THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

Information Technology Services Office

Get started with GitLab Service for Research for PolyU Researchers

Version: 3.0

USER GUIDE

Table of Contents

Introduction

The newly launched GitLab service for research is for ***PolyU staff and students to support their research project(s).***

It provides on premises Git repository as an alternative to third party public cloud service to store your code base which you may connect it from anywhere including off-campus access.

You could link up your Git repository with this Git repository management platform using editors or Integrated Development Environments (IDEs) that support Git version control (such as Pychram, Rstudio, Visual Studio and Atom, etc).

Features

- GitLab is a platform for managing Git repositories
- Provide on premises Git repository as an alternative to store your code base
- Connect it from anywhere
- Link up your repository on GitLab with editors or Integrated IDEs that support Git version control

GitLab service location: https://gitlab.polyu.edu.hk

Purpose

This User Guide contains all essential information and step-by-step procedures for the user (PolyU's researcher) to get started with GitLab service for research.

Part I: Registration

Please apply the registration and follow the step as follows:

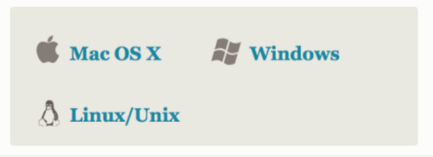
1. Go to the registration form.
2. Please use your NetID and NetPassword to login the registration form.
3. Please read the personal information collection statement and privacy policy statement clearly before submitting the form.
4. Please fill in all the mandatory items.
5. Select the platform(s) which you want to apply, you could apply “Pilot HPC Platform” and “GitLab Service for Research” in the same form.
6. Click “Submit”.
7. The registration process will be completed within 2 working days.
8. You would receive a confirmation email from ITS after the registration is completed.

For enquiries or more information about the IT support services for research, please contact the IT HelpCentre (Tel: **2766 5900**, WhatsApp/WeChat: **6577 9669**).

Part II: Preparation on your local machine

Before everything, install Git for your desktop first:

1. Go to https://git-scm.com/downloads.
2. Download the software for your operating system.



3. Install Git and choosing all of the default options.
4. Once everything is installed, you should be able to run Git on the command line.

   Suggested shell for difference operating system:

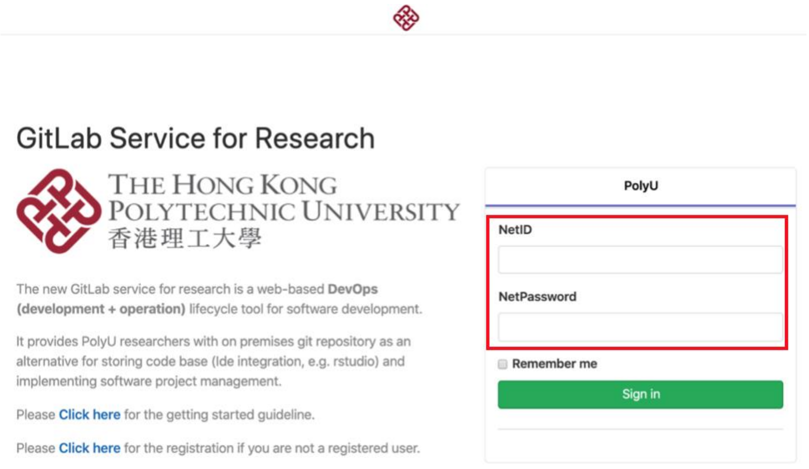
   Window: Git Bash

   Mac and Linux: Terminal

5. You may confirm the Git is successfully installed by typing `$ git --version` or `$ git`.
6. If it displays the usage information, then you are good to go.

Part III: Login and create repository

1. Go to https://gitlab.polyu.edu.hk.
2. Login with your PolyU NetID and NetPassword.



GitLab Service for Research

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

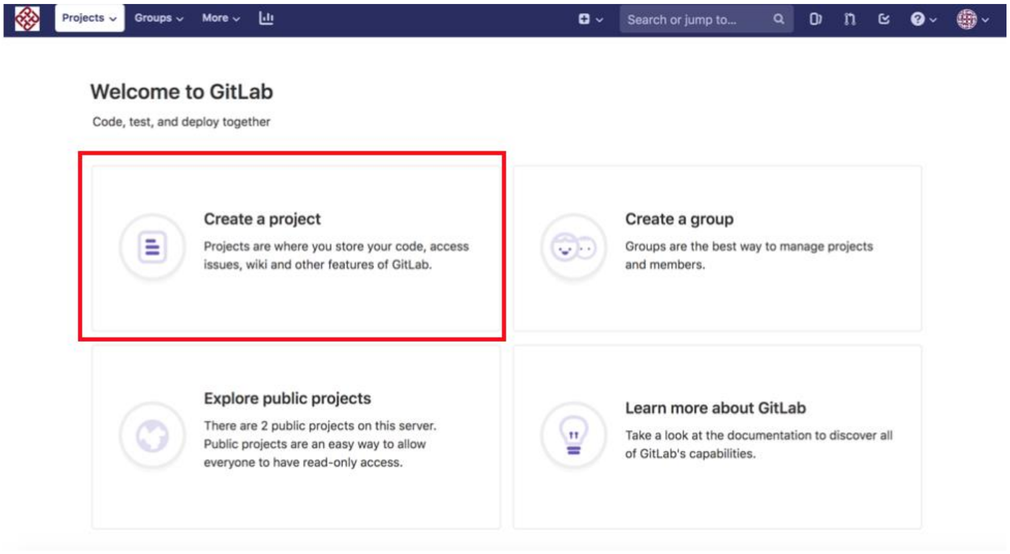
The new GitLab service for research is a web-based **DevOps (development + operation)** lifecycle tool for software development.

It provides PolyU researchers with on premises git repository as an alternative for storing code base (Ide integration, e.g. rstudio) and implementing software project management.

Please Click here for the getting started guideline.

Please Click here for the registration if you are not a registered user.

3. Create a new project under “Projects”.
4. Total 20 projects can be created by each user account.
5. Click “Create a project” to get started.



Welcome to GitLab

Code, test, and deploy together

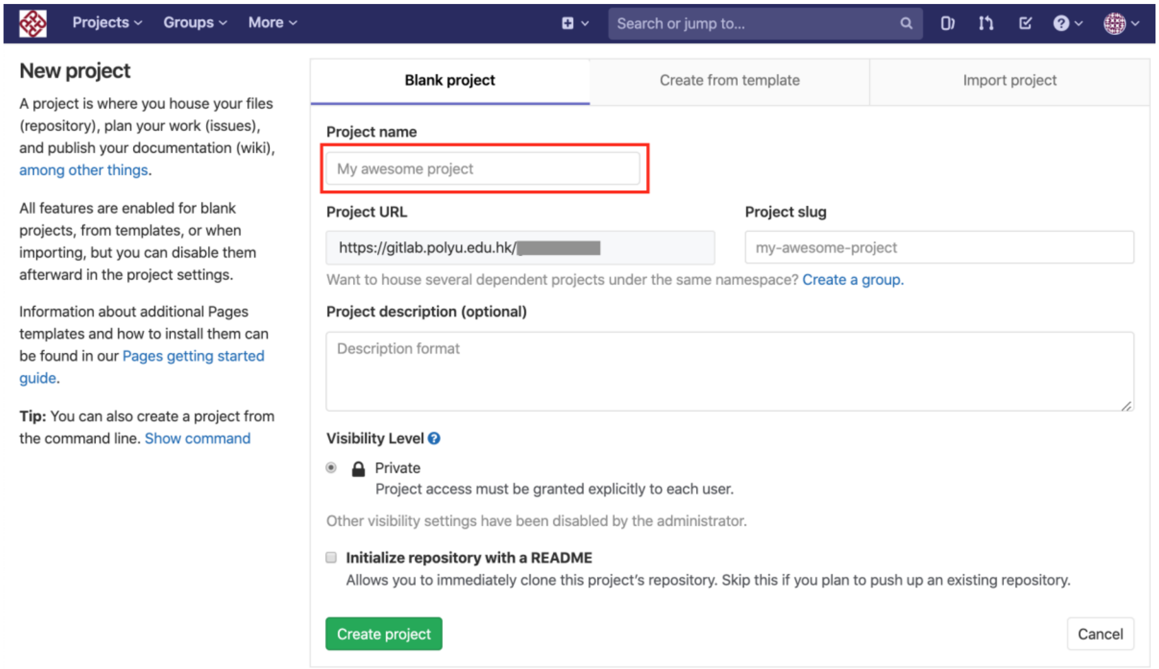
Create a project
Projects are where you store your code, access issues, wiki and other features of GitLab.

