GITLAB
PENGURUSAN REPOSITORI KOD SUMBER

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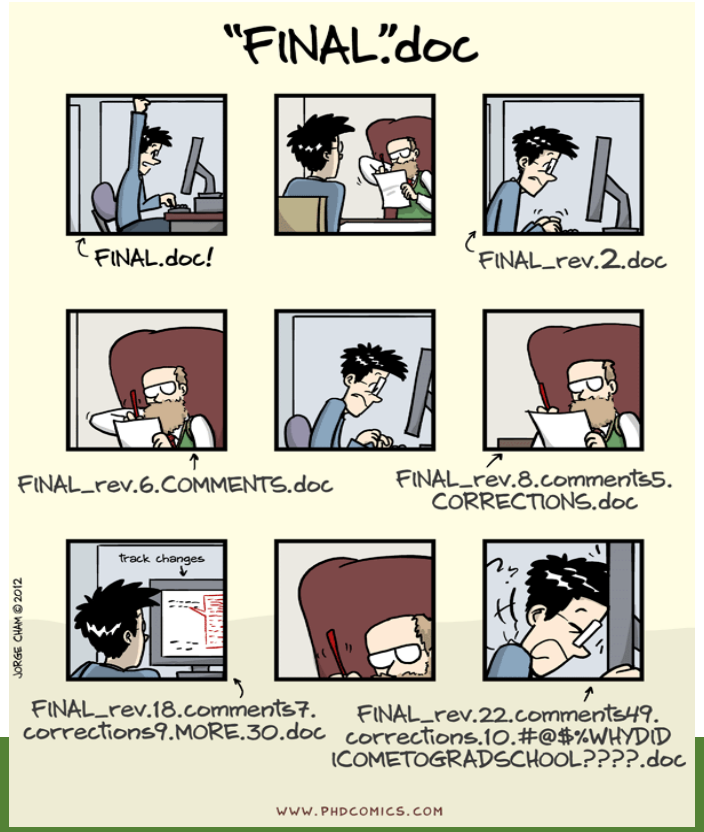
Jabatan Kemajuan Islam Malaysia (JAKIM)
4 Mei 2020

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 ”



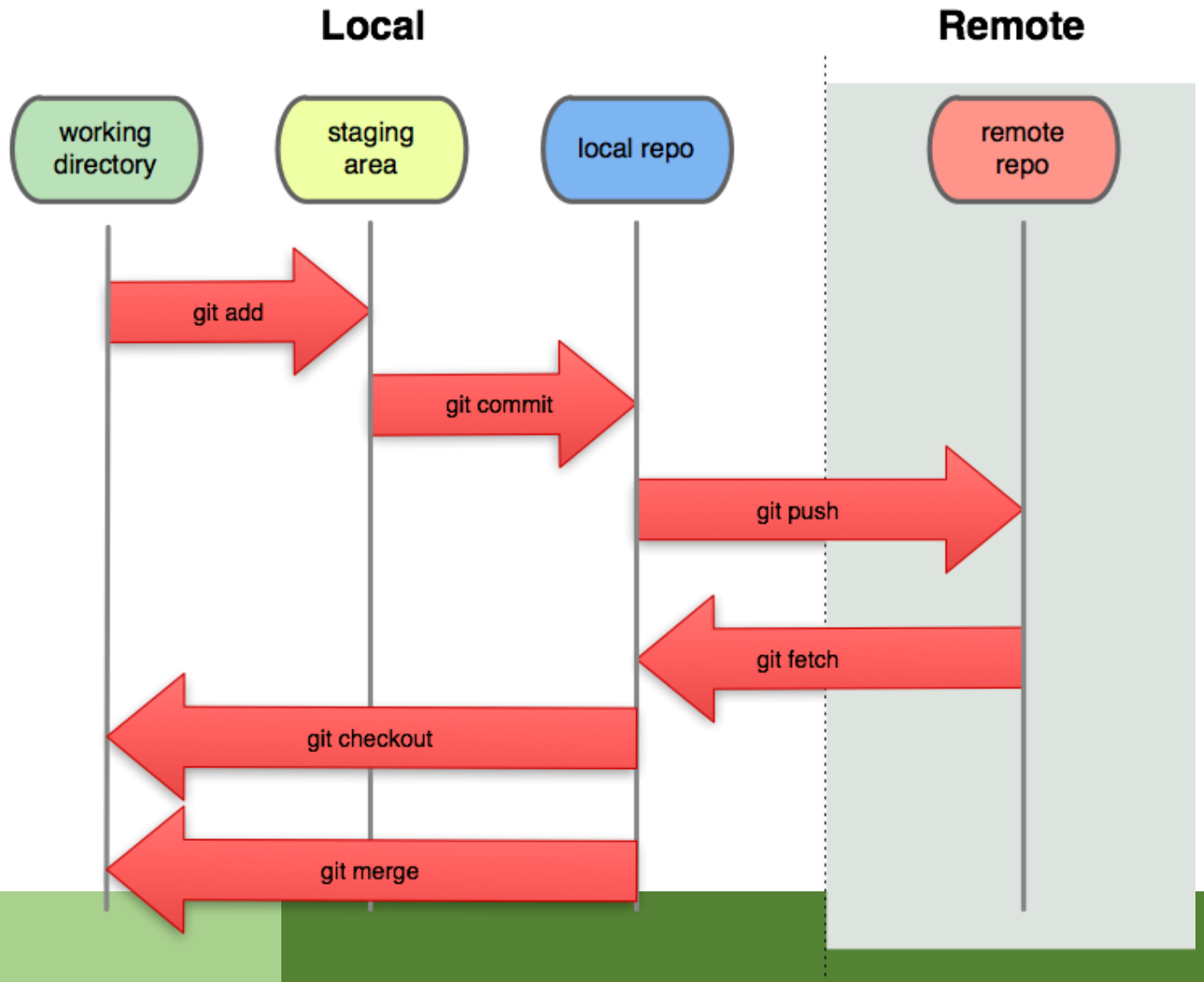
KELEBIHAN VCS

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


Local
Remote
working directory
staging area
local repo
remote repo
git add
git commit
git push
git fetch
git checkout
git merge

KELEBIHAN & KEKURANGAN GIT

Kelebihan

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

Kekurangan

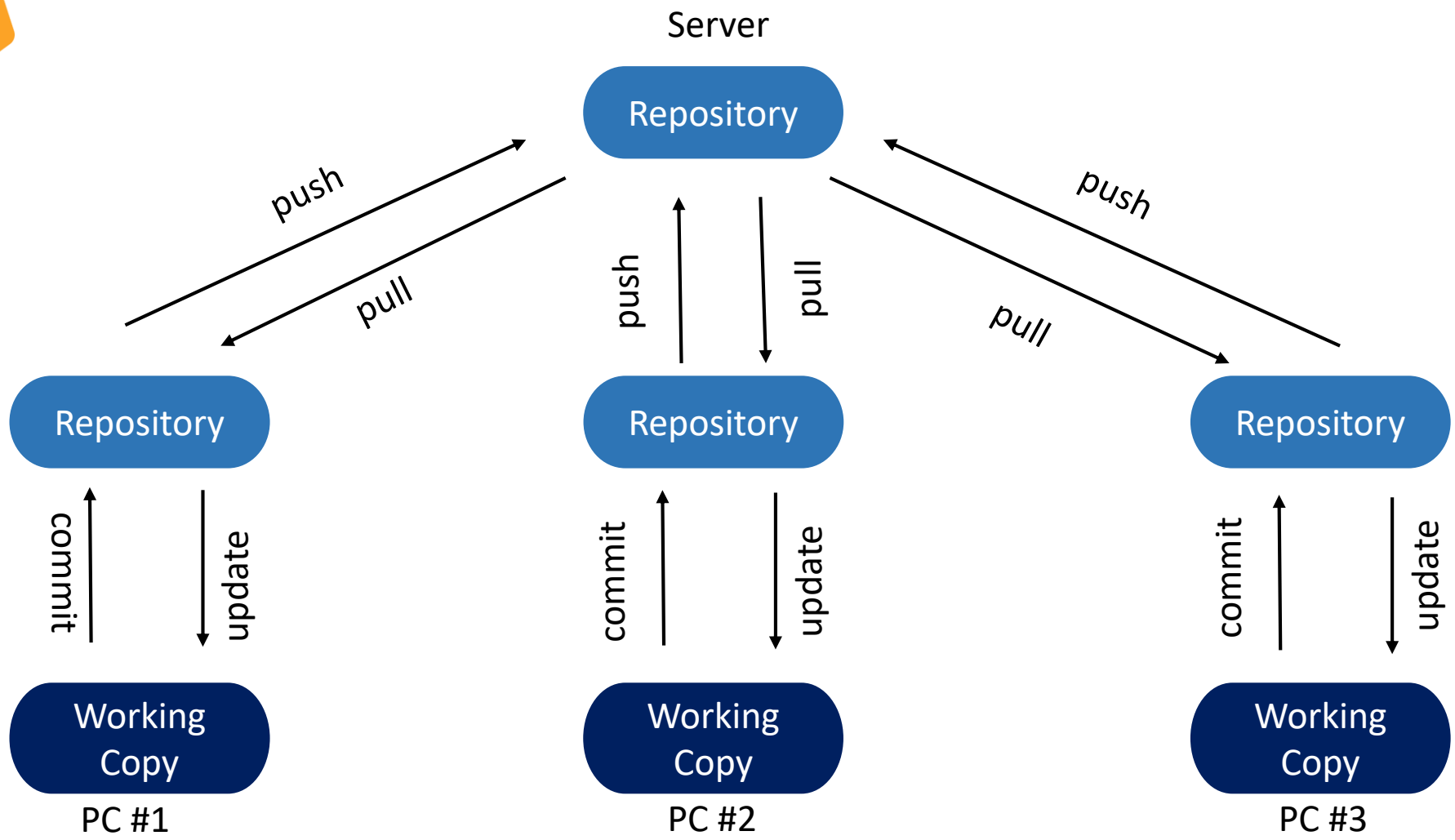
1. Steep learning curve.
2. Complex.
3. Slow for big binary file.
4. No built-in access control.

