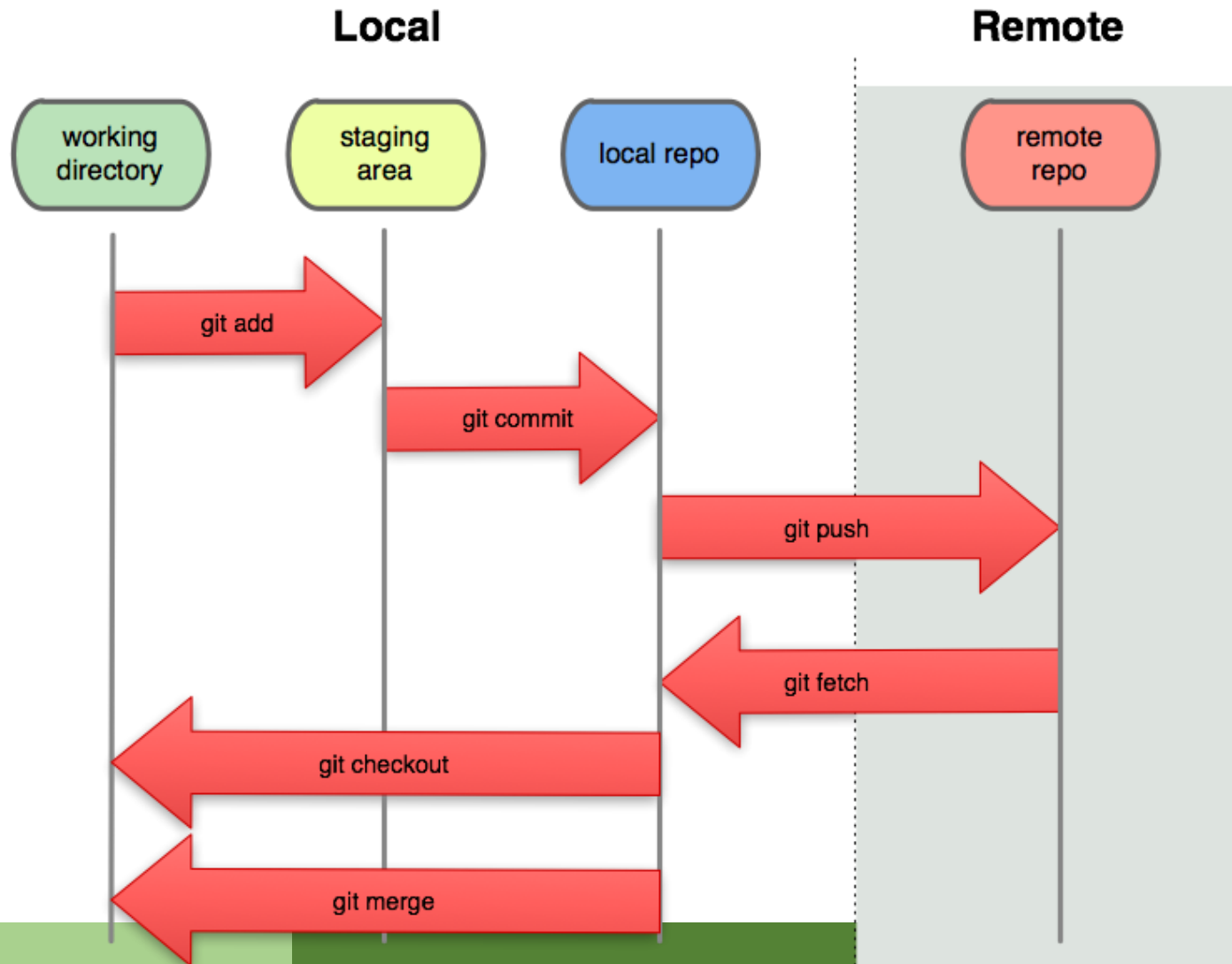
- 
1. Menjejak dan mengawal sebarang perubahan fail.
  2. Amalan moden pembangunan sistem oleh pakar.
  3. Keselamatan fail lebih terjamin (integrity & accountability).

# APAKAH GIT?

1. Distributed Version Control System.
2. Dibangunkan oleh Linus Torvalds, Finland.
3. Open Source.



# WORKFLOW



# KELEBIHAN & KEKURANGAN GIT




## Kelebihan

1. Distributed model.
2. Integrity.
3. Branching capabilities.
4. Staging Area.
5. Open source.
6. Performance.

## Kekurangan

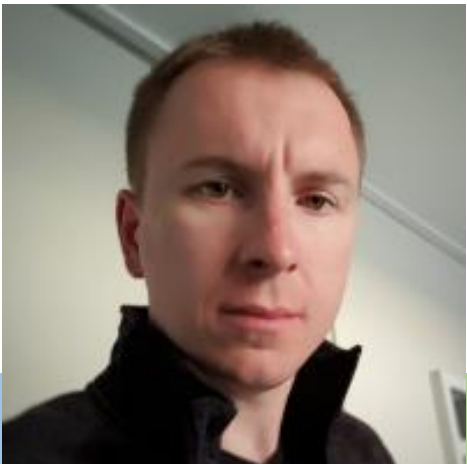
1. Steep learning curve.
2. Complex.
3. Slow for big binary file.
4. No built-in access control.

# APAKAH GITLAB?



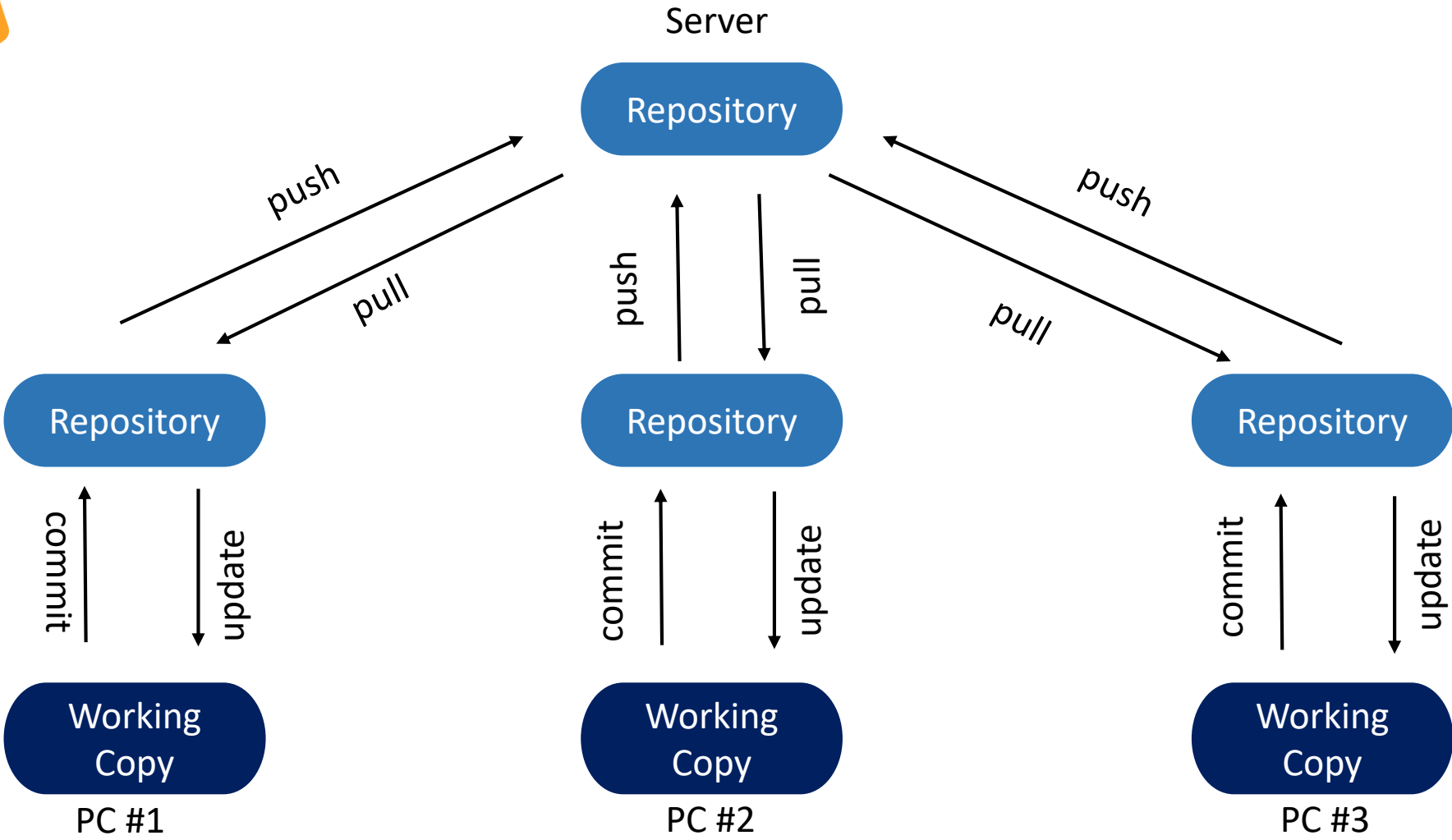
“ Platform DevOps berasaskan web yang menggunakan Git sebagai pengurus repository. ”