Create a group
Groups are the best way to manage projects and members.

Explore public projects
There are 2 public projects on this server. Public projects are an easy way to allow everyone to have read-only access.

Learn more about GitLab
Take a look at the documentation to discover all of GitLab's capabilities.

6. Simply select blank project for getting started, fill in the name of project only.



New project

A project is where you house your files (repository), plan your work (issues), and publish your documentation (wiki), among other things.

All features are enabled for blank projects, from templates, or when importing, but you can disable them afterward in the project settings.

Information about additional Pages templates and how to install them can be found in our Pages getting started guide.

Tip: You can also create a project from the command line. Show command

Project name: My awesome project

Project URL: https://gitlab.polyu.edu.hk/[redacted]

Project slug: my-awesome-project

Want to house several dependent projects under the same namespace? Create a group.

Project description (optional): Description format

Visibility Level

● Private
Project access must be granted explicitly to each user.

Other visibility settings have been disabled by the administrator.

□ **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.

7. The blank repository is created.
8. The repository for this project is empty, you can create files directly in GitLab or follow the command line instructions as follows.
9. For maximum upload size each time as well as every file size are limited to 10 Mb.
10. Do the setup as instructed at your client command prompt.

Suggested shell for difference operating system:

Window: Git Bash

Mac and Linux: Terminal

A) Git Global setup

To set up your username for every repository on your computer:

```
$ git config --global user.name "NetID"
```

You may confirm your Git username has been set correctly:

```
$ git config --global user.name
> Your NetID
```

To set up your email address for every repository on your computer:

(For staffs)

```
$ git config --global user.email your_email@polyu.edu.hk
```

(For students)

```
$ git config --global user.email your_email@connect.polyu.hk
```

You may confirm your email address has been set correctly:

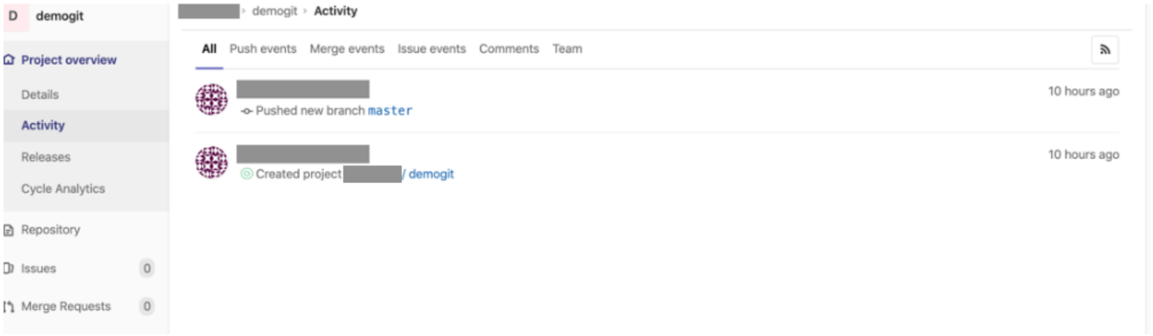
```
$ git config --global user.email
> your_email@polyu.edu.hk or your_email@connect.polyu.hk
```

B) Create a new repository

If you have no repository on your host, please follow this example. We create a project called "demogit" as an example in the following sections, you may pick a name you like instead.

```
$ git clone https://gitlab.polyu.edu.hk/NetID/demogit.git
$ cd demogit
$ touch README.md (For Windows, use Windows explorer to create new files or
type “nul > README.md” using command prompt.)
$ git add README.md
$ git commit -m "add README"
$ git push -u origin master
```

The default branch “master” is pushed in Git.

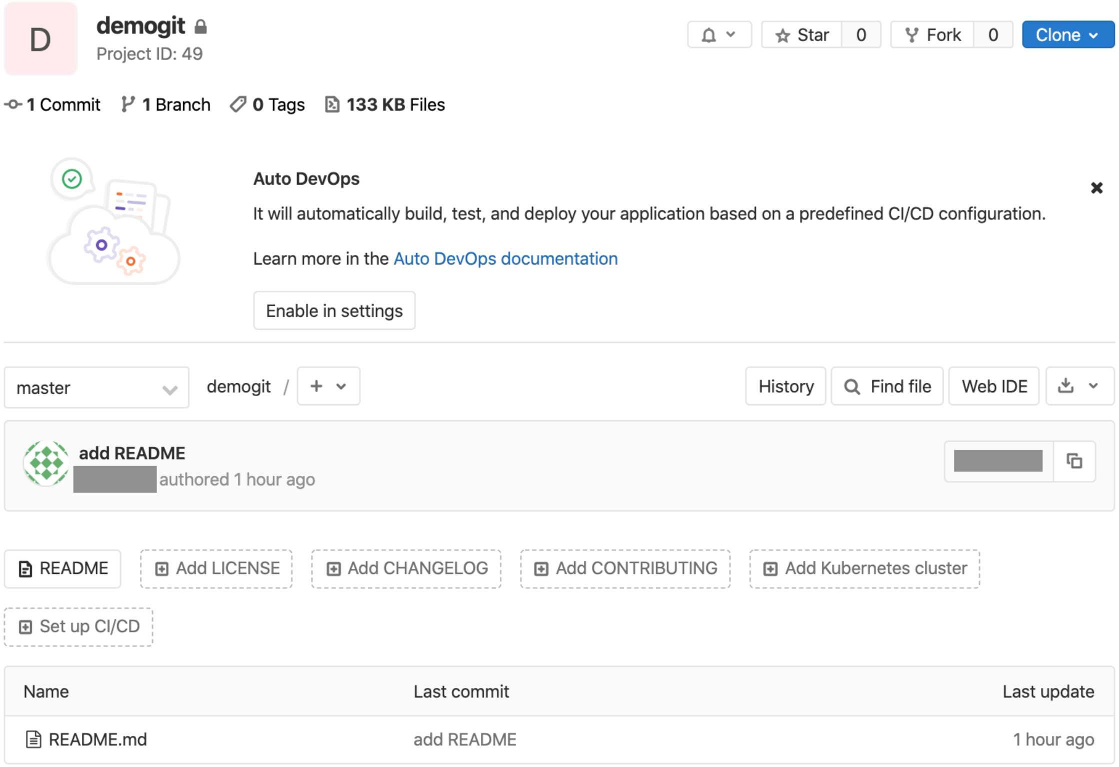


[redacted] › demogit › Activity

[redacted] 10 hours ago
Pushed new branch master

[redacted] 10 hours ago
Created project [redacted] / demogit

The file "README.md" is pushed in Git.



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

add README

[redacted] authored 1 hour ago

[redacted]

Name	Last commit	Last update
README.md	add README	1 hour ago

C) Push an existing folder

If you have a folder that is not yet a Git repository and want to push it to Gitlab, do this:

```
$ cd existing_folder
$ git init
$ git remote add origin https://gitlab.polyu.edu.hk/NetID/demogit.git
$ git add .
$ git commit -m "Initial commit"
$ git push -u origin master
```

D) Push an existing Git repository

If you have an existing Git repository to be pushed, do this:

```
$ cd existing_repo
$ git remote rename origin old-origin
$ git remote add origin https://gitlab.polyu.edu.hk/NetID/demogit.git
$ git push -u origin --all
$ git push -u origin --tags
```