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

- 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

- 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

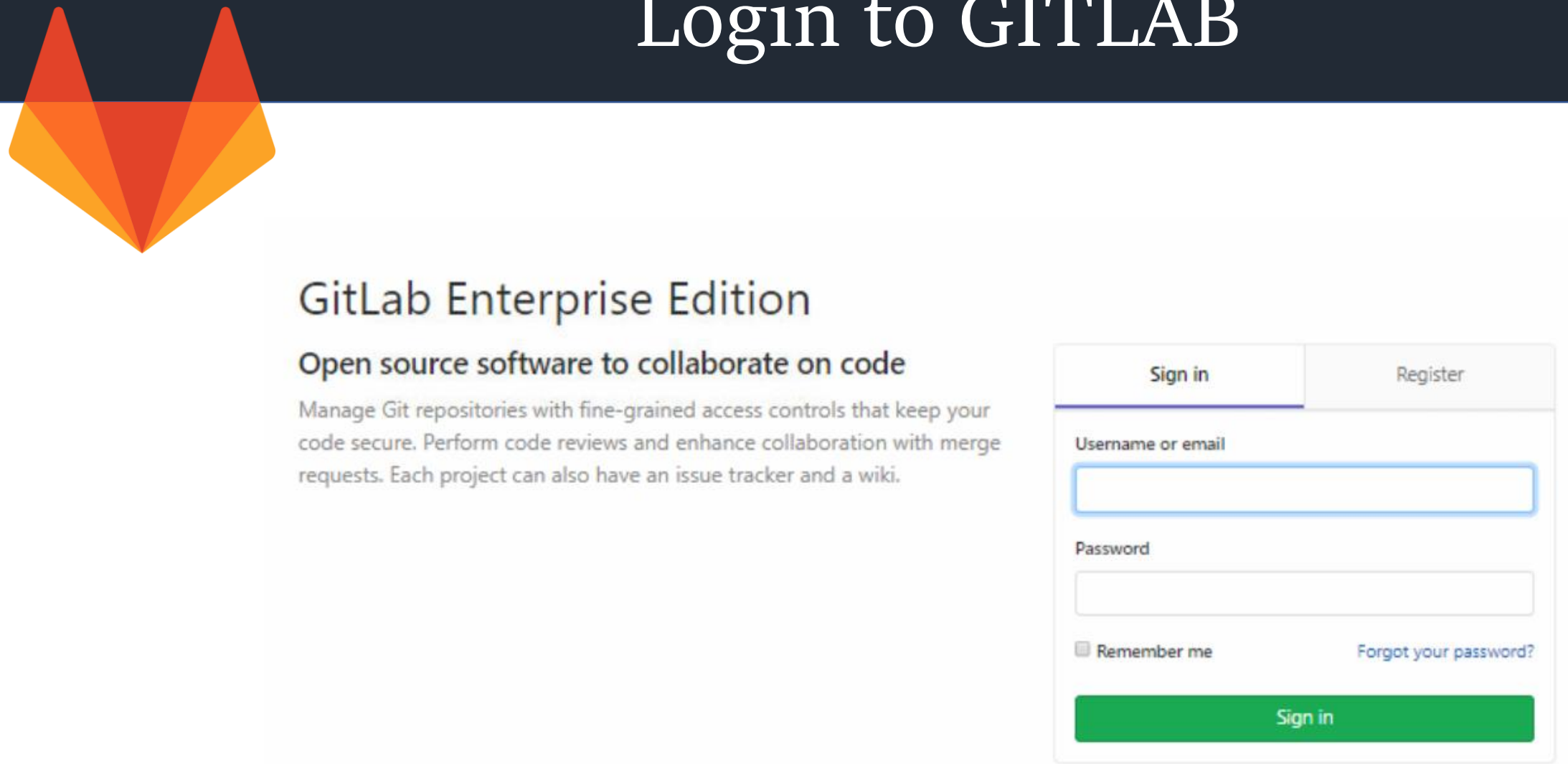
Mac OS X

Windows

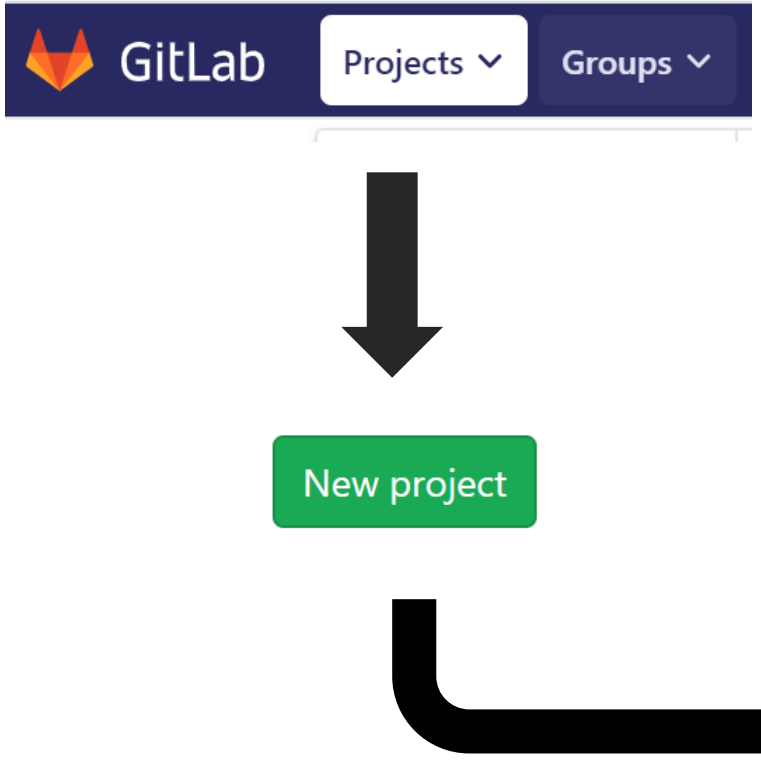
Linux/Unix

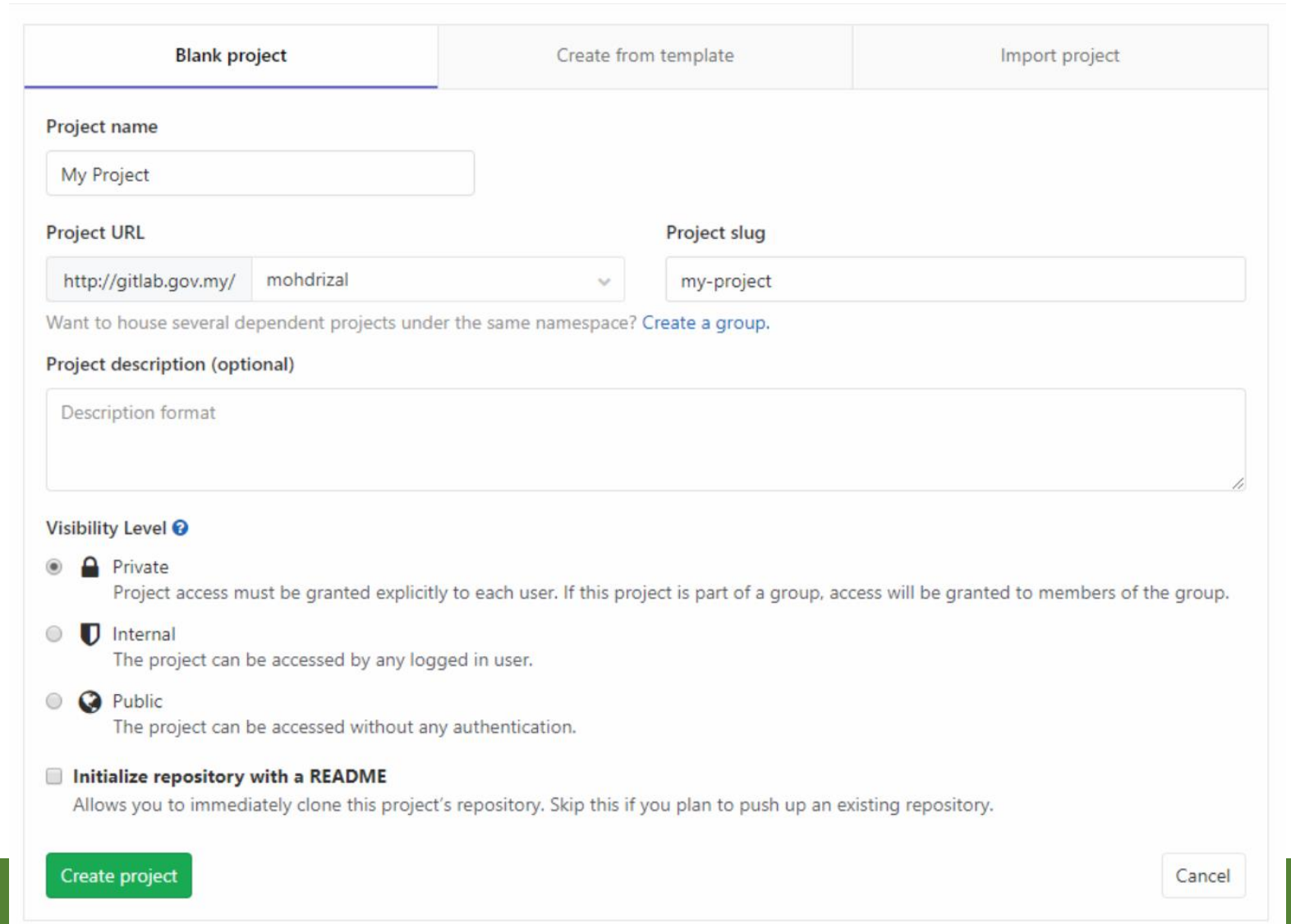
https://git-scm.com/downloads