1. Dibangunkan oleh Dmitriy Zaporozhets, Ukraine.
2. Open Source (Ruby)





# SENI BINA GITLAB



# GITLAB PRICING



<https://about.gitlab.com/pricing/>

# GitLab Installation



## Supported Linux distributions

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- Ubuntu
- Debian
- CentOS
- openSUSE
- Red Hat Enterprise Linux (please use the CentOS packages and instructions)
- Scientific Linux (please use the CentOS packages and instructions)
- Oracle Linux (please use the CentOS packages and instructions)


## Unsupported Linux distributions and Unix-like operating systems

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- Arch Linux
- Fedora
- FreeBSD
- Gentoo
- macOS

<https://about.gitlab.com/install/>

# GitHub Desktop Installation



You can install GitHub Desktop on supported Microsoft Windows or macOS operating systems.

<https://help.github.com/en/desktop/getting-started-with-github-desktop/installing-github-desktop>

# Git-SCM Installation



<https://git-scm.com/downloads>

# Login to GITLAB

## GitLab Enterprise Edition

### Open source software to collaborate on code

Manage Git repositories with fine-grained access controls that keep your code secure. Perform code reviews and enhance collaboration with merge requests. Each project can also have an issue tracker and a wiki.

Sign in	Register
---------	----------

Username or email

Password

Remember me [Forgot your password?](#)

Sign in

# Create Project



New project



Blank project    Create from template    Import project

Project name

Project URL    Project slug  
    

Want to house several dependent projects under the same namespace? [Create a group.](#)


Project description (optional)

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.
- Internal  
The project can be accessed by any logged in user.
- Public  
The project can be accessed without any authentication.

Initialize repository with a README  
Allows you to immediately clone this project's repository. Skip this if you plan to push up an existing repository.

# Assign Members



- CI / CD
- Operations
- Packages
- Analytics
- Wiki
- Snippets
- Settings

- General
- Members
- Integrations
- Webhooks
- Repository
- CI / CD
- Operations
- Audit Events



### Project members

You can invite a new member to **My Project** or invite another group.

**Invite member** Invite group

GitLab member or Email address

Choose a role permission


Guest

[Read more](#) about role permissions

Access expiration date

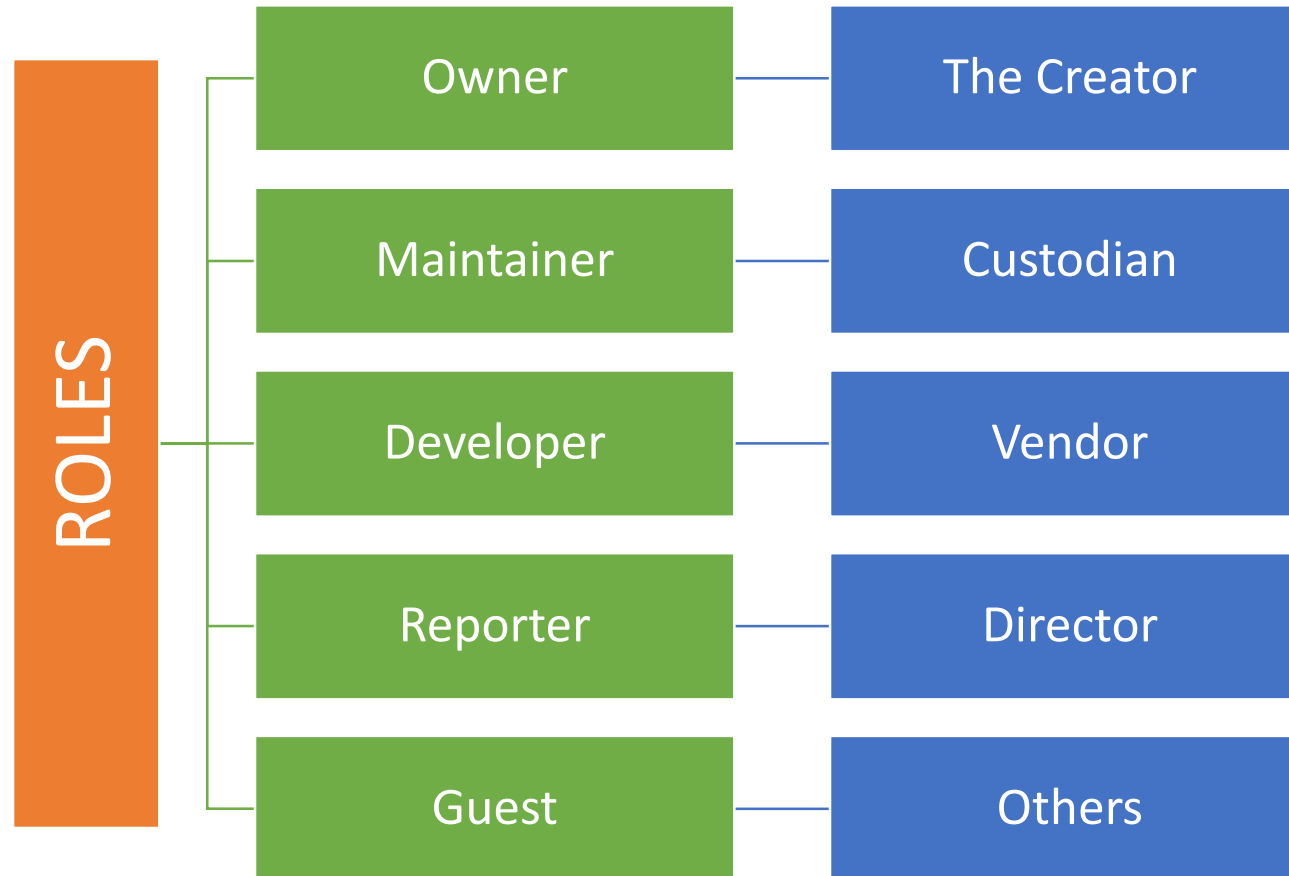
Existing members and groups

Members of **My Project** 1

 Mohd Rizal @mohdrizal It's you  
Given access 2 minutes ago



# Assign Members



# Create Repository



## Pilihan

1. Create New Repository
2. Push an existing repository
3. Push an existing Git repository

Anda perlu setup Git sebagai local repository di komputer anda.