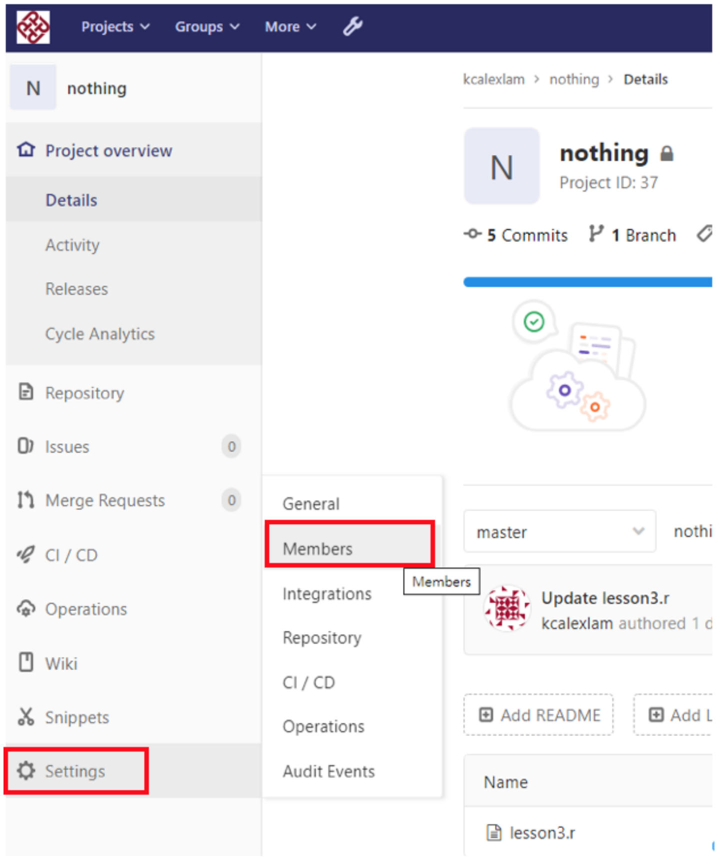
11. The basic Git repository has been created.

Part IV: Basic operations of groups and members

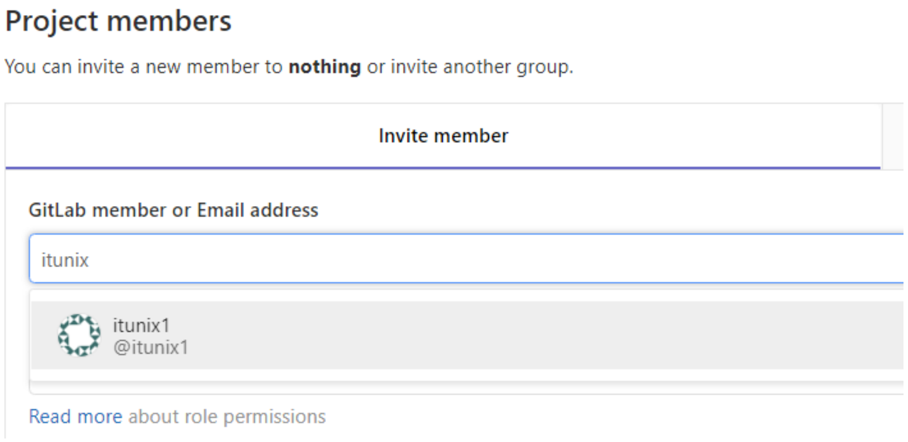
On GitLab server interface you may grant the access right of project for individuals or groups.

A) Project member

1. Within project, on the left, click Settings -> Members.



2. Invite members from member list.



Project members

You can invite a new member to **nothing** or invite another group.

Invite member

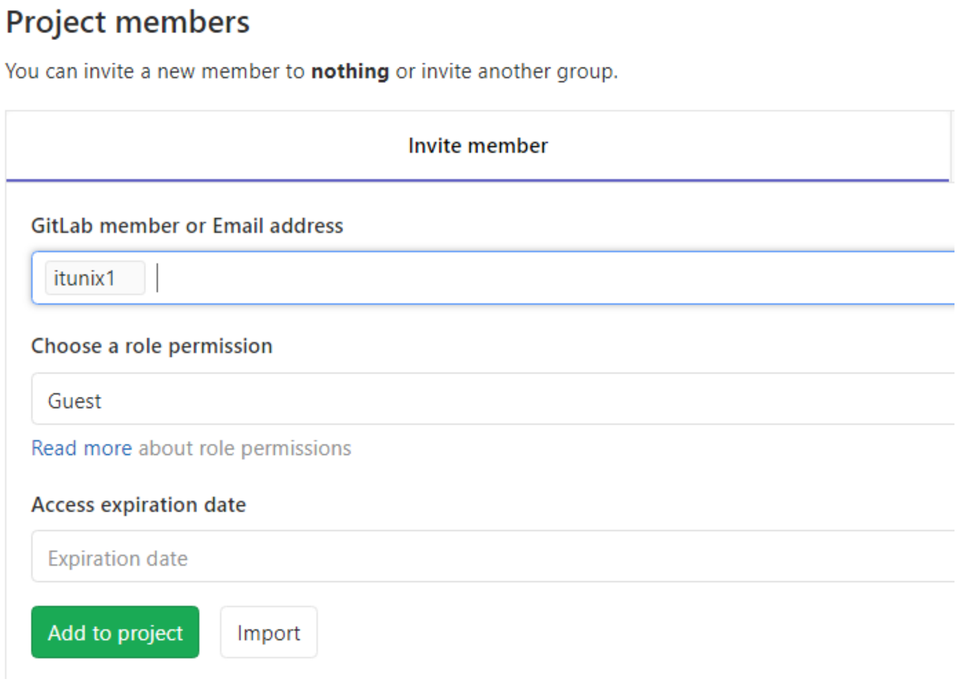
GitLab member or Email address

itunix

itunix1
@itunix1

Read more about role permissions

3. And choose a role permission. It is optional to setup the expiration date for the invited member.
4. Click add if everything is correct.



Project members

You can invite a new member to **nothing** or invite another group.

Invite member

GitLab member or Email address

itunix1

Choose a role permission

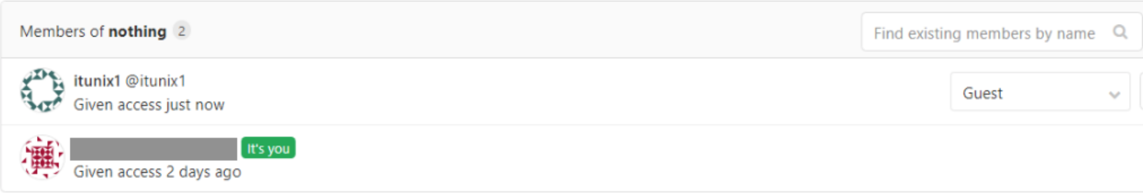
Guest

Read more about role permissions

Access expiration date

Expiration date

5. At last, the list of invited members and groups is shown. As an owner or maintainer of project, you may alter the role of members anytime. For details, please refer to the official document.



Members of **nothing** 2

Find existing members by name

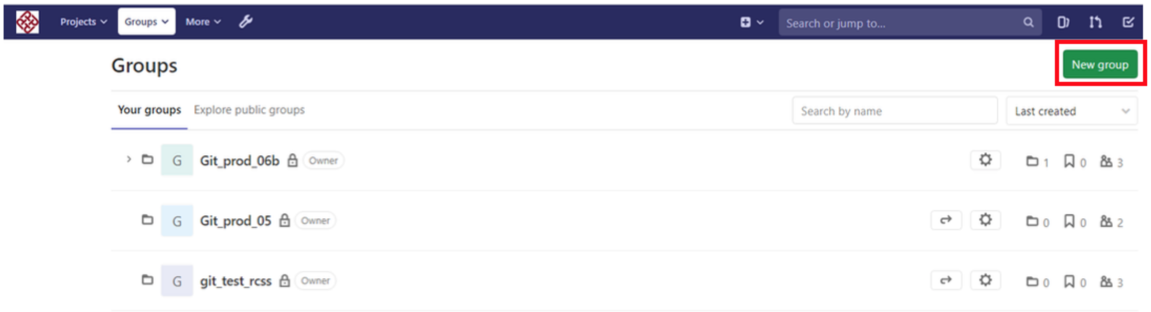
itunix1 @itunix1
Given access just now
Guest

[redacted] It's you
Given access 2 days ago

B) Invite group to project

You may also add members to a group which could be invited by project.