Login to GITLAB

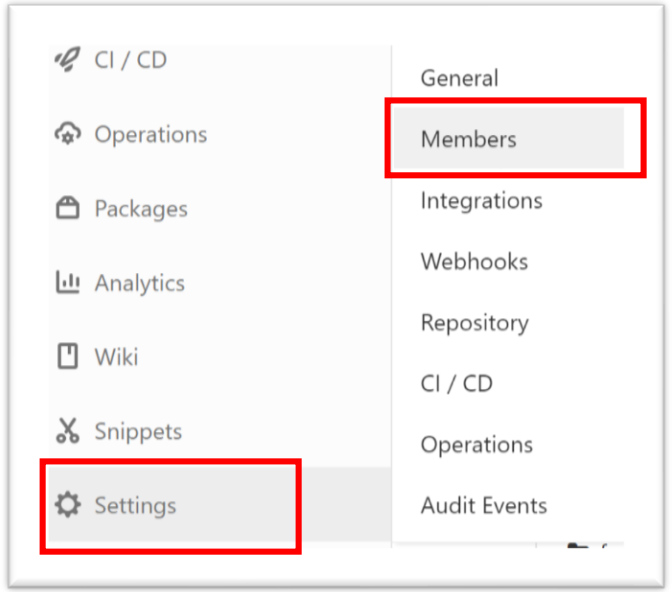


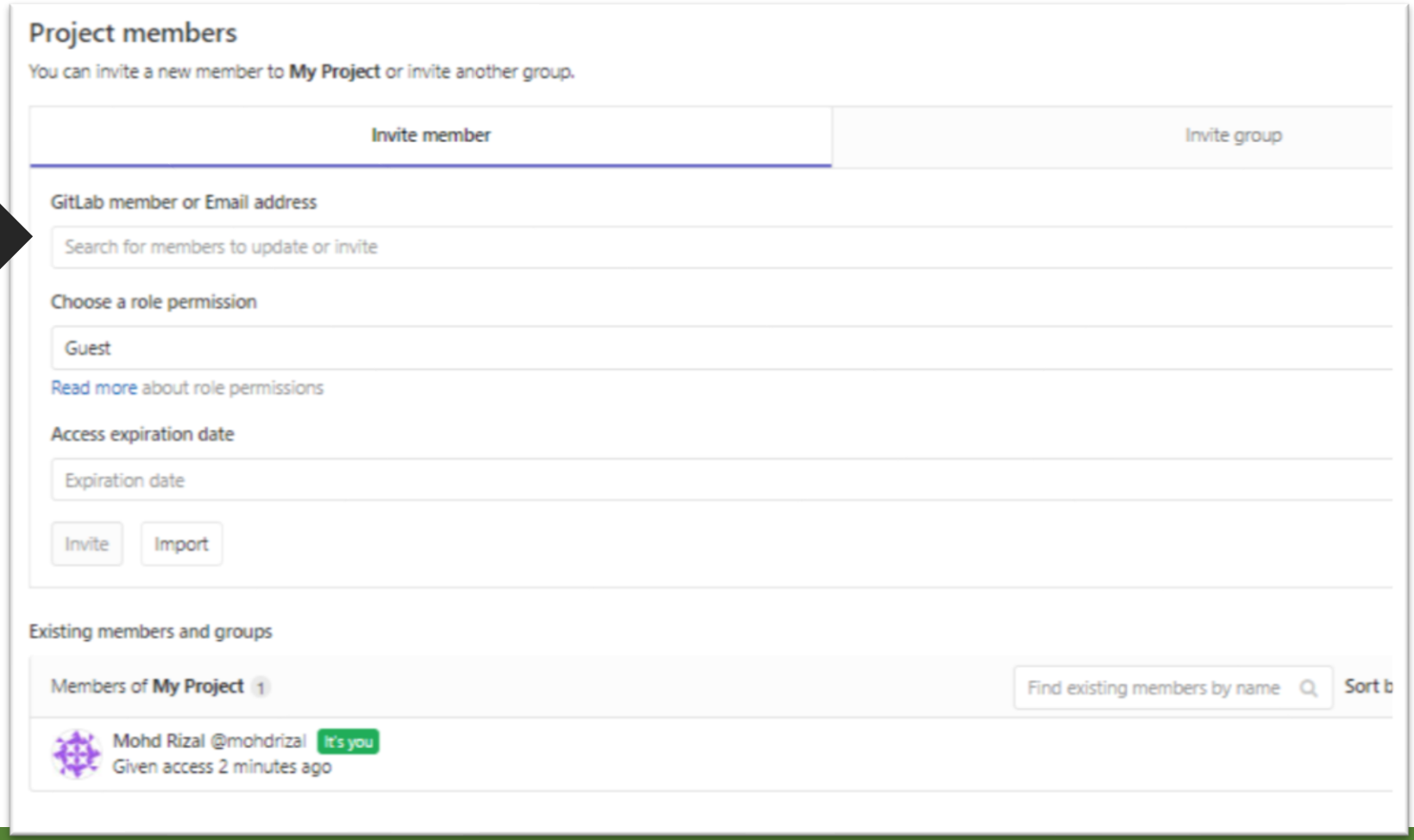
Create Project



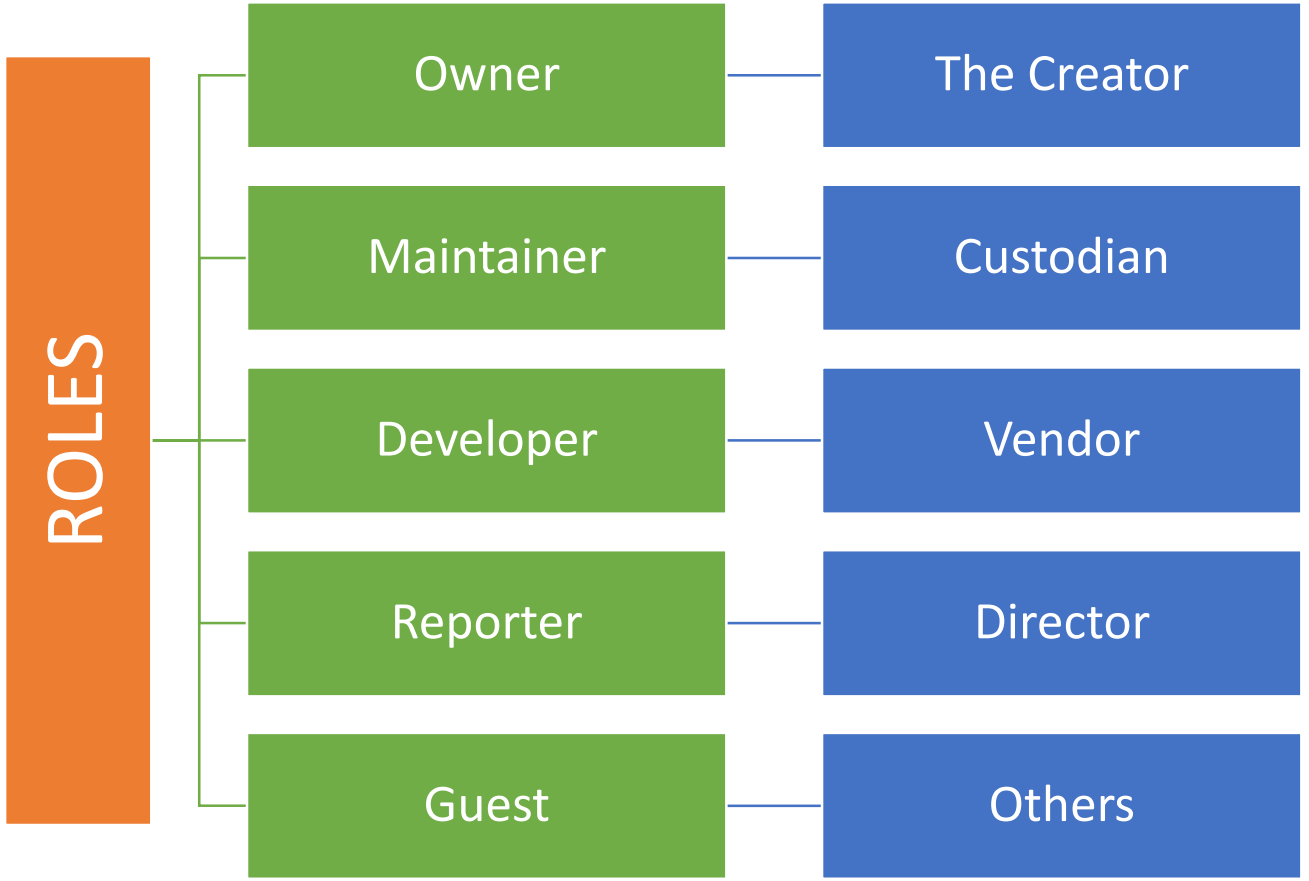


Assign Members





Assign Members



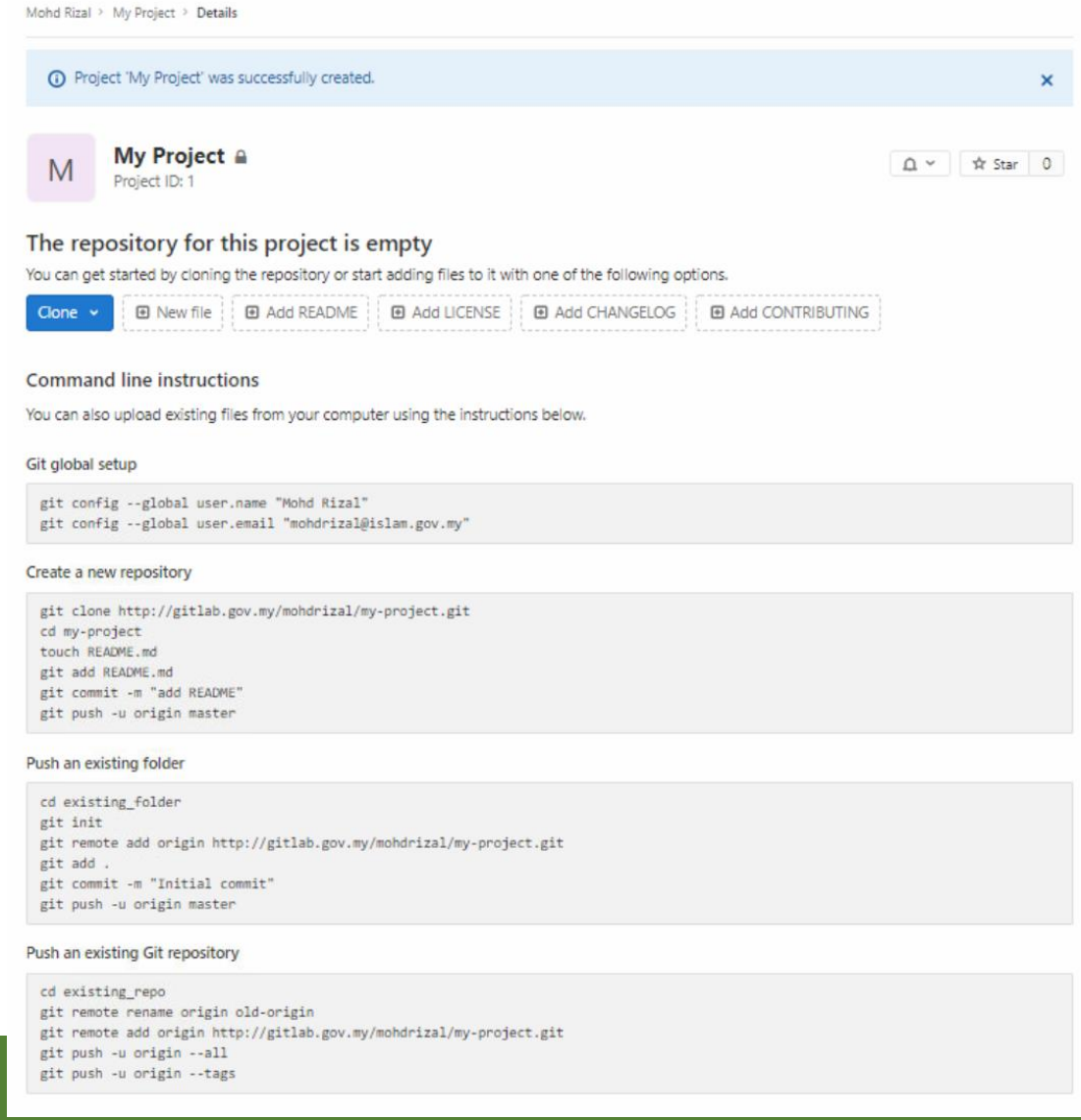
https://docs.gitlab.com/ee/user/permissions.html

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.