Mohd Rizal > My Project > Details

Project 'My Project' was successfully created.

**M** My Project   
Project ID: 1

  Star 0

### 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 

 New file

 Add README

 Add LICENSE

 Add CHANGELOG

 Add CONTRIBUTING

### Command line instructions

You can also upload existing files from your computer using the instructions below.

#### Git global setup

```
git config --global user.name "Mohd Rizal"
git config --global user.email "mohdrizal@islam.gov.my"
```

#### Create a new repository

```
git clone http://gitlab.gov.my/mohdrizal/my-project.git
cd my-project
touch README.md
git add README.md
git commit -m "add README"
git push -u origin master
```

#### Push an existing folder

```
cd existing_folder
git init
git remote add origin http://gitlab.gov.my/mohdrizal/my-project.git
git add .
git commit -m "Initial commit"
git push -u origin master
```

#### Push an existing Git repository

```
cd existing_repo
git remote rename origin old-origin
git remote add origin http://gitlab.gov.my/mohdrizal/my-project.git
git push -u origin --all
git push -u origin --tags
```

# Create Local Repository

## Pilihan

1. Download & install GitHub Desktop.

<https://help.github.com/en/desktop/getting-started-with-github-desktop/installing-github-desktop>

# Create Local Repository

## Welcome to GitHub Desktop

GitHub Desktop is a seamless way to contribute to projects on GitHub and GitHub Enterprise Server. Sign in below to get started with your existing projects.

New to GitHub? [Create your free account.](#)

[Sign in to GitHub.com](#)

[Sign in to GitHub Enterprise Server](#)

[Skip this step](#)

## Configure Git

This is used to identify the commits you create. Anyone will be able to see this information if you publish commits.

Name

Mohd Rizal

Email

mohdrizal@islam.gov.my

Continue

Cancel

Example commit

Fix all the things

Mohd Rizal committed 30 minutes ago

## Make GitHub Desktop better!

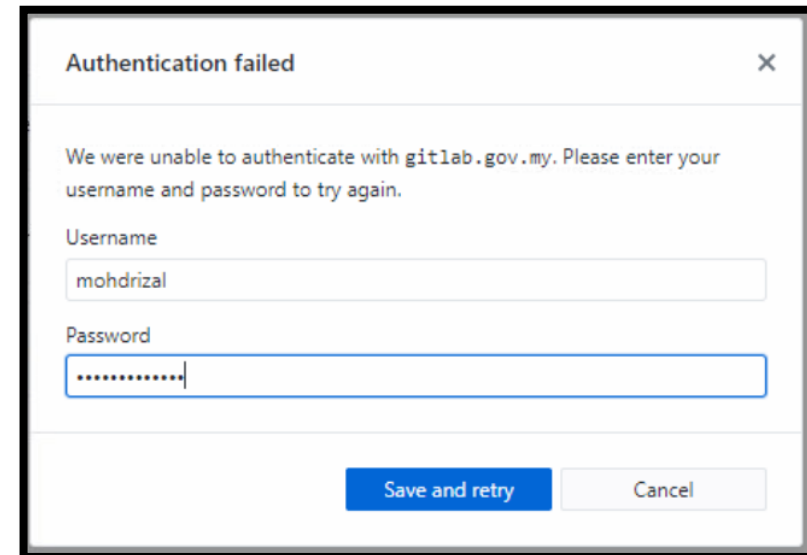
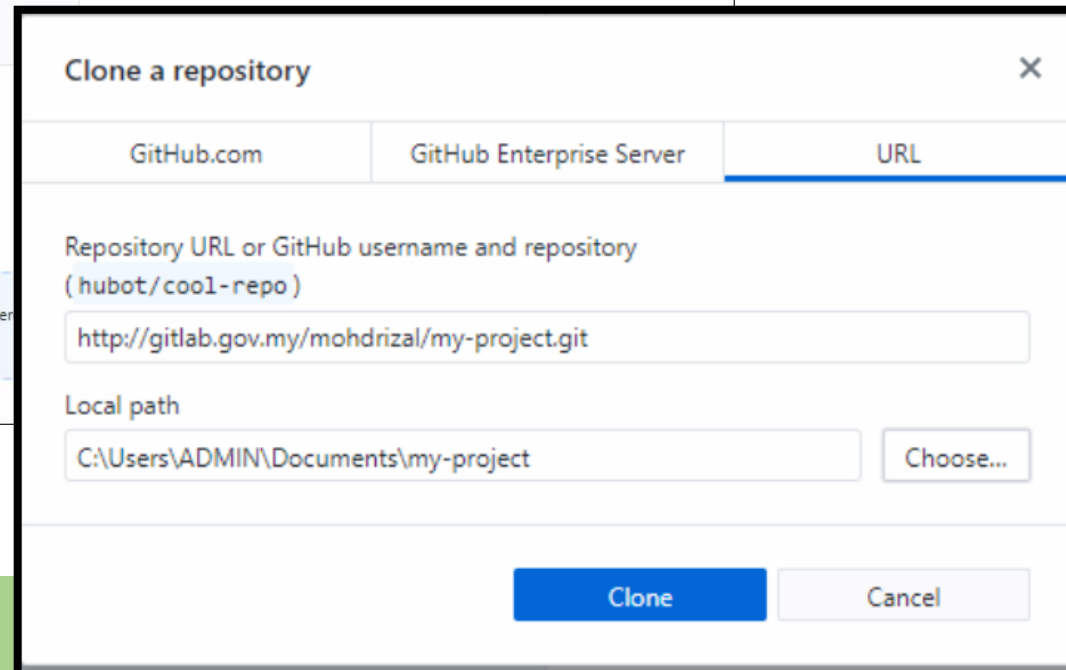
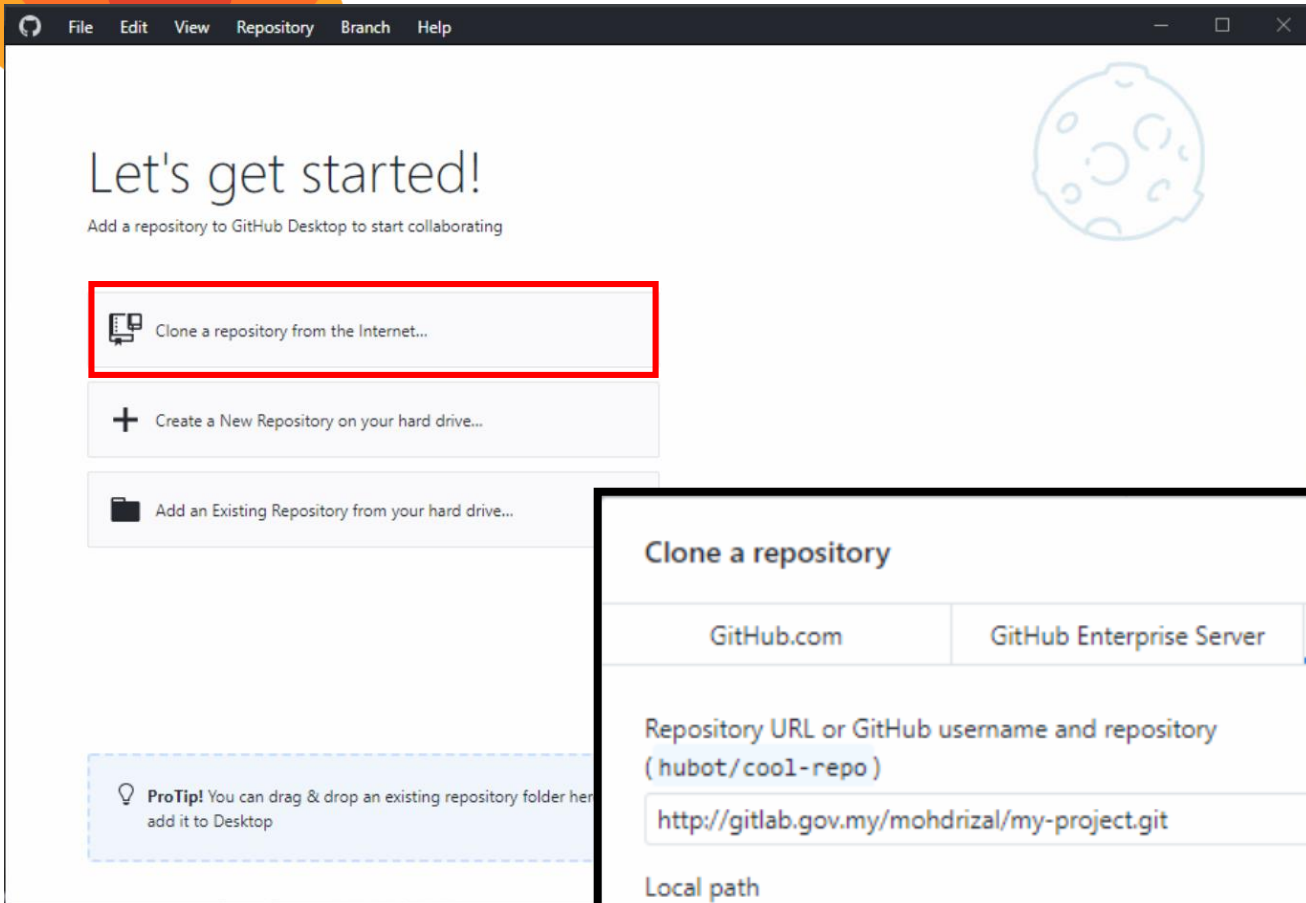
Would you like to help us improve GitHub Desktop by periodically submitting [usage stats](#)?