1. Click the “New Group” green button on the top right corner.



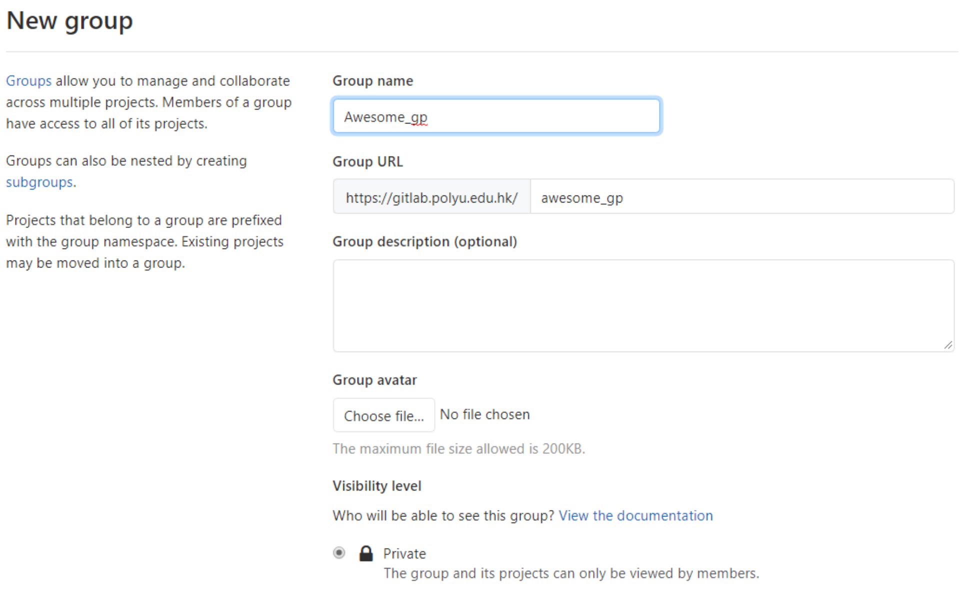
Groups

Your groups | Explore public groups

Search by name | Last created

Group	Role	Subgroups	Projects	Members
Git_prod_06b	Owner	1	0	3
Git_prod_05	Owner	0	0	2
git_test_rcss	Owner	0	0	3

2. Assign a name for the group. Visibility level available to you should be “Private” only.



New group

Groups allow you to manage and collaborate across multiple projects. Members of a group have access to all of its projects.

Groups can also be nested by creating subgroups.

Projects that belong to a group are prefixed with the group namespace. Existing projects may be moved into a group.

Group name: Awesome_gp

Group URL: https://gitlab.polyu.edu.hk/ awesome_gp

Group description (optional)

Group avatar: Choose file... No file chosen

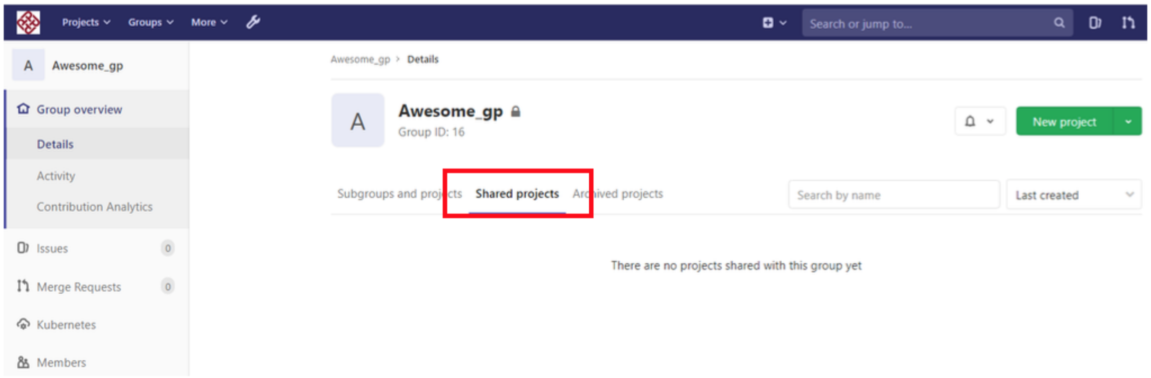
The maximum file size allowed is 200KB.

Visibility level

Who will be able to see this group? View the documentation

● Private
The group and its projects can only be viewed by members.

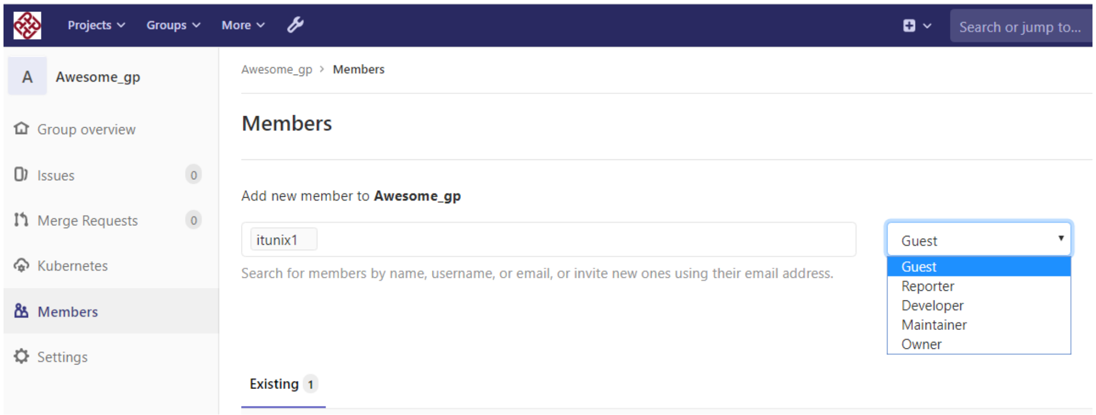
3. On the frontpage of the group, you may click “Shared projects” and now it has no project being shared. On the left click member.



Awesome_gp
Group ID: 16

There are no projects shared with this group yet

4. Add members to your group and assign roles:



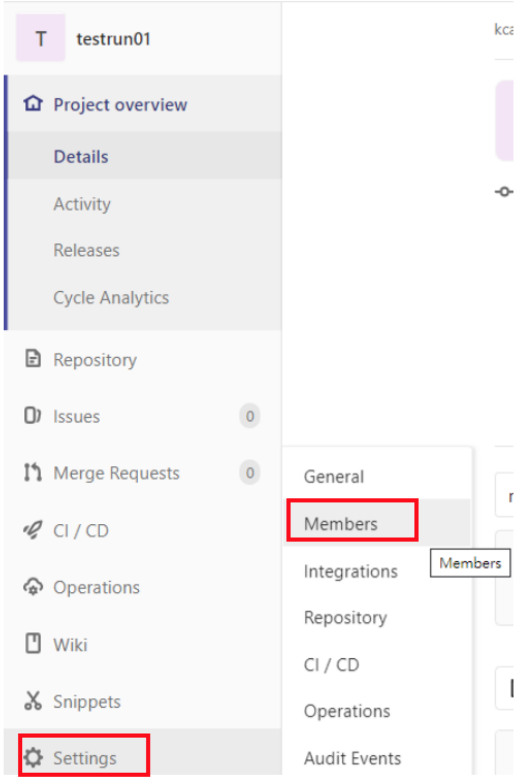
Add new member to **Awesome_gp**

itunix1

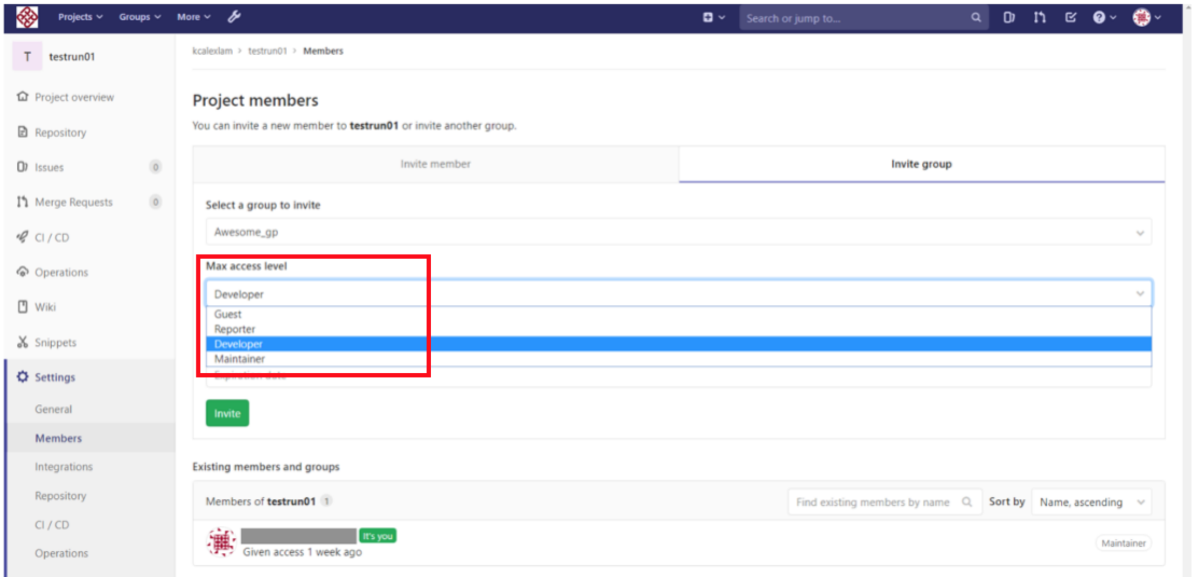
Guest

Search for members by name, username, or email, or invite new ones using their email address.