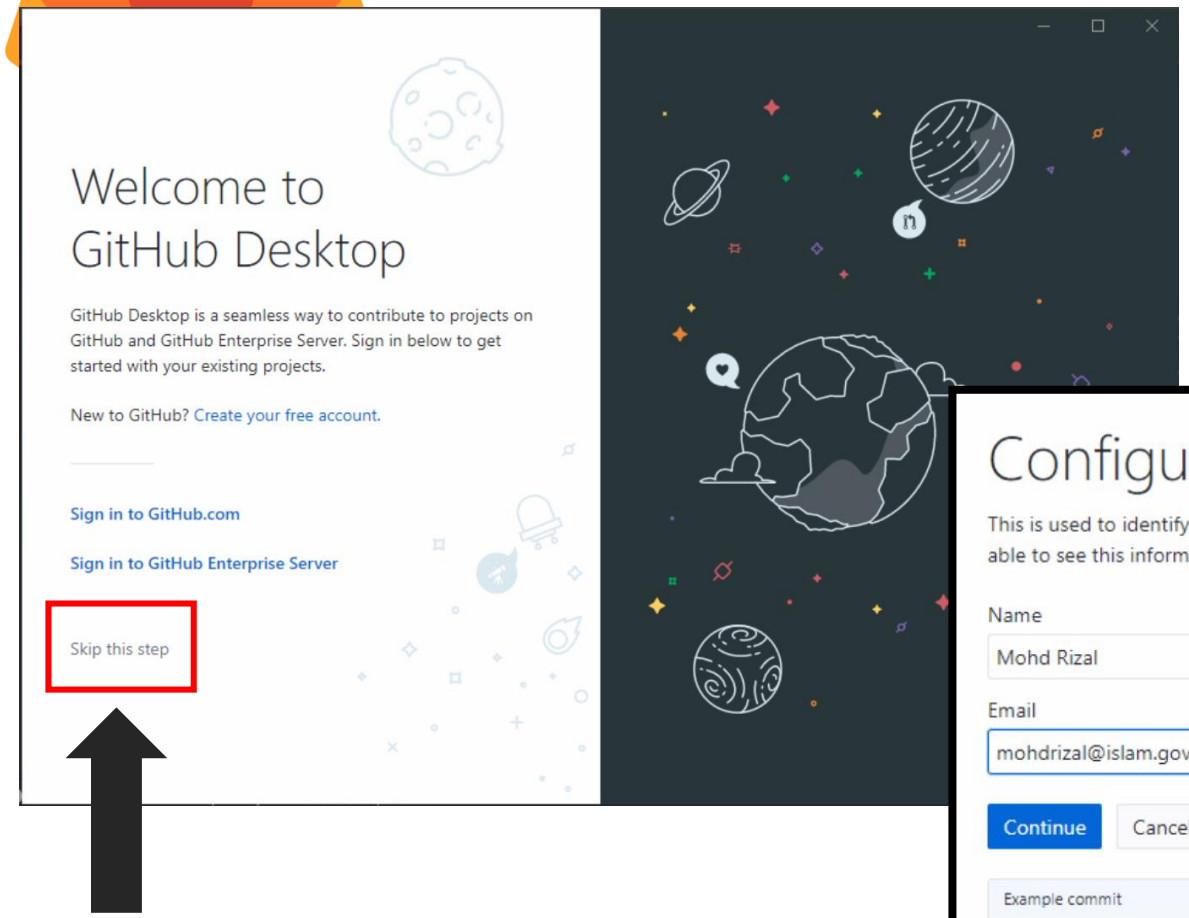
Create Local Repository

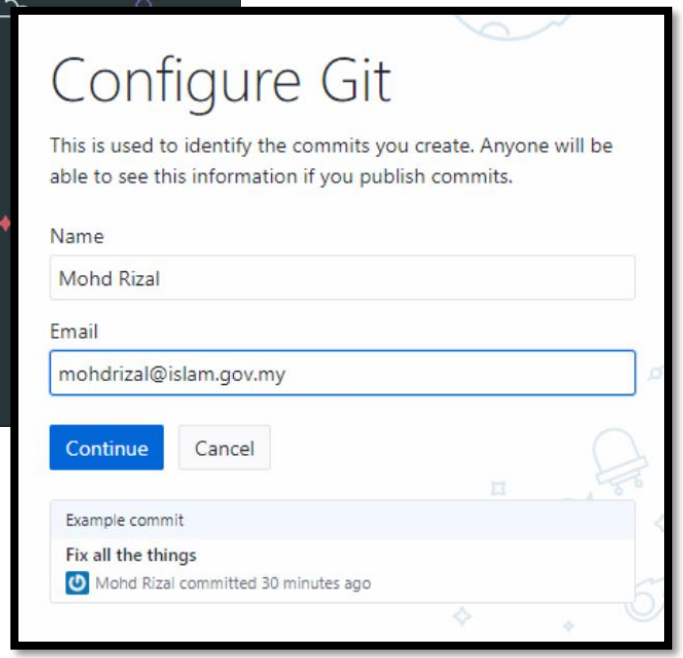
Pilihan

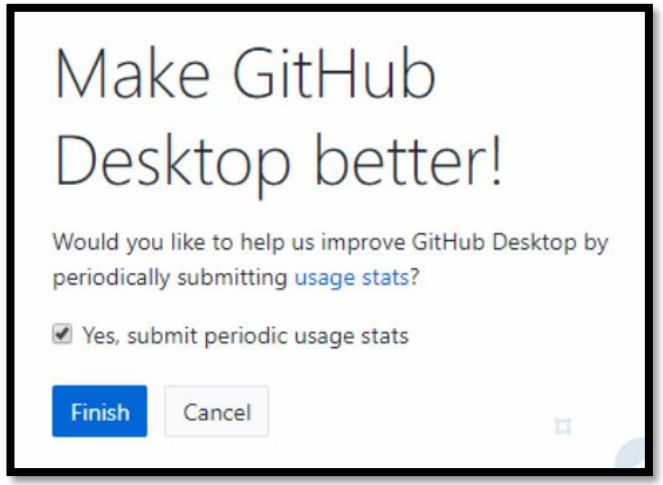
1. Download & install GitHub Desktop.