Yes, submit periodic usage stats

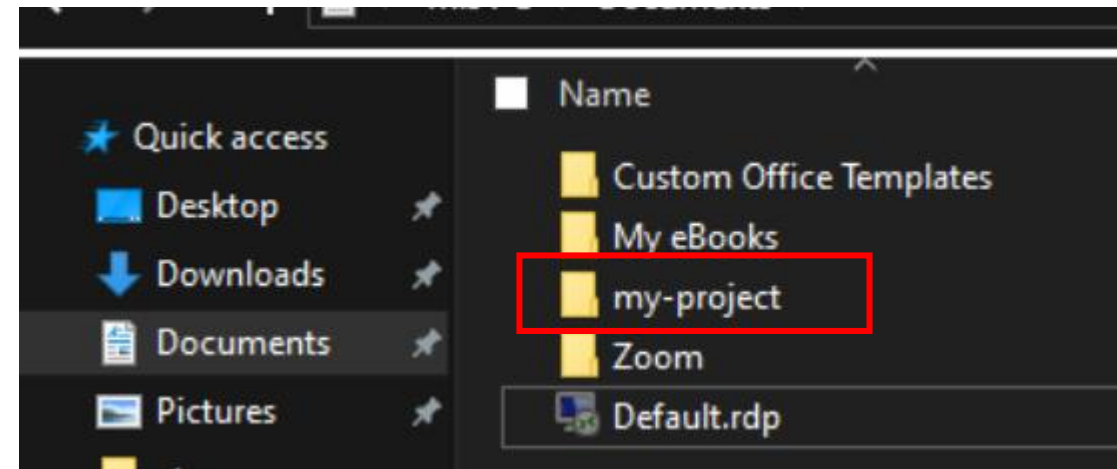
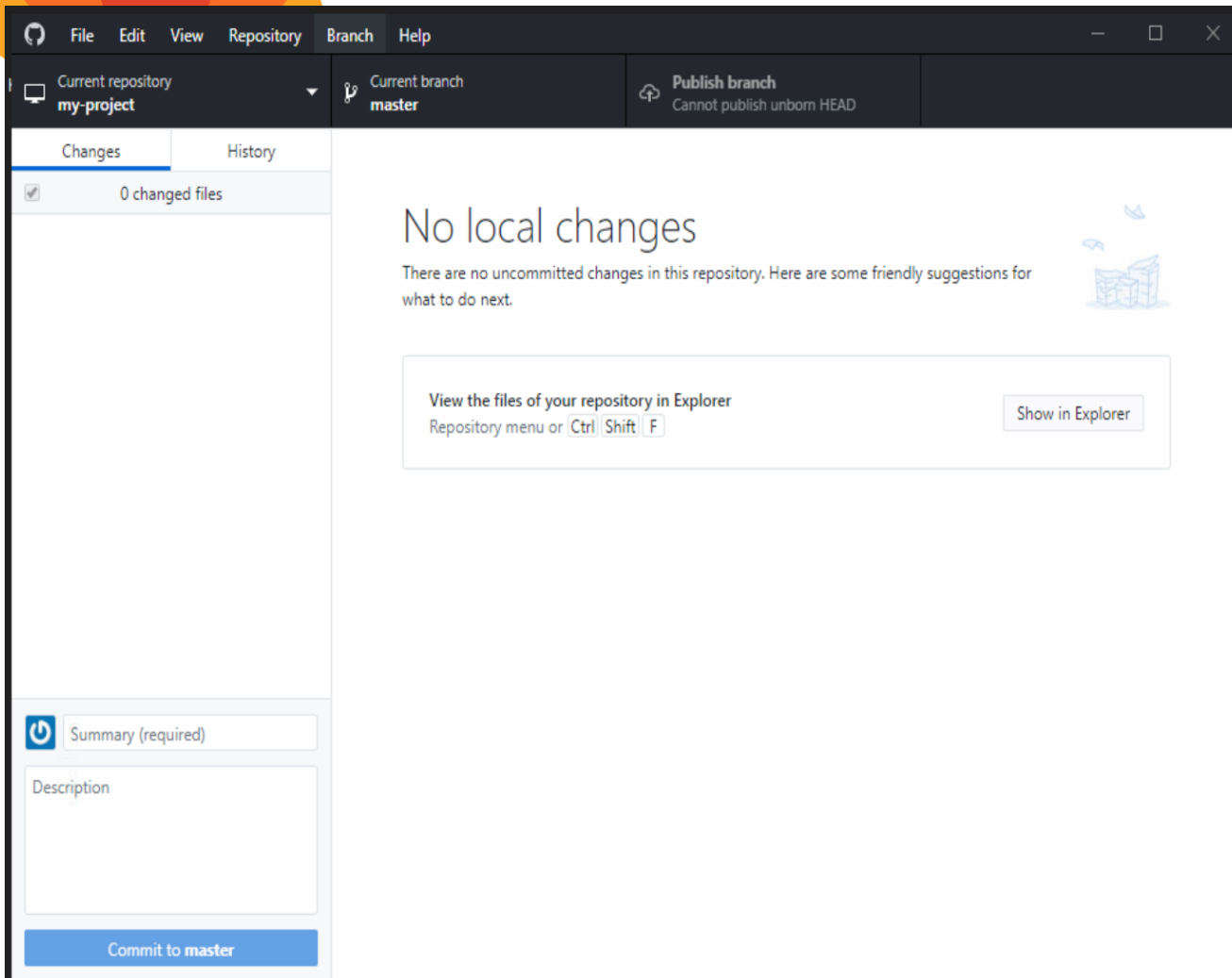
Finish