5. Go to the project you wish the group members to access. In the project, select Settings-> Members



6. On the page, select the group you want to share the project with and set the maximum role permission of this project for the group. For details please see the link here.



Project members

You can invite a new member to **testrun01** or invite another group.

Select a group to invite: Awesome_gp

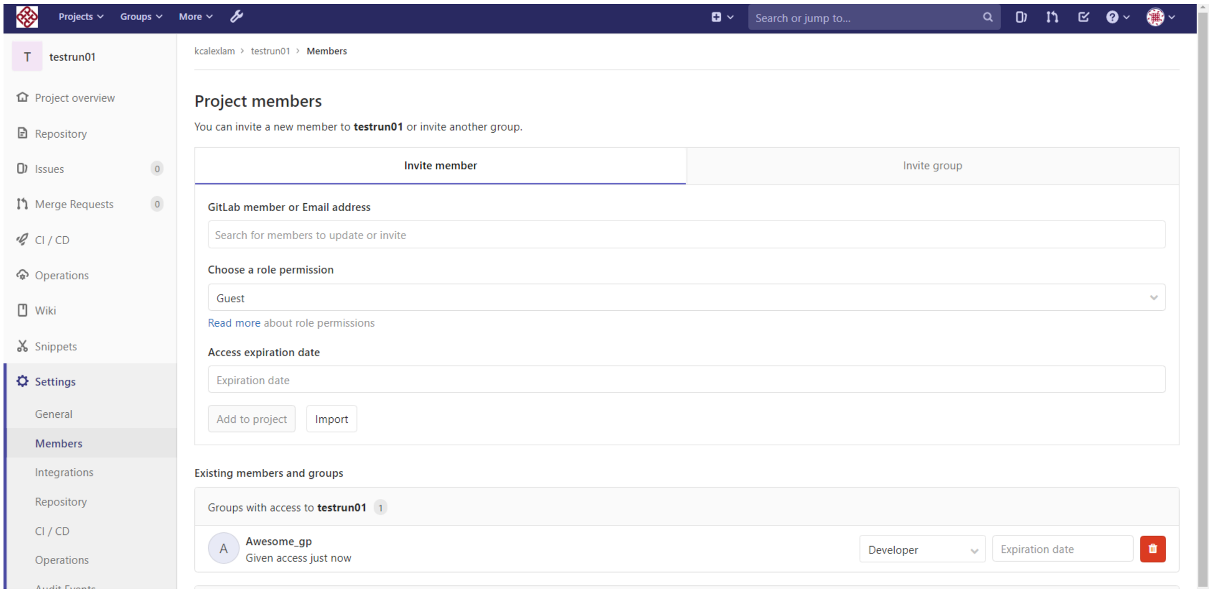
Max access level: Developer

- Guest
- Reporter
- Developer
- Maintainer

Existing members and groups

Members of **testrun01** 1 — Find existing members by name — Sort by Name, ascending

[redacted] It's you — Given access 1 week ago — Maintainer



Project members

You can invite a new member to **testrun01** or invite another group.

GitLab member or Email address: Search for members to update or invite

Choose a role permission: Guest

Read more about role permissions

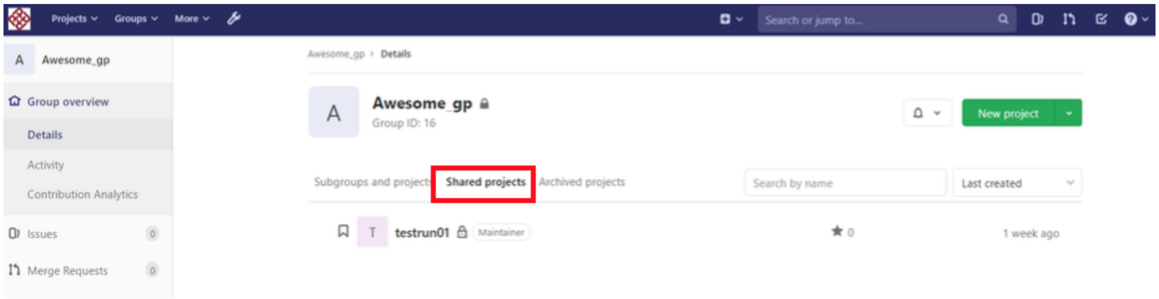
Access expiration date: Expiration date

Existing members and groups

Groups with access to **testrun01** 1

A Awesome_gp — Given access just now — Developer — Expiration date

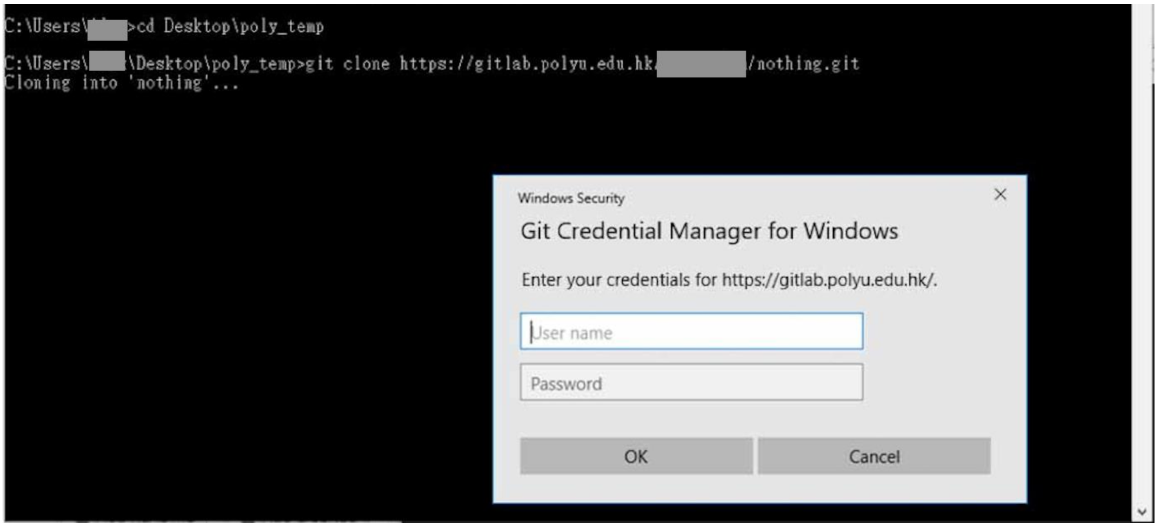
7. Go back to the group that you have just invited and check “shared projects”, now the users within the group could access the project according to the permission role they are assigned.