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

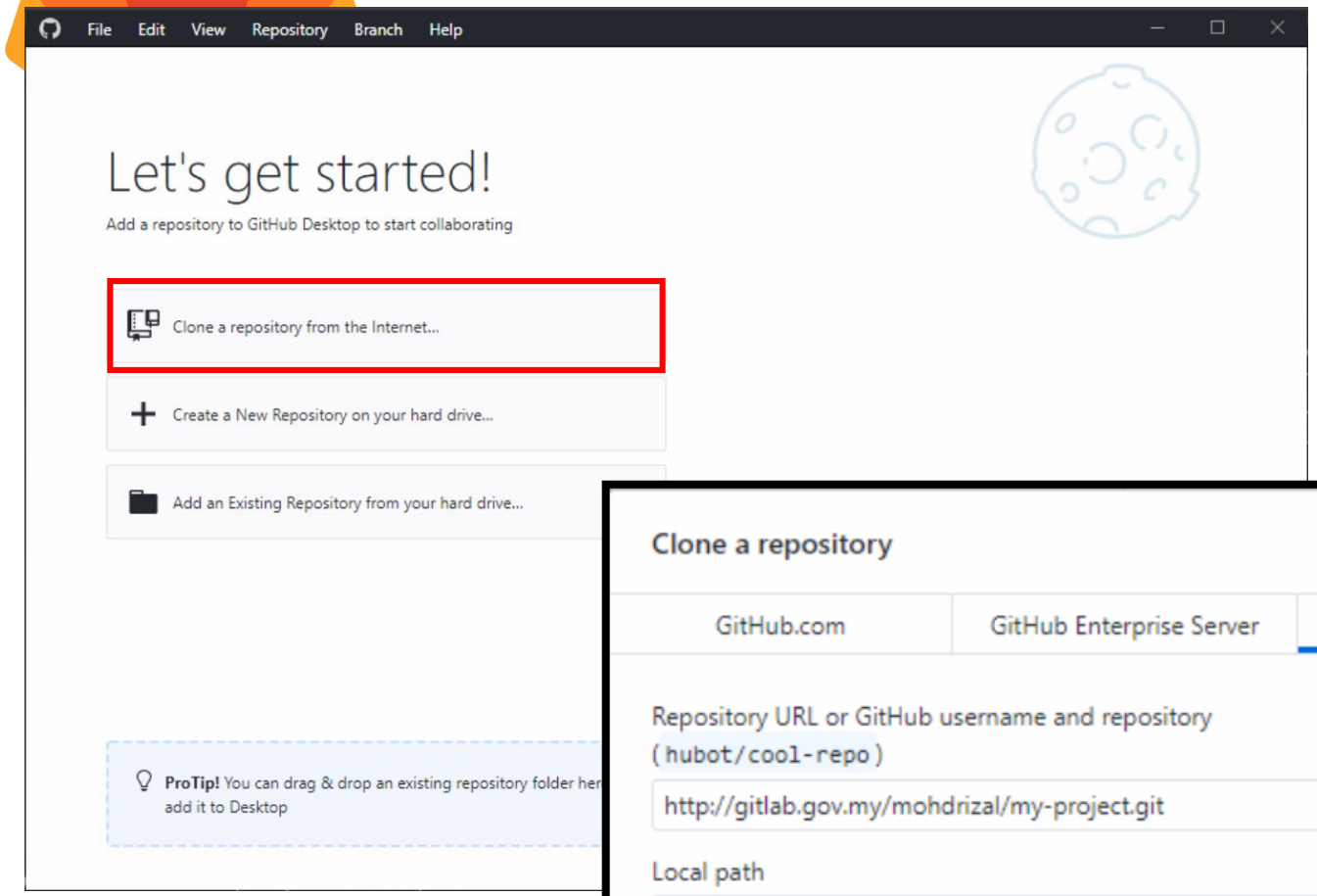
Create Local Repository

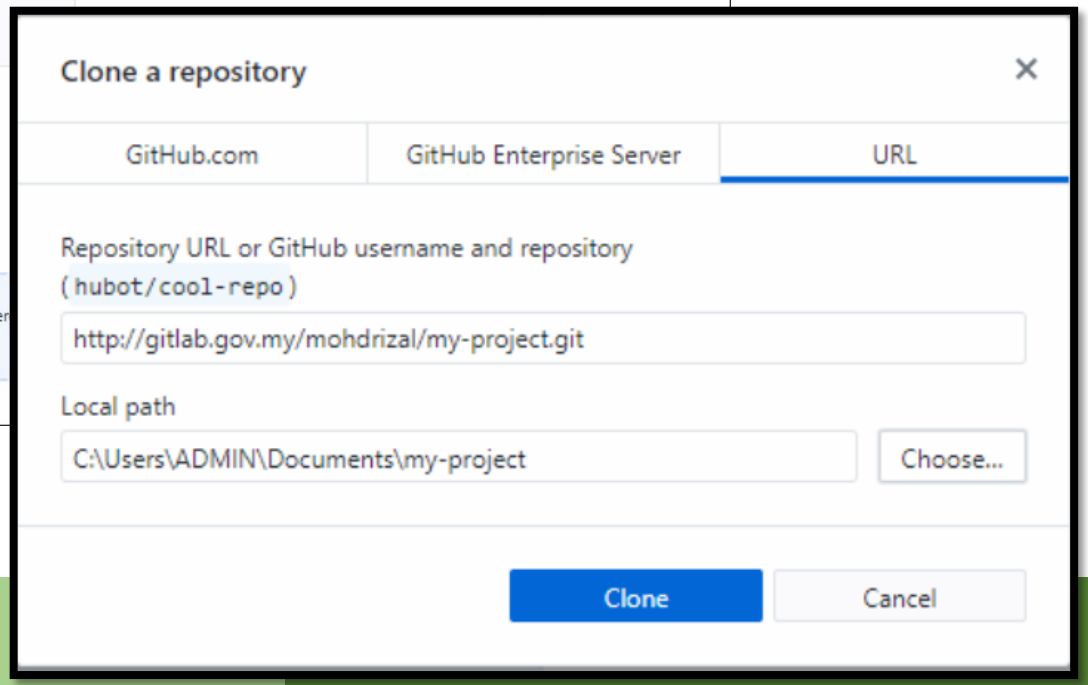


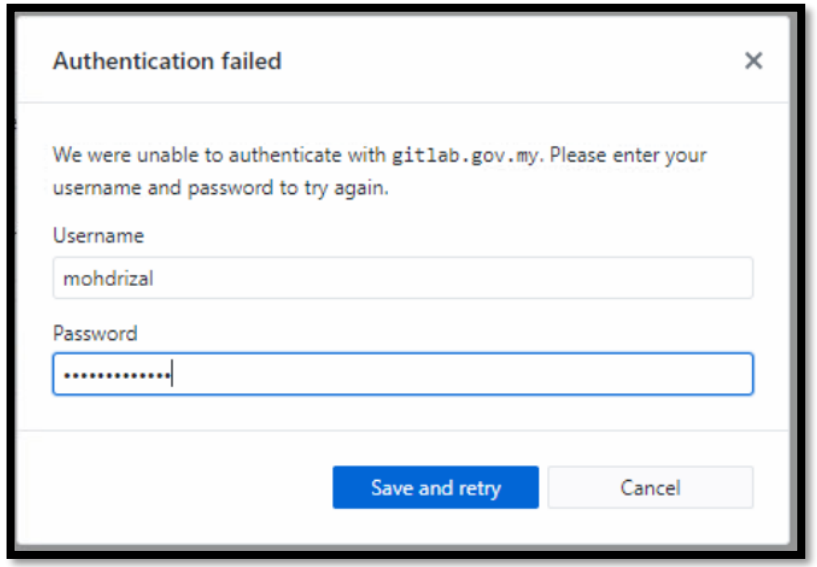




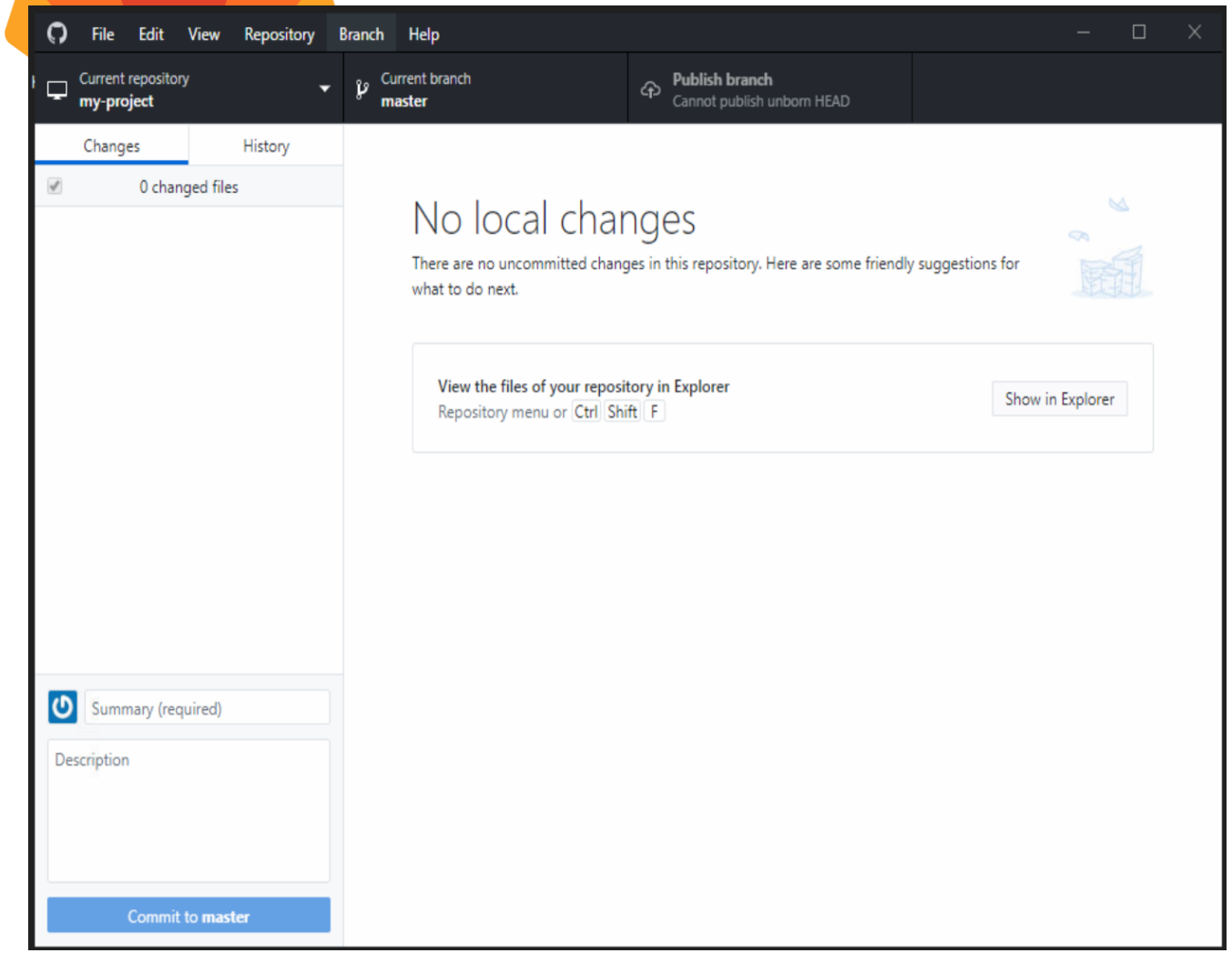
Create Local Repository

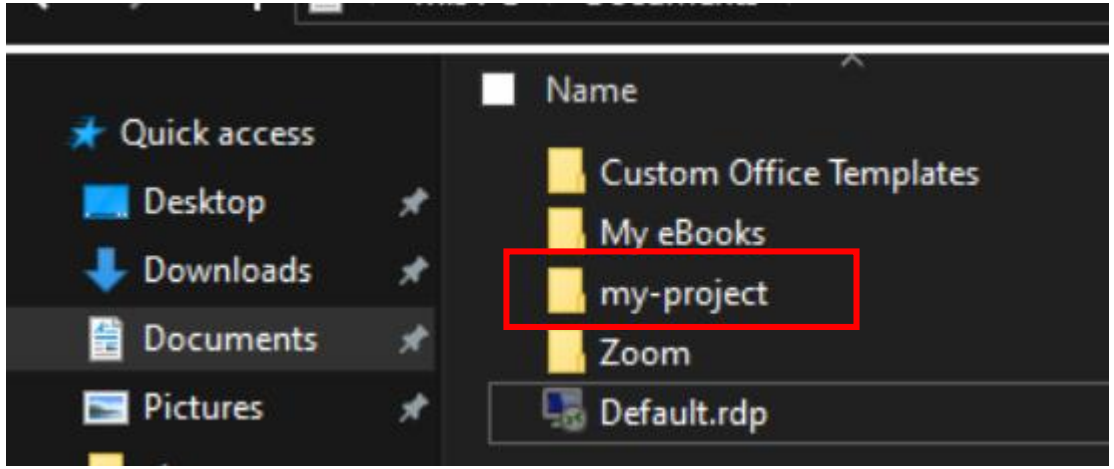






Create Local Repository

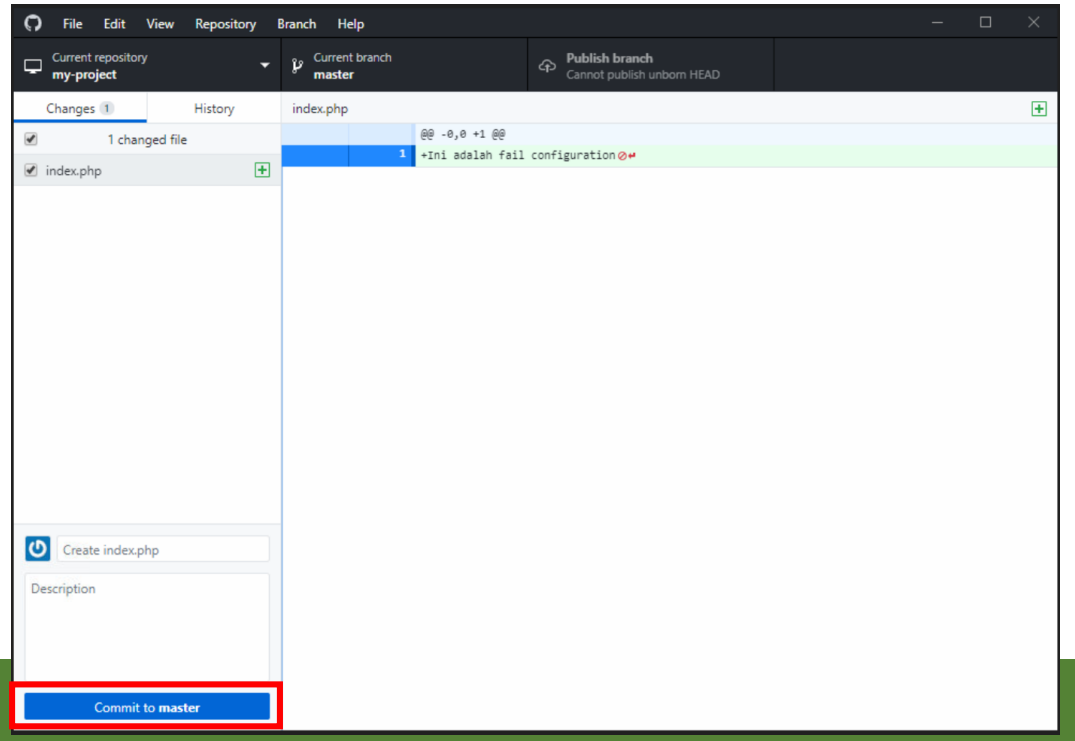




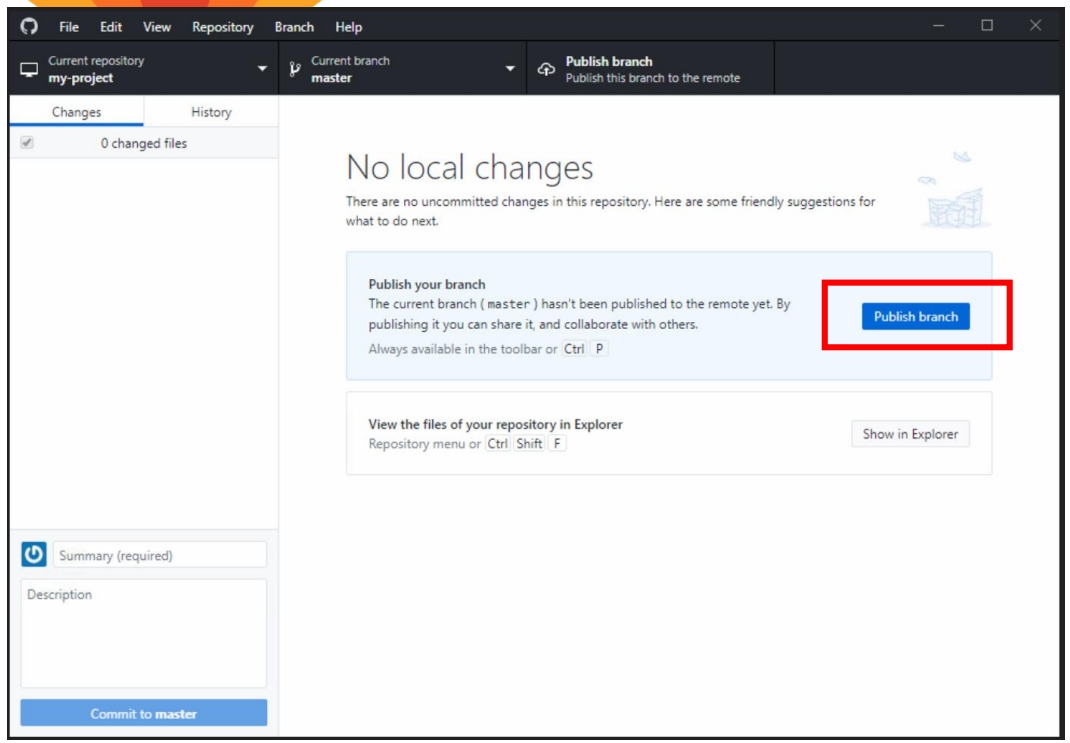
1. Folder my-project diwujudkan secara automatic.
2. Folder my-project adalah working copy.