Cancel

# Create Local Repository



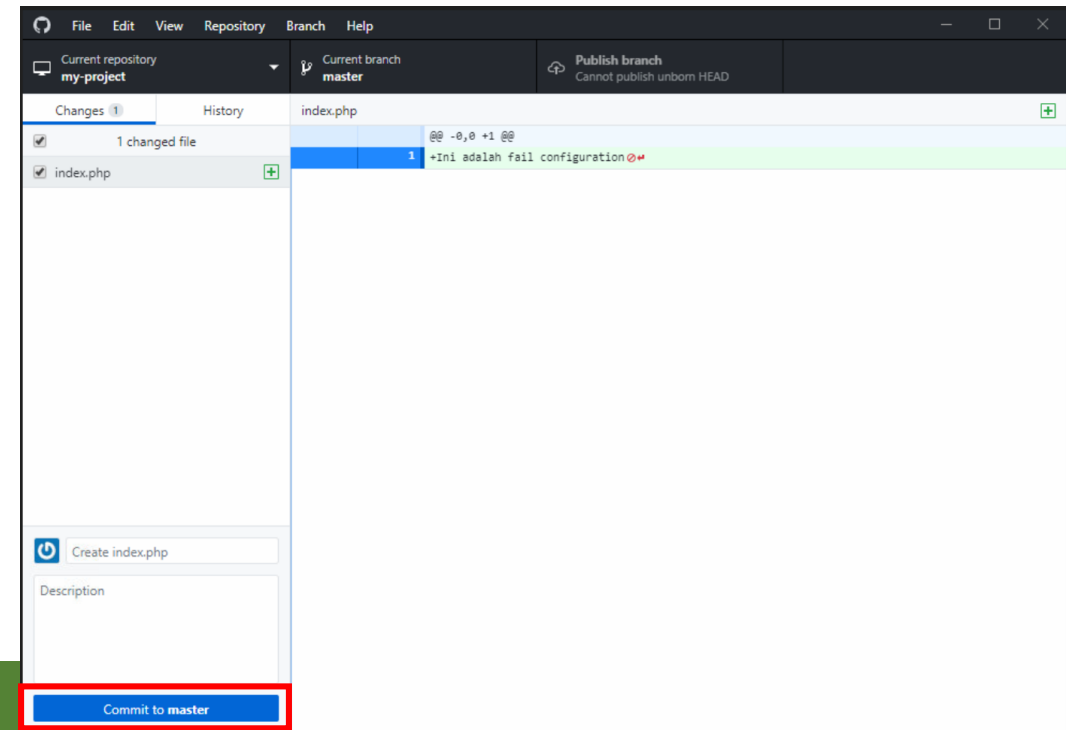
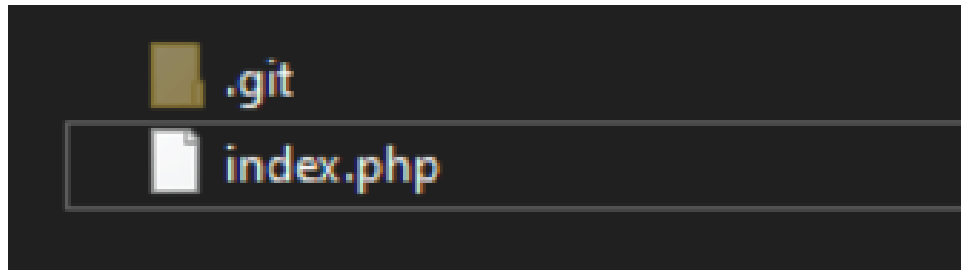
# Create Local Repository



1. Folder my-project diwujudkan secara automatic.
2. Folder my-project adalah working copy.

# Work on Files

1. Buka folder my-project.
2. Cipta fail. Contoh index.php
3. Lihat GitHub Desktop. Klik “Commit to master”



# Commit & Push



File Edit View Repository Branch Help

Current repository: my-project

Current branch: master

Publish branch: Publish this branch to the remote

Changes: 0 changed files

### No local changes

There are no uncommitted changes in this repository. Here are some friendly suggestions for what to do next.

**Publish your branch**  
The current branch ( master ) hasn't been published to the remote yet. By publishing it you can share it, and collaborate with others.  
Always available in the toolbar or `Ctrl | P`

**View the files of your repository in Explorer**  
Repository menu or `Ctrl | Shift | F`

Summary (required)