FAQ

I) Login problem for Windows

1. At the first time of cloning your repository, you would be prompted for login information, the information would be stored by Credential Manager:



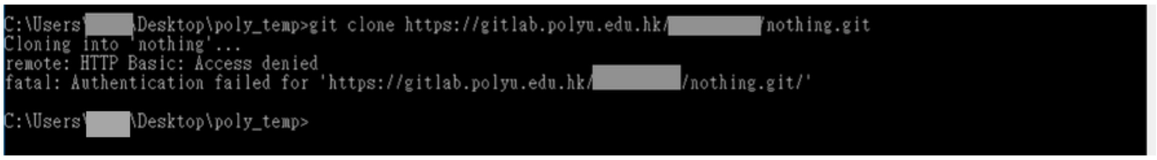
```
C:\Users\[redacted]>cd Desktop\poly_temp

C:\Users\[redacted]\Desktop\poly_temp>git clone https://gitlab.polyu.edu.hk/[redacted]/nothing.git
Cloning into 'nothing'...
```

Windows Security

Git Credential Manager for Windows

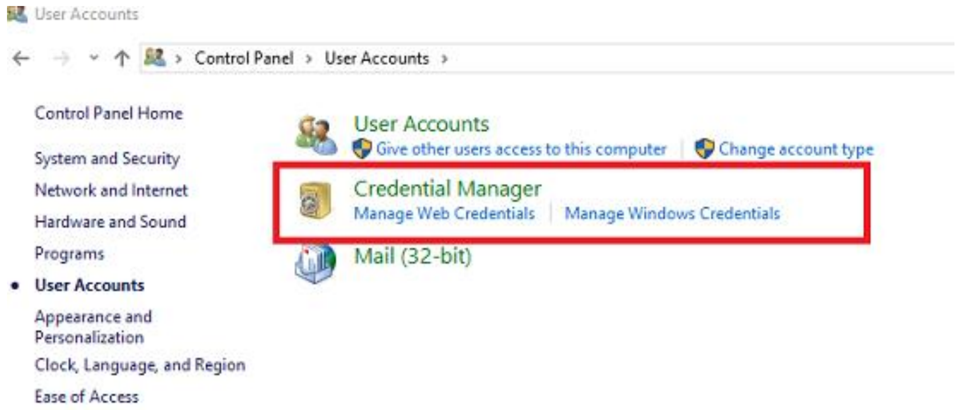
Enter your credentials for https://gitlab.polyu.edu.hk/.

2. If you entered the information incorrectly for the first time, you would get login error.

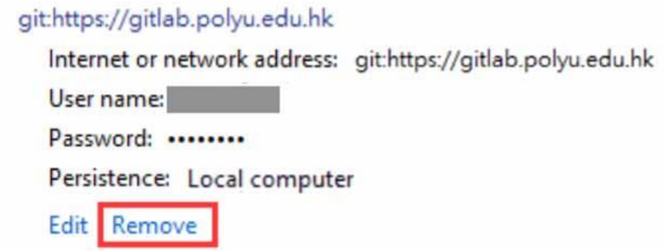


```
C:\Users\[redacted]\Desktop\poly_temp>git clone https://gitlab.polyu.edu.hk/[redacted]/nothing.git
Cloning into 'nothing'...
remote: HTTP Basic: Access denied
fatal: Authentication failed for 'https://gitlab.polyu.edu.hk/[redacted]/nothing.git/'

C:\Users\[redacted]\Desktop\poly_temp>
```

4. To solve this, open the Credential Manager, click Manage Windows Credentials:



5. Find out the entry of gitlab.polyu.edu.hk and remove it:


git:https://gitlab.polyu.edu.hk

Internet or network address: git:https://gitlab.polyu.edu.hk

User name: [redacted]

Password: ••••••••

Persistence: Local computer

6. You may now perform step 1 to login again with correct login information.

II) Git default branch name

1. Due to Git version upgrade. New projects created via the GitLab GUI will use **main** as the default branch name. For the new creating project. If your project is running CI/CD jobs configured in another project, hard-coded references to **master**, old default branch name, will need to be updated to use either **main** or to use a default branch name CI/CD variable, such as **CI_DEFAULT_BRANCH**.

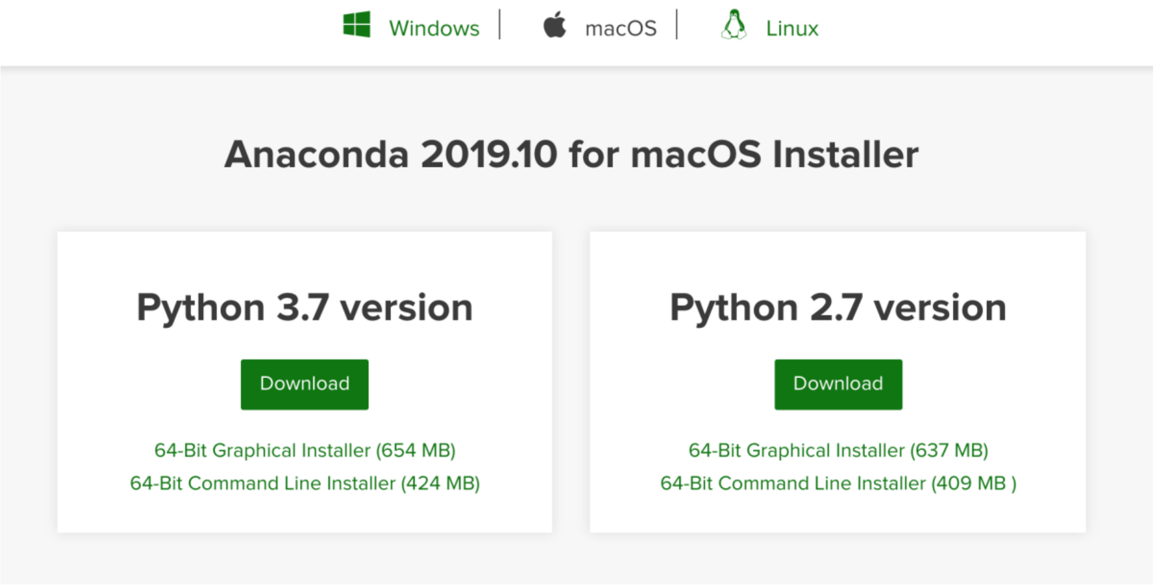
Reference

Official GitLab Documents	
Download Git	https://git-scm.com/downloads
Project members permissions	https://docs.gitlab.com/ce/user/permissions.html
Basic commands for Git	https://docs.gitlab.com/ce/gitlab-basics/command-line-commands.html
Tutorials from Tutorials Point	
Getting started	https://www.tutorialspoint.com/gitlab/gitlab_create_project.htm
PolyU: IT Support for Research Website	
Homepage	https://www.polyu.edu.hk/its/researchsupport
GitLab Service for Research	https://www.polyu.edu.hk/its/researchsupport/en/gitlab-service-for-research/introduction/
Use Case for GitLab	https://www.polyu.edu.hk/its/researchsupport/en/gitlab-service-for-research/user-guides/
Pilot HPC Platform	https://www.polyu.edu.hk/its/researchsupport/en/pilot-hpc-platform/introduction/

Appendix A - Install Anaconda 3

Download Location for Anaconda 3 in:

https://www.anaconda.com/distribution/



Anaconda 2019.10 for macOS Installer

Python 3.7 version

64-Bit Graphical Installer (654 MB)
64-Bit Command Line Installer (424 MB)

Python 2.7 version

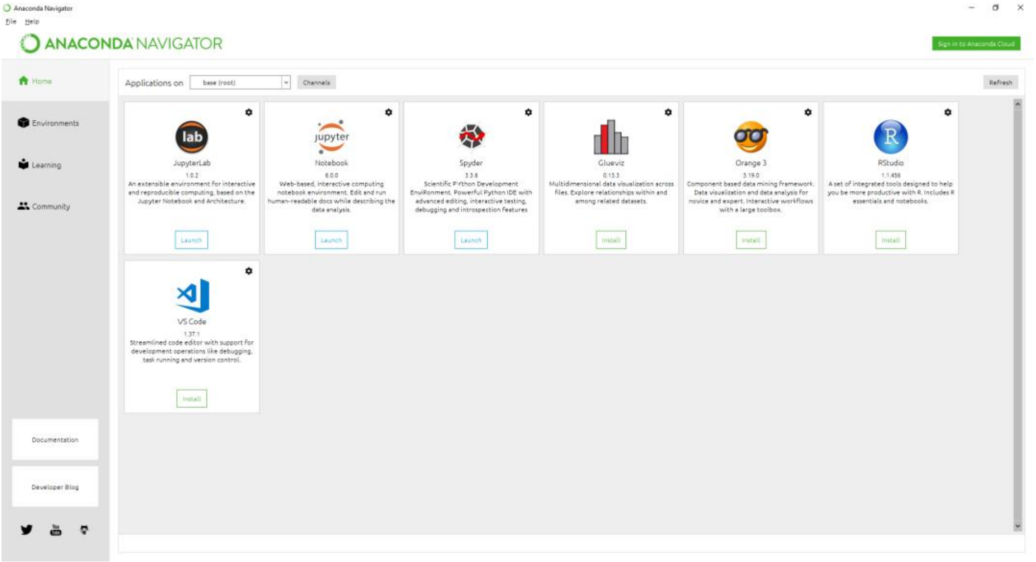
64-Bit Graphical Installer (637 MB)
64-Bit Command Line Installer (409 MB)

You could refer the installation instructions for difference operating system in the official Anaconda website:

https://docs.anaconda.com/anaconda/install/

Appendix B - Install RStudio in Anaconda 3

1. Open Anaconda 3.



An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.

Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.

Scientific PYthon Development EnviRonment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features

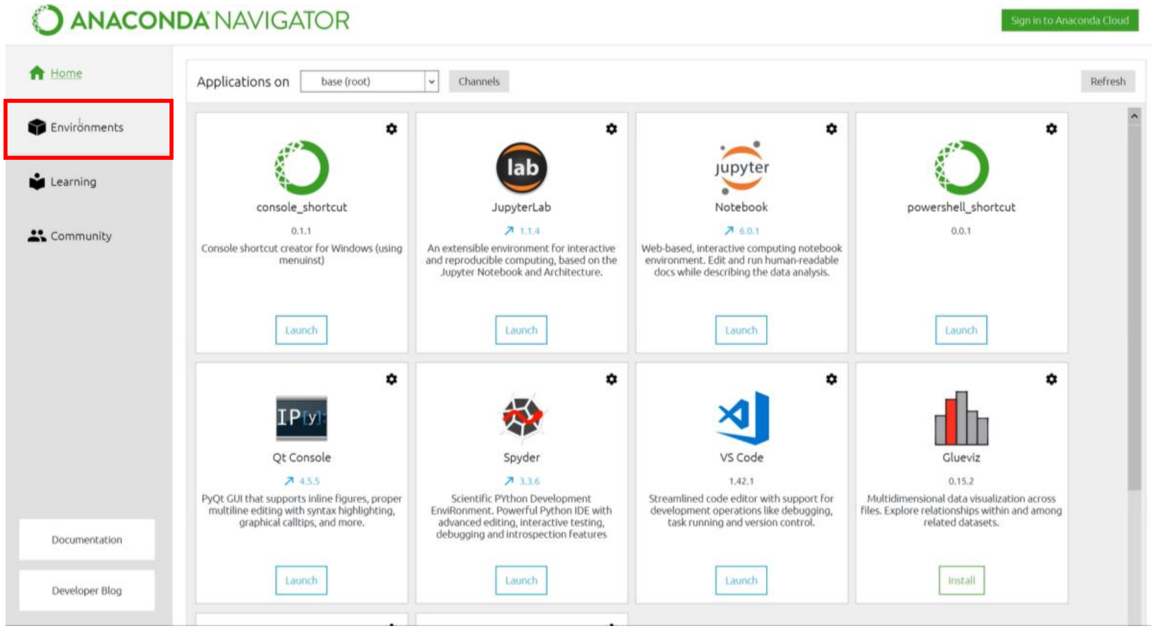
Multidimensional data visualization across files. Explore relationships within and among related datasets.

Component based data mining Framework. Data visualization and data analysis for novice and expert. Interactive workflows with a large toolbox.

A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks.

Streamlined code editor with support for development operations like debugging, task running and version control.

2. Click “Environments” to create a R environment.



Console shortcut creator for Windows (using menuinst)

An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.

Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.

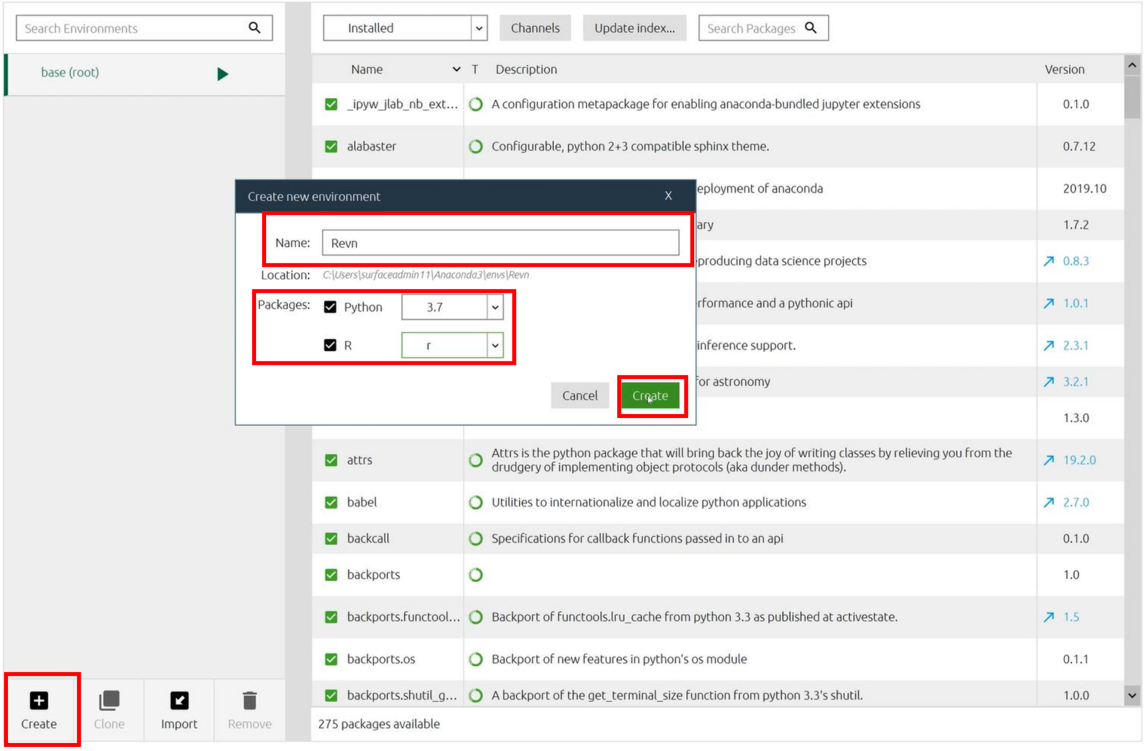
PyQt GUI that supports inline figures, proper multiline editing with syntax highlighting, graphical calltips, and more.

Scientific PYthon Development EnviRonment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features

Streamlined code editor with support for development operations like debugging, task running and version control.

Multidimensional data visualization across files. Explore relationships within and among related datasets.

3. Click “Create” at the bottom menu.
4. Enter the name (e.g. Revn) for the R environment.
5. Select “R” at the package list then press “Create”.