Work on Files

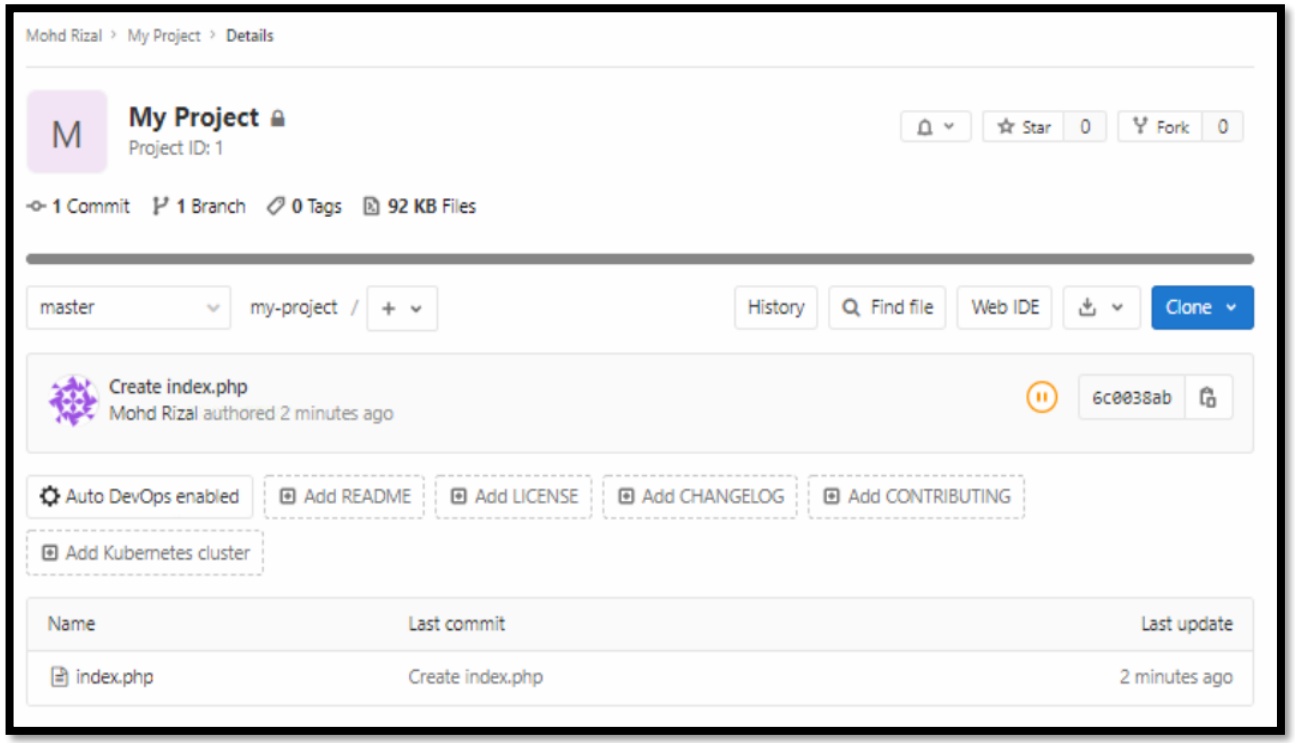
1. Buka folder my-project.
2. Cipta fail. Contoh index.php
3. Lihat GitHub Desktop. Klik “Commit to master”