Description

Commit to master

Local Repository

Mohd Rizal > My Project > Details

**My Project** Project ID: 1

1 Commit 1 Branch 0 Tags 92 KB Files

master my-project / +

History Find file Web IDE Clone

Create index.php  
Mohd Rizal authored 2 minutes ago

6c0038ab

Auto DevOps enabled Add README Add LICENSE Add CHANGELOG Add CONTRIBUTING

Add Kubernetes cluster

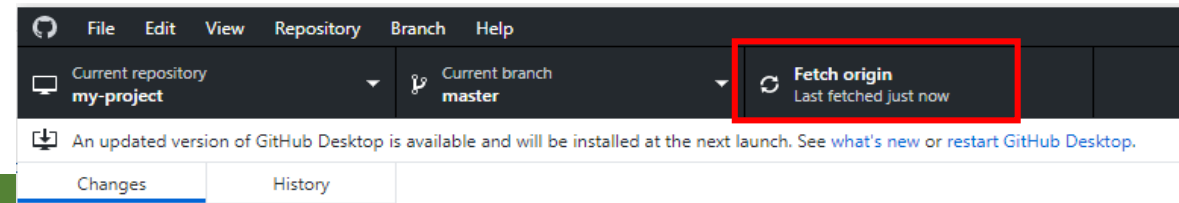
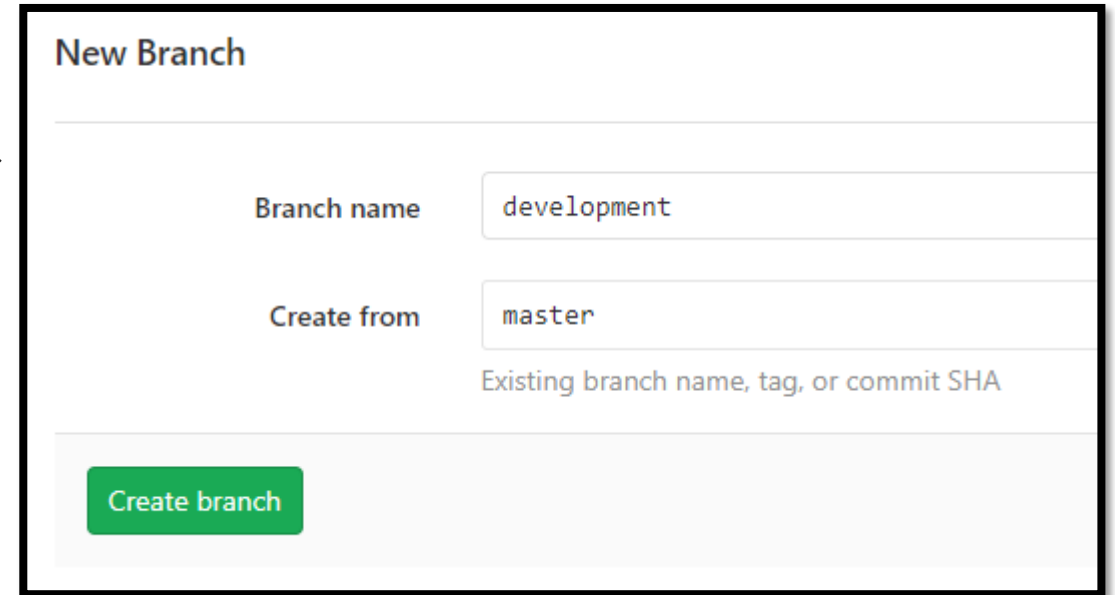
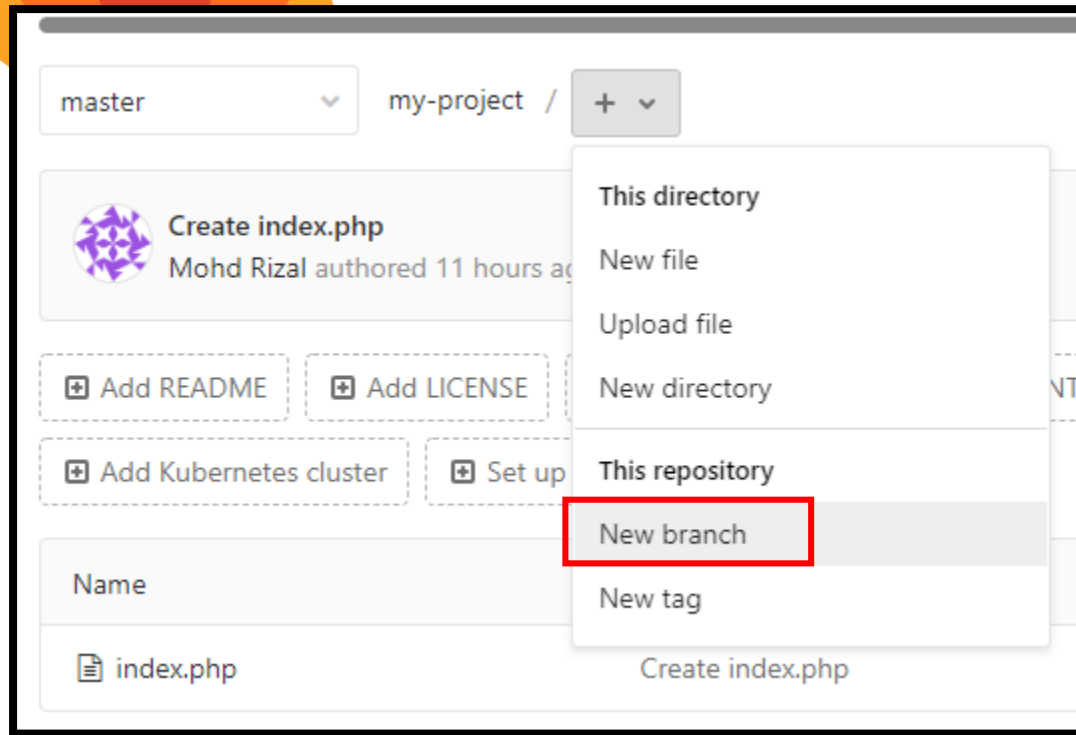
Name	Last commit	Last update
index.php	Create index.php	2 minutes ago

GitLab





# Create Branch



Local Repository

# Merge Branch

New merge request

New Merge Request

Source branch: mohdrizal/my-project development

Target branch: mohdrizal/my-project master

Create test.docx Mohd Rizal authored 1 hour ago ff149b3c

Create index.php Mohd Rizal authored 14 hours ago 6c0038ab

Compare branches and continue

New Merge Request

From development into master Change branches

Title: Development

Description: Write Preview

Assignee: Unassigned Assign to me

Milestone: Milestone

Labels: Labels

Merge options:  Delete source branch when merge request is accepted.  Squash commits when merge request is accepted.

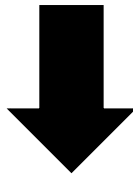
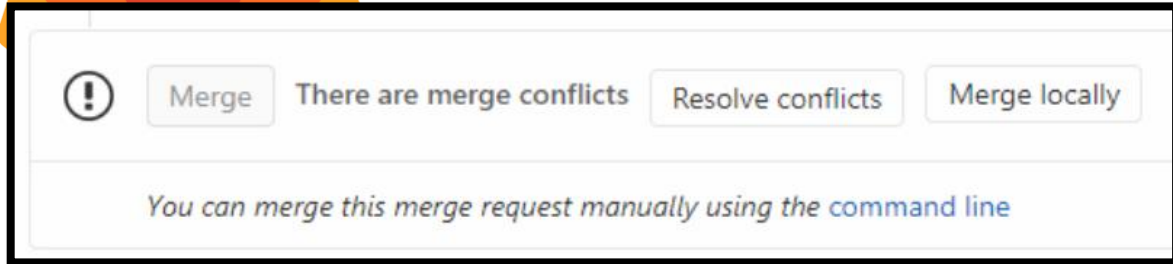
Submit merge request Cancel