Commit & Push

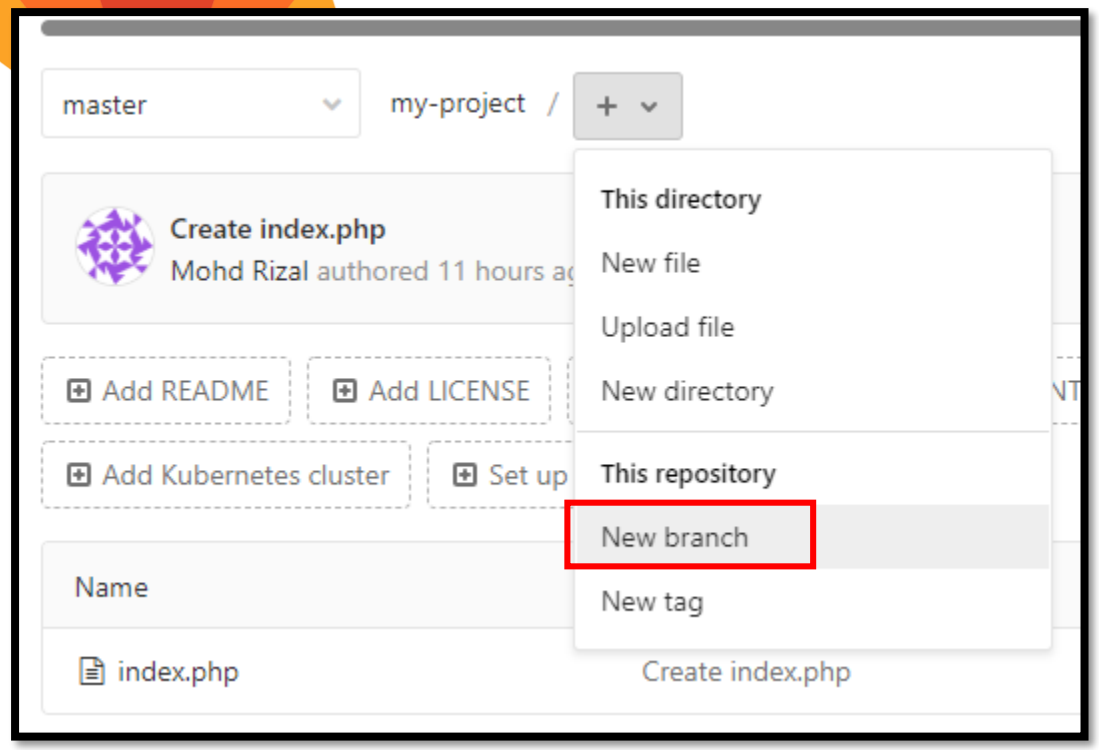


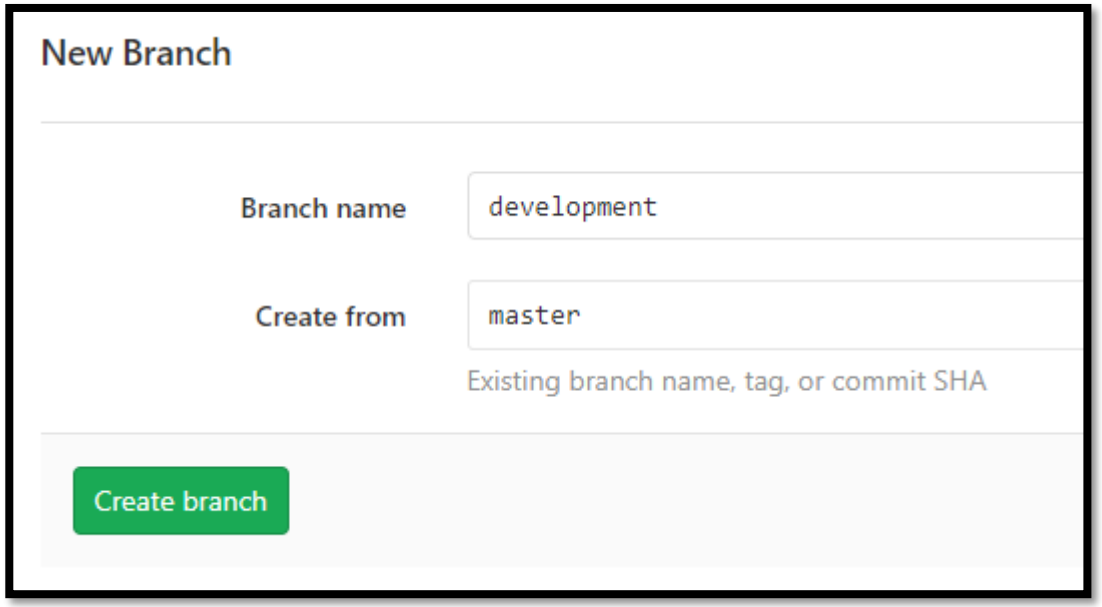
Local Repository

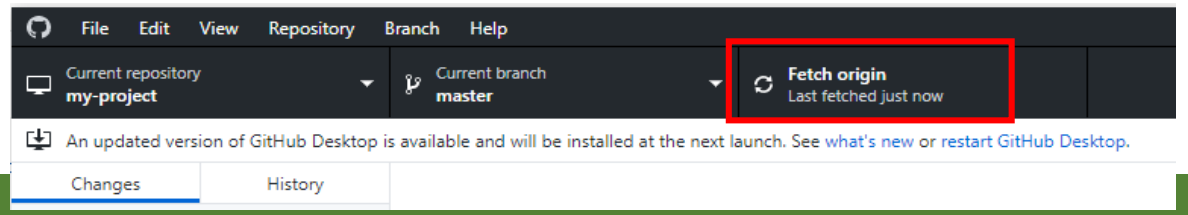


GitLab

Create Branch

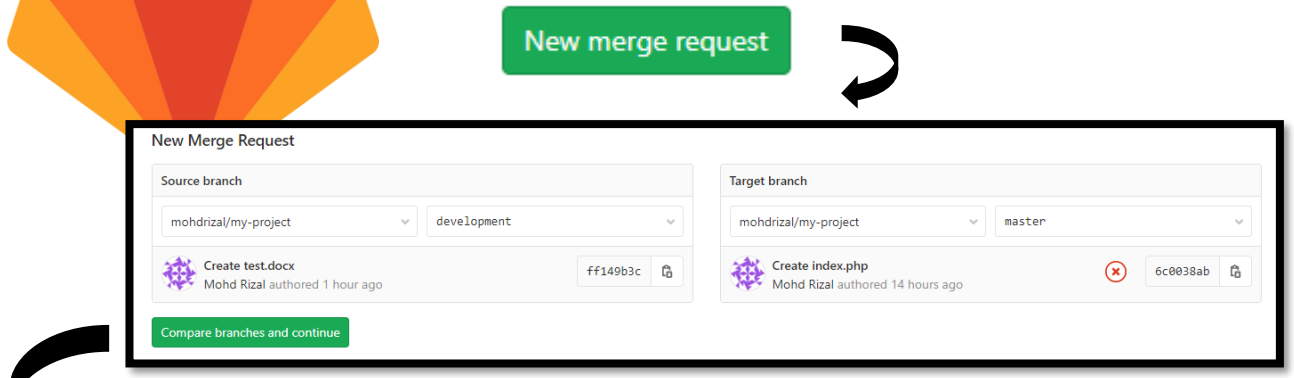


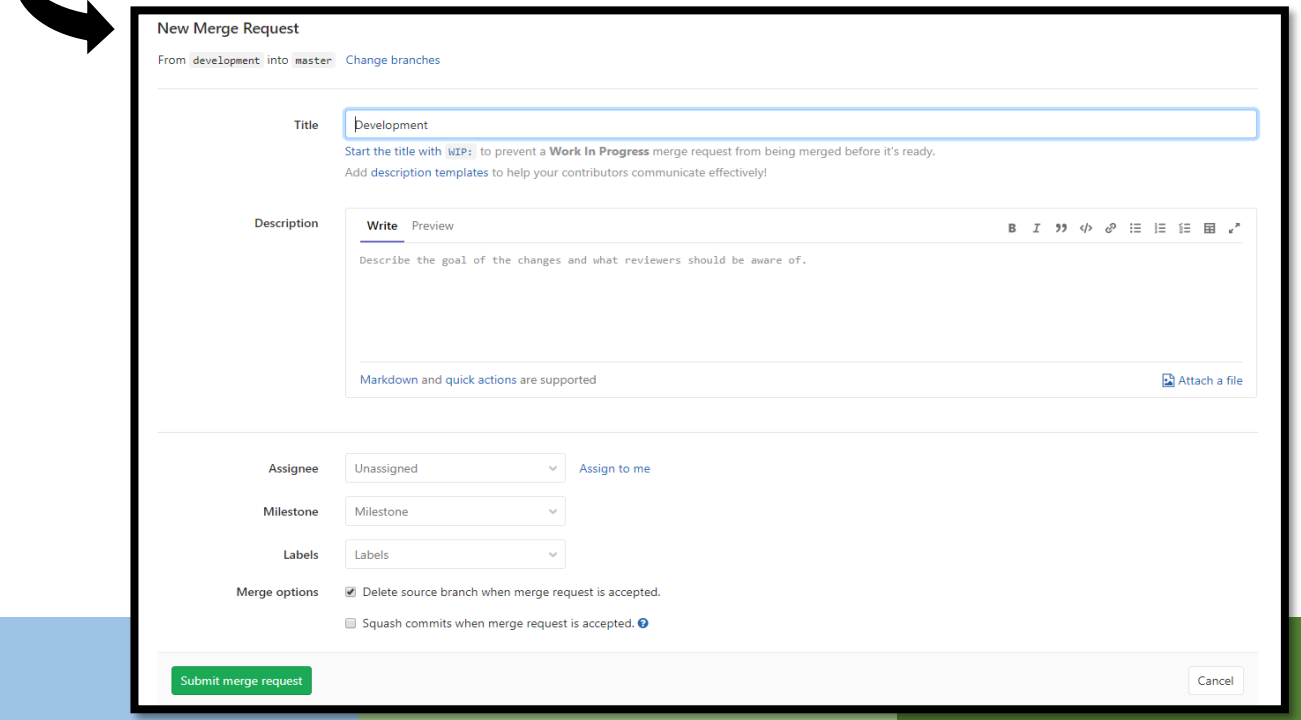


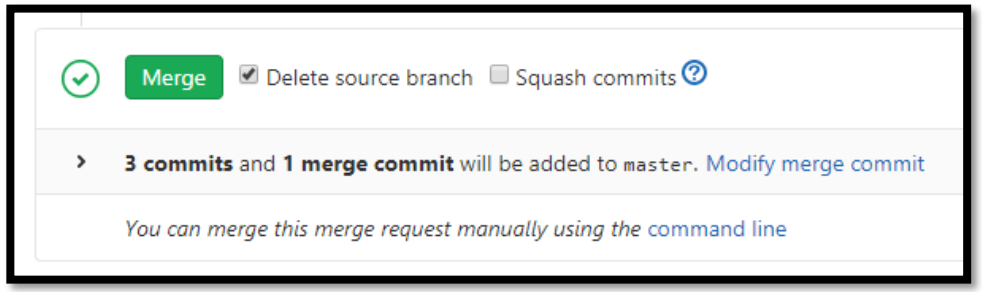


Local Repository

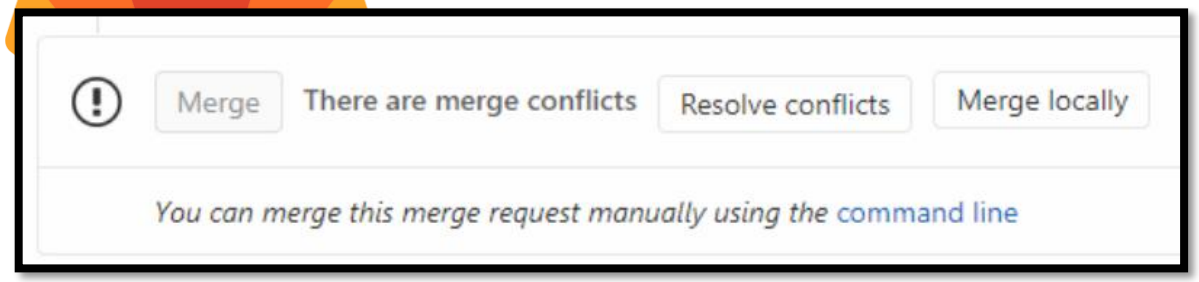
Merge Branch





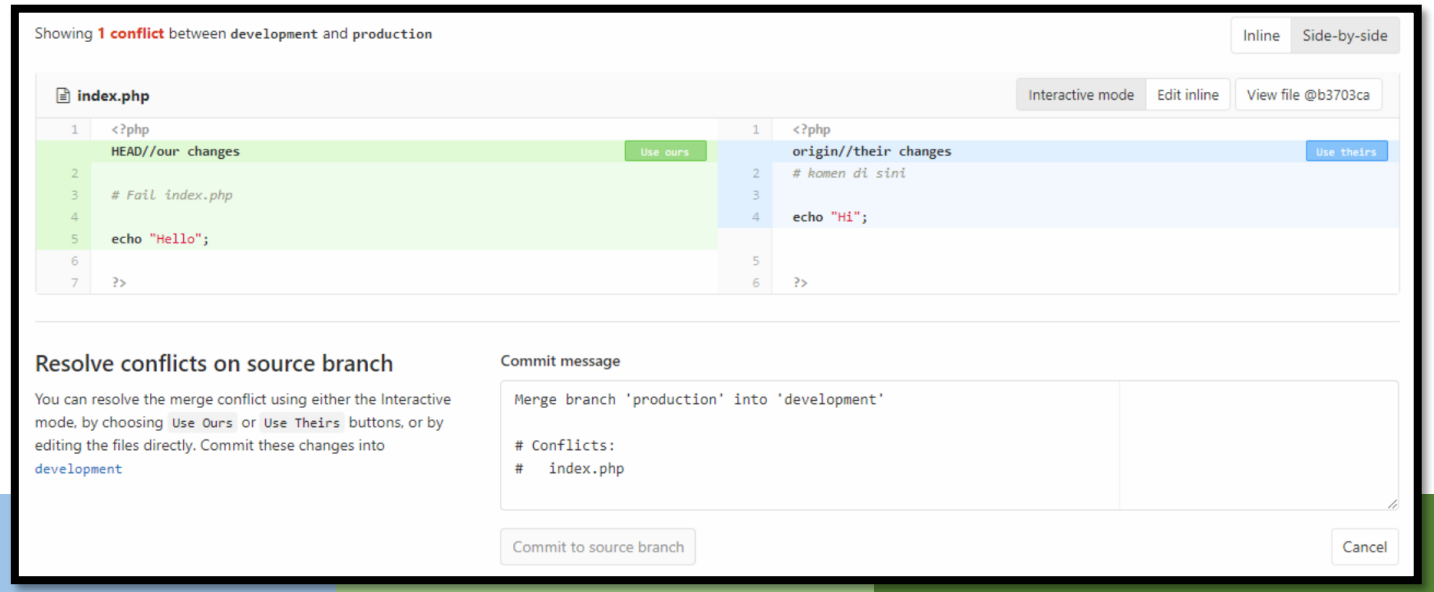


Conflict Resolution

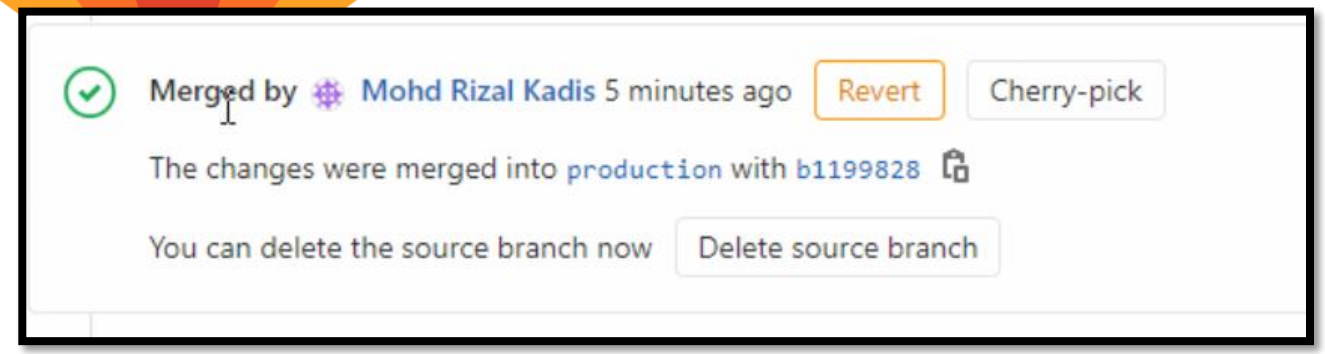


GitLab allows resolving conflicts in a file where all of the below are true:

- 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

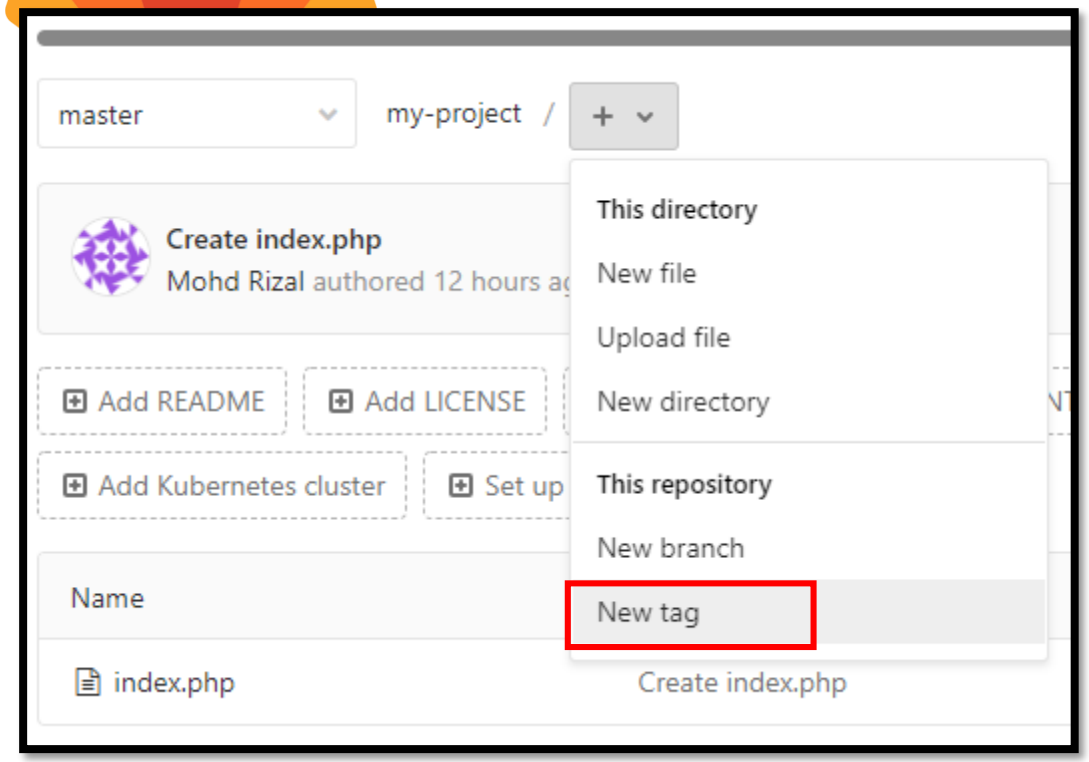


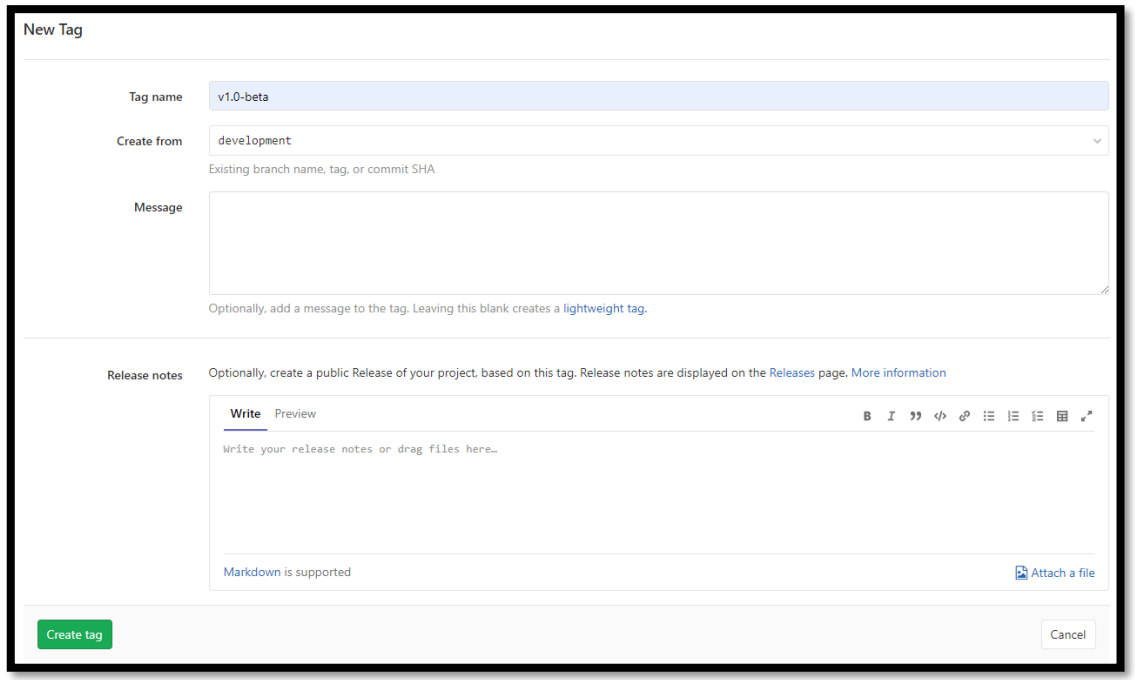
Revert


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 master
Revert
Cherry-pick
Tag
Download
Plain Diff

Create Tag

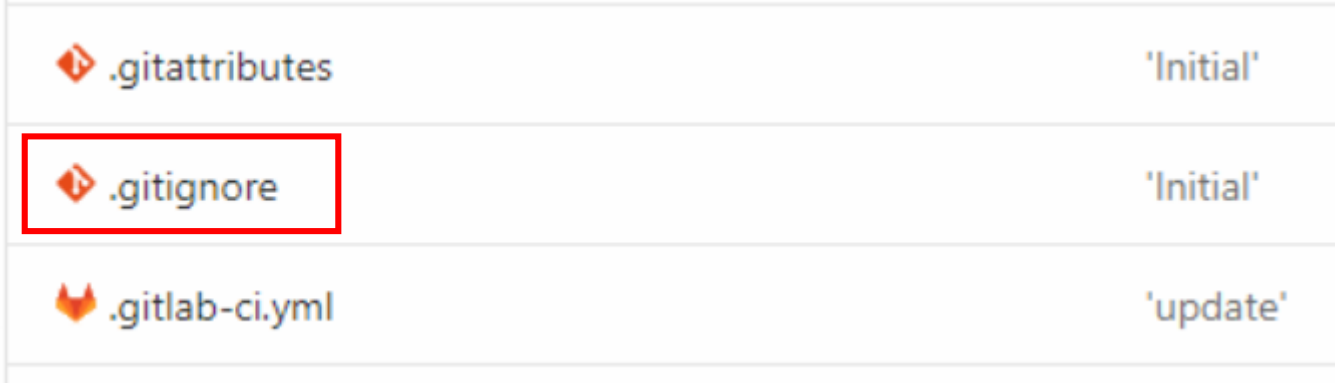




Tags

- 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



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

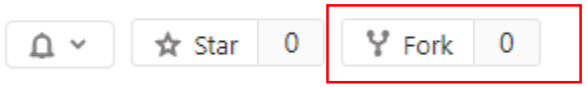
* is used as a wildcard match
** is used to match any number of directories
/ is used to ignore pathnames relative to the .gitignore file
is used to add comments to a .gitignore file
! is used to negate a file that would be ignored

What If I Already Have It Checked In?

git rm --cached FILENAME

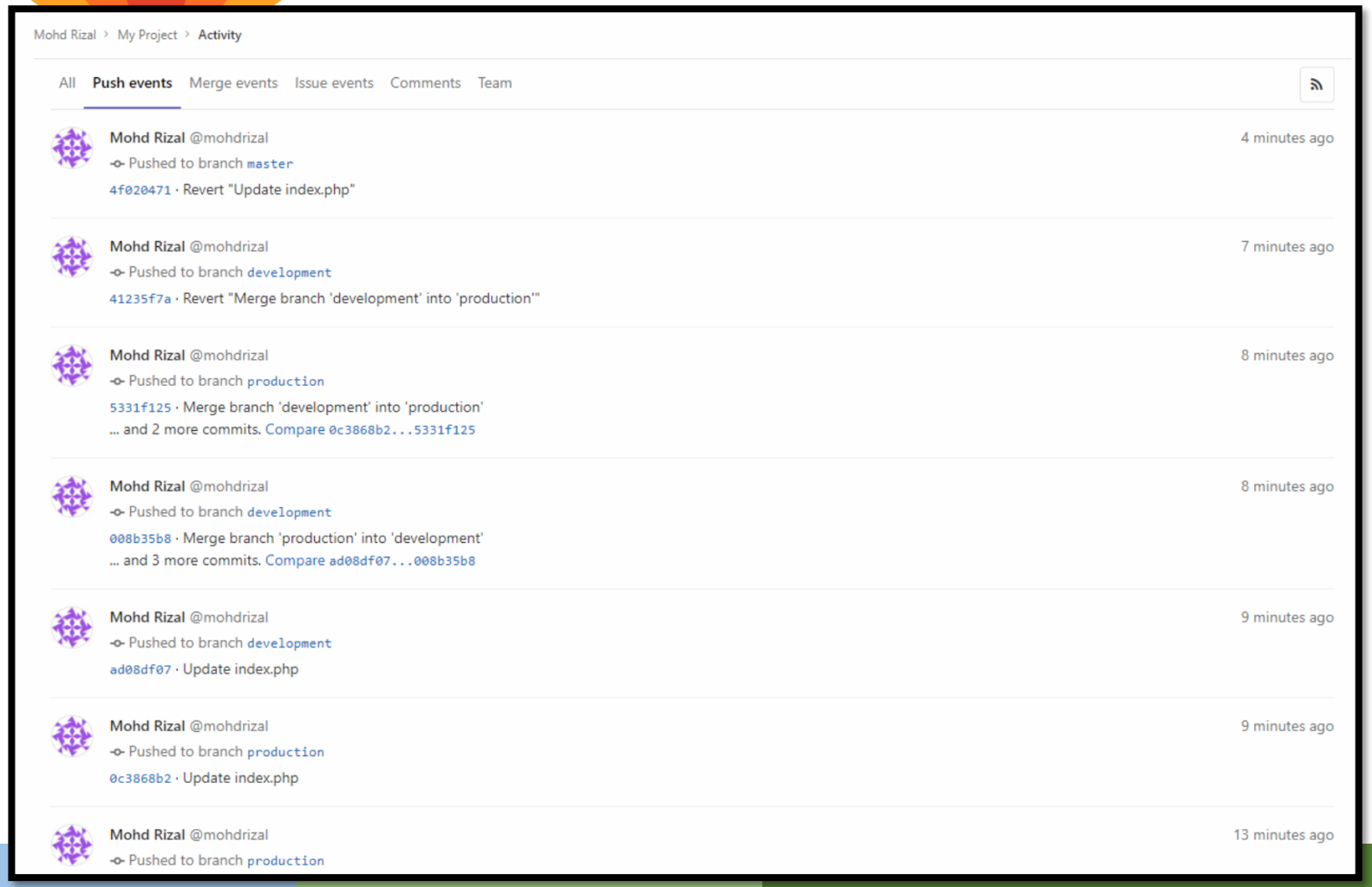
https://git-scm.com/docs/gitignore

Fork

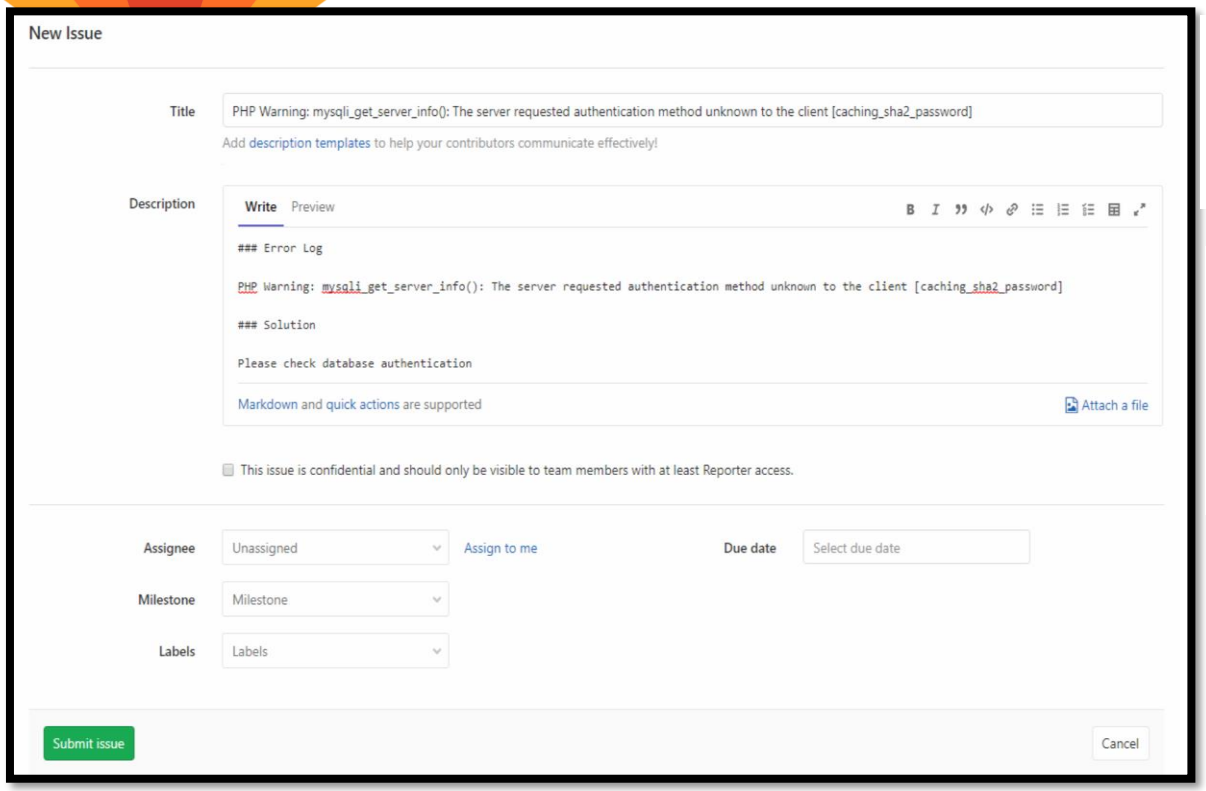


A fork is a copy of an original repository that you put in another namespace where you can experiment and apply changes that you can later decide whether or not to share, without affecting the original project.

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



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