Merge  Delete source branch  Squash commits

3 commits and 1 merge commit will be added to master. Modify merge commit

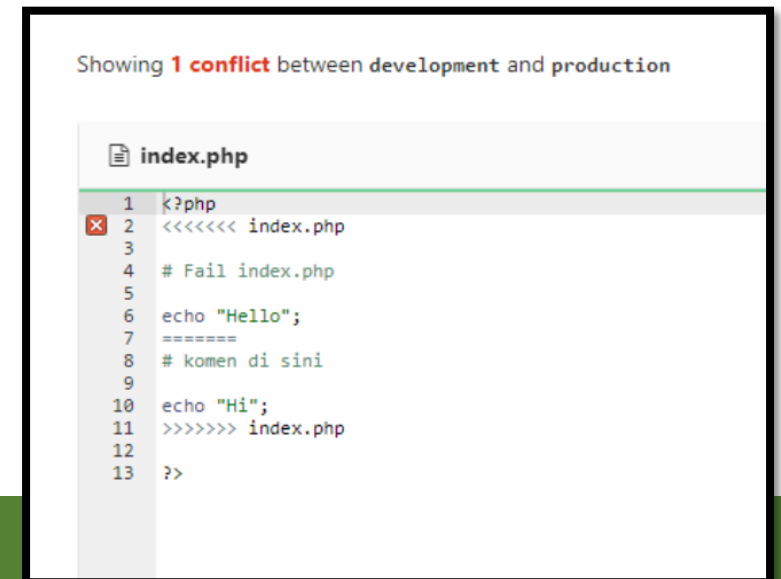
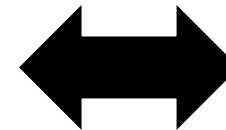
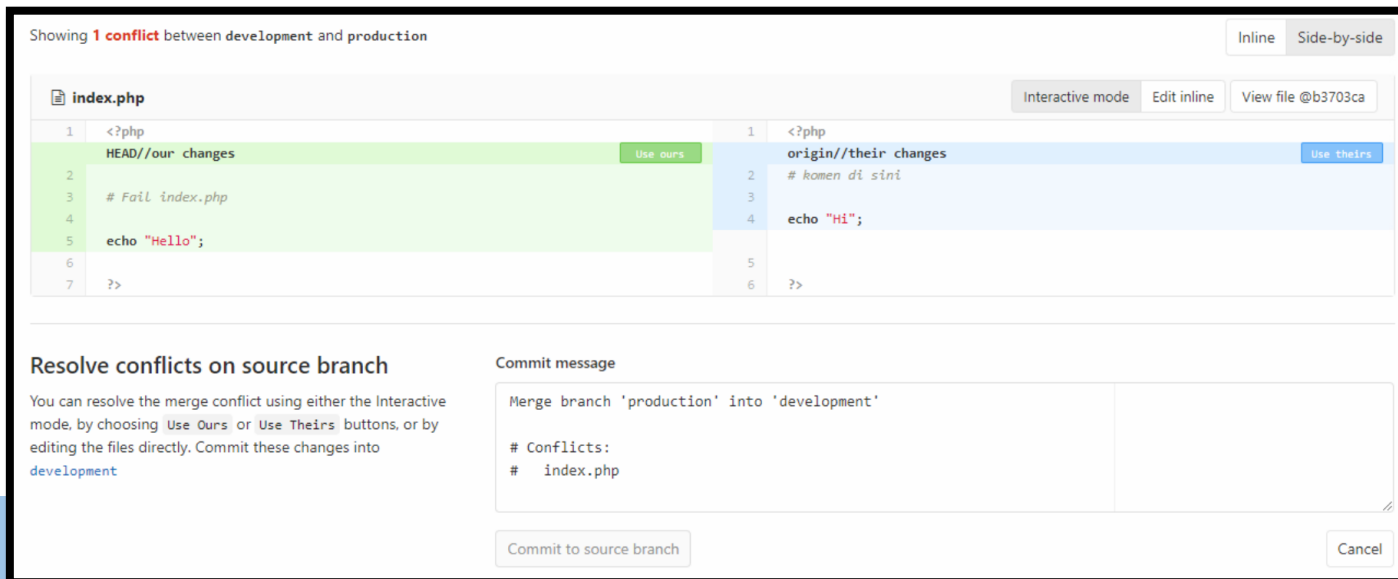
You can merge this merge request manually using the command line

# Conflict Resolution




GitLab allows resolving conflicts in a file where all of the below are true:

- The file is text, not binary
- The file is in a UTF-8 compatible encoding
- The file does not already contain conflict markers
- The file, with conflict markers added, is not over 200 KB in size
- The file exists under the same path in both branches





# Revert

✓ Merged by  Mohd Rizal Kadis 5 minutes ago Revert Cherry-pick

The changes were merged into `production` with `b1199828` 

You can delete the source branch now Delete source branch

Mohd Rizal Kadis > My Project 1 > Commits > b1199828

Commit `b1199828`  authored 19 minutes ago by  Mohd Rizal Kadis Browse files Options ▾

## Merge branch 'development' into 'production'

Development

[See merge request !2](#)

🔗 parents `7ee7b96b bf05287b` P master ...

Revert

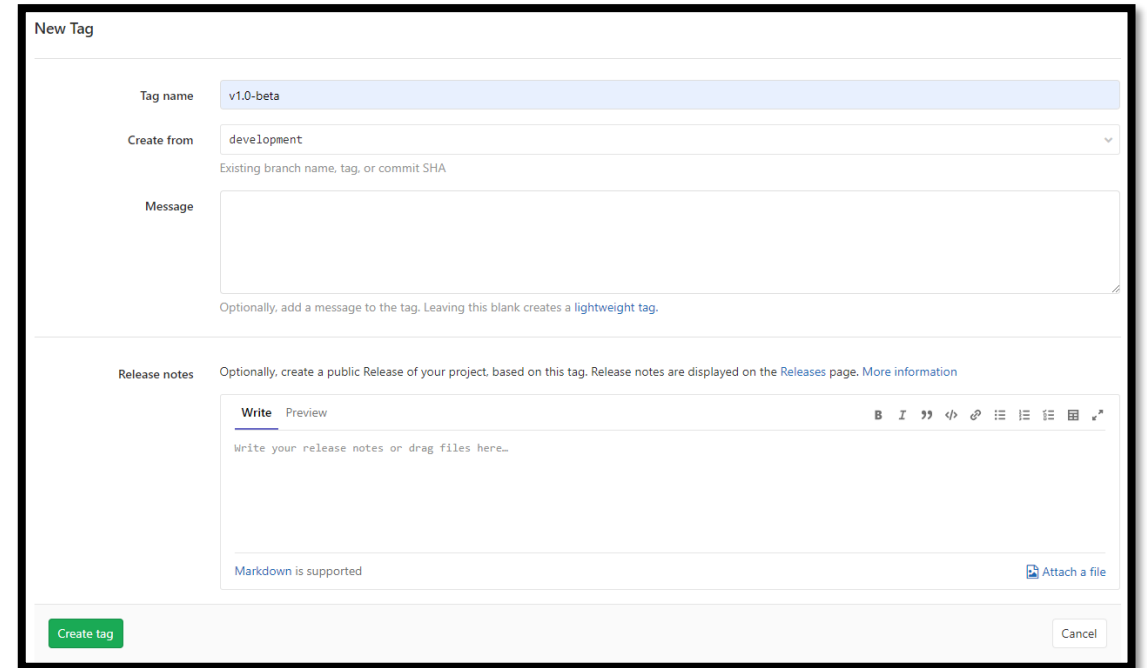
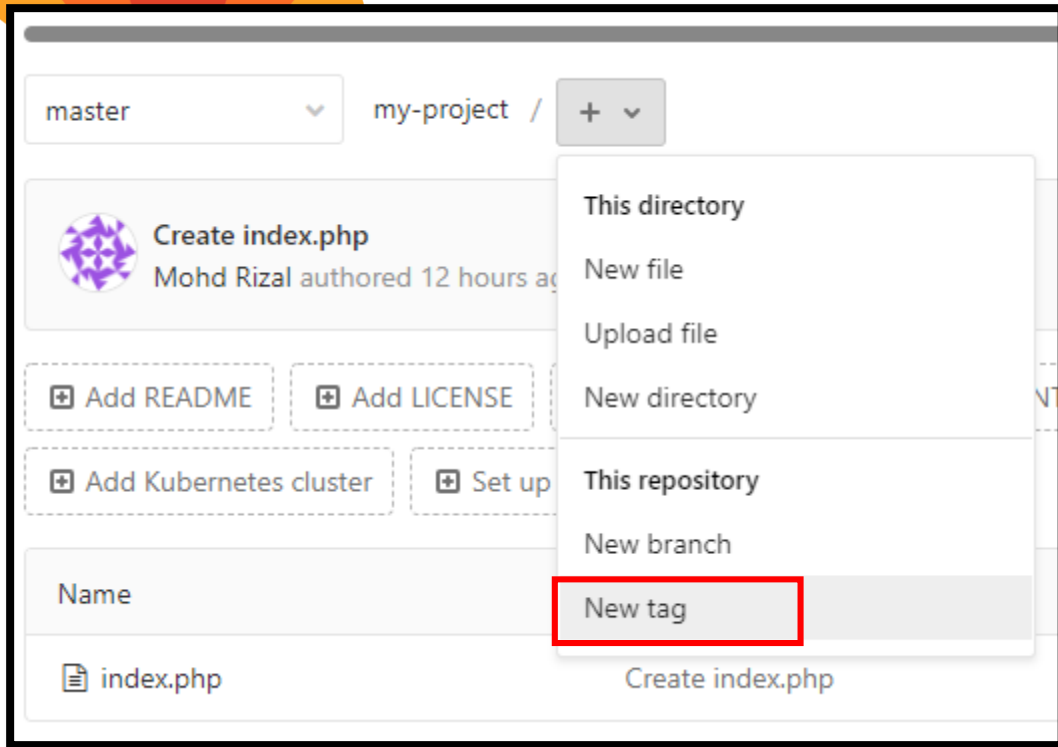
Cherry-pick

Tag

Download

Plain Diff

# Create Tag



## Tags

- Useful for marking deployments and releases
- Annotated tags are an unchangeable part of Git history
- Soft/lightweight tags can be set and removed at will
- Many projects combine an annotated release tag with a stable branch
- Consider setting deployment/release tags automatically

# Ignoring Files



 .gitattributes	'Initial'
 .gitignore	'Initial'
 .gitlab-ci.yml	'update'

A `gitignore` file specifies intentionally untracked files that Git should ignore. Files already tracked by Git are not affected;

\* is used as a wildcard match

\*\* is used to match any number of directories

/ is used to ignore pathnames relative to the .gitignore file

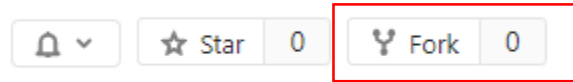
# is used to add comments to a .gitignore file

! is used to negate a file that would be ignored

What If I Already Have It Checked In?

```
git rm --cached FILENAME
```

# Fork










A fork is a copy of an original repository that you put in another namespace where you can experiment and apply changes that you can later decide whether or not to share, without affecting the original project.

# Activities

Mohd Rizal > My Project > Activity

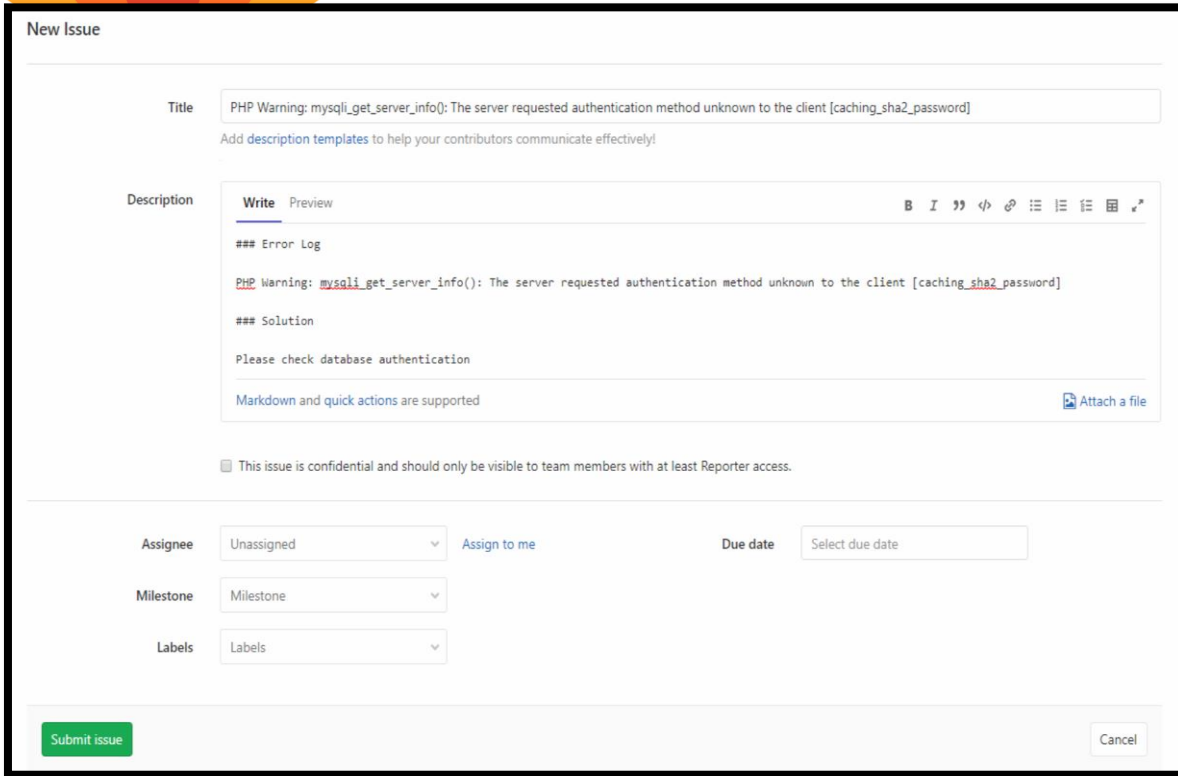
All **Push events** Merge events Issue events Comments Team



-  **Mohd Rizal** @mohdrizal 4 minutes ago  
→ Pushed to branch [master](#)  
4f020471 · Revert "Update index.php"
-  **Mohd Rizal** @mohdrizal 7 minutes ago  
→ Pushed to branch [development](#)  
41235f7a · Revert "Merge branch 'development' into 'production'"
-  **Mohd Rizal** @mohdrizal 8 minutes ago  
→ Pushed to branch [production](#)  
5331f125 · Merge branch 'development' into 'production'  
... and 2 more commits. [Compare 0c3868b2...5331f125](#)
-  **Mohd Rizal** @mohdrizal 8 minutes ago  
→ Pushed to branch [development](#)  
008b35b8 · Merge branch 'production' into 'development'  
... and 3 more commits. [Compare ad08df07...008b35b8](#)
-  **Mohd Rizal** @mohdrizal 9 minutes ago  
→ Pushed to branch [development](#)  
ad08df07 · Update index.php
-  **Mohd Rizal** @mohdrizal 9 minutes ago  
→ Pushed to branch [production](#)  
0c3868b2 · Update index.php
-  **Mohd Rizal** @mohdrizal 13 minutes ago  
→ Pushed to branch [production](#)



# Issues



**New Issue**

**Title**

Add [description templates](#) to help your contributors communicate effectively!

**Description**

**Write** **Preview** **B** **I** **↵** **</>** **🔗** **☰** **☰** **☰** **🗑️**

### Error Log

PHP Warning: `mysqli_get_server_info()`: The server requested authentication method unknown to the client [caching\_sha2\_password]

### Solution

Please check database authentication

Markdown and quick actions are supported [📎 Attach a file](#)

This issue is confidential and should only be visible to team members with at least Reporter access.

**Assignee**  [Assign to me](#) **Due date**

**Milestone**

**Labels**

[Submit issue](#) [Cancel](#)

## Issues

Issues are the fundamental medium for collaborating on ideas and planning work in GitLab.

### Common use cases include:

- Discussing the implementation of a new idea
- Tracking tasks and work status
- Accepting feature proposals, questions, support requests, or bug reports
- Elaborating on new code implementations

# Markdown



## Standard Markdown

Blockquotes

Code blocks

Emphasis

Headers

Images

Line breaks

links

<https://docs.gitlab.com/ee/user/markdown.html>



THANK YOU!

[mohdrizal@islam.gov.my](mailto:mohdrizal@islam.gov.my)