Create new environment

Name: Revn

Location: C:\Users\surfaceadmin11\Anaconda3\envs\Revn

Packages: ☑ Python 3.7

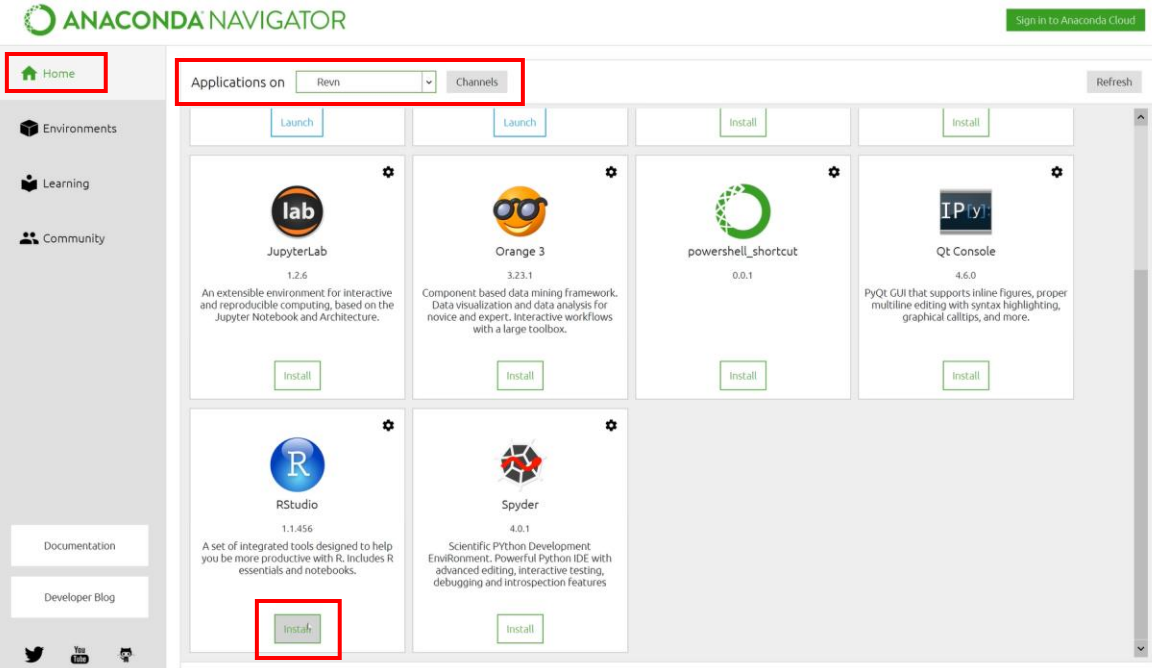
☑ R r

Cancel Create

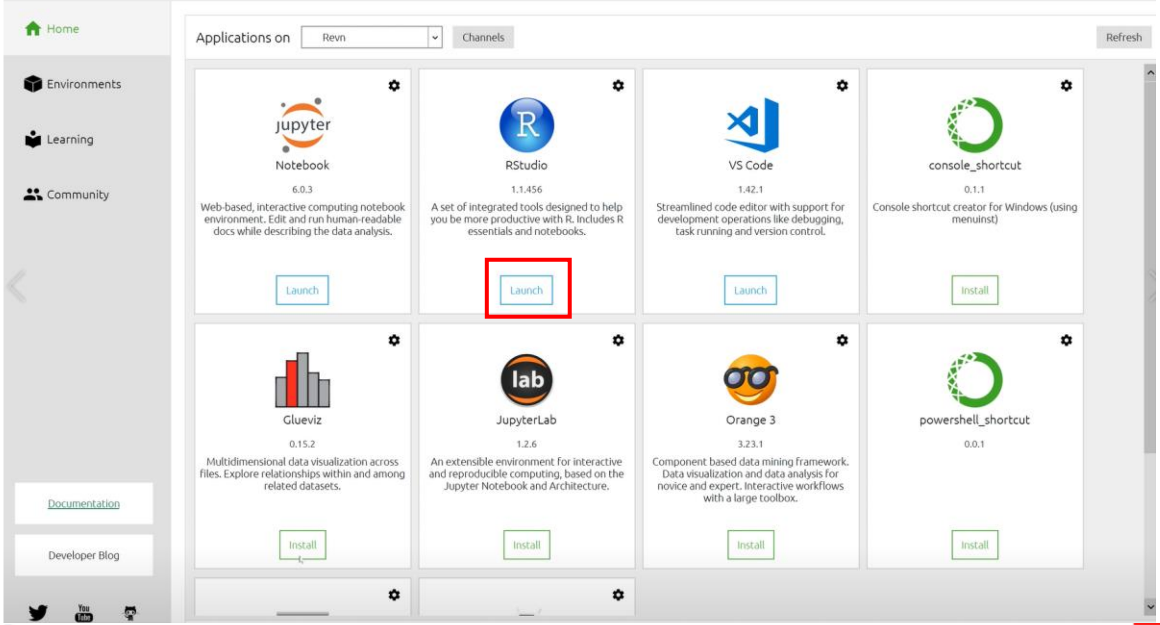
	Name	T	Description	Version
☑	_ipyw_jlab_nb_ext...	○	A configuration metapackage for enabling anaconda-bundled jupyter extensions	0.1.0
☑	alabaster	○	Configurable, python 2+3 compatible sphinx theme.	0.7.12
			eployment of anaconda	2019.10
			ary	1.7.2
			producing data science projects	↗ 0.8.3
			rformance and a pythonic api	↗ 1.0.1
			inference support.	↗ 2.3.1
			or astronomy	↗ 3.2.1
				1.3.0
☑	attrs	○	Attrs is the python package that will bring back the joy of writing classes by relieving you from the drudgery of implementing object protocols (aka dunder methods).	↗ 19.2.0
☑	babel	○	Utilities to internationalize and localize python applications	↗ 2.7.0
☑	backcall	○	Specifications for callback functions passed in to an api	0.1.0
☑	backports	○		1.0
☑	backports.functool...	○	Backport of functools.lru_cache from python 3.3 as published at activestate.	↗ 1.5
☑	backports.os	○	Backport of new features in python's os module	0.1.1
☑	backports.shutil_g...	○	A backport of the get_terminal_size function from python 3.3's shutil.	1.0.0

275 packages available

6. Click "Home" at the left menu. Make sure the "Application on" change to the new environment (e.g. "Revn") and click "Install" to install the Rstudio.


ANACONDA NAVIGATOR
Sign in to Anaconda Cloud
Home
Environments
Learning
Community
Documentation
Developer Blog
Applications on
Revn
Channels
Refresh
Launch
Launch
Install
Install
JupyterLab
1.2.6
An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.
Install
Orange 3
3.23.1
Component based data mining framework. Data visualization and data analysis for novice and expert. Interactive workflows with a large toolbox.
Install
powershell_shortcut
0.0.1
Install
Qt Console
4.6.0
PyQt GUI that supports inline figures, proper multiline editing with syntax highlighting, graphical calltips, and more.
Install
RStudio
1.1.456
A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks.
Install
Spyder
4.0.1
Scientific PYthon Development EnviRonment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features
Install

7. The RStudio is successfully installed in Anaconda 3.
8. Click “Launch” to get started.



Notebook
6.0.3
Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.

RStudio
1.1.456
A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks.

VS Code
1.42.1
Streamlined code editor with support for development operations like debugging, task running and version control.

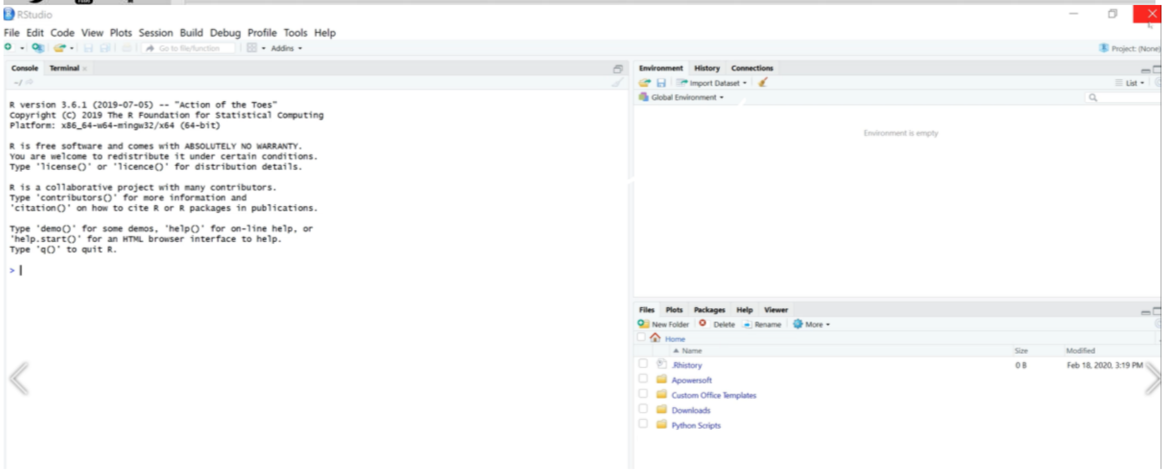
console_shortcut
0.1.1
Console shortcut creator for Windows (using menuinst)

Glueviz
0.15.2
Multidimensional data visualization across files. Explore relationships within and among related datasets.

JupyterLab
1.2.6
An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.

Orange 3
3.23.1
Component based data mining framework. Data visualization and data analysis for novice and expert. Interactive workflows with a large toolbox.

powershell_shortcut
0.0.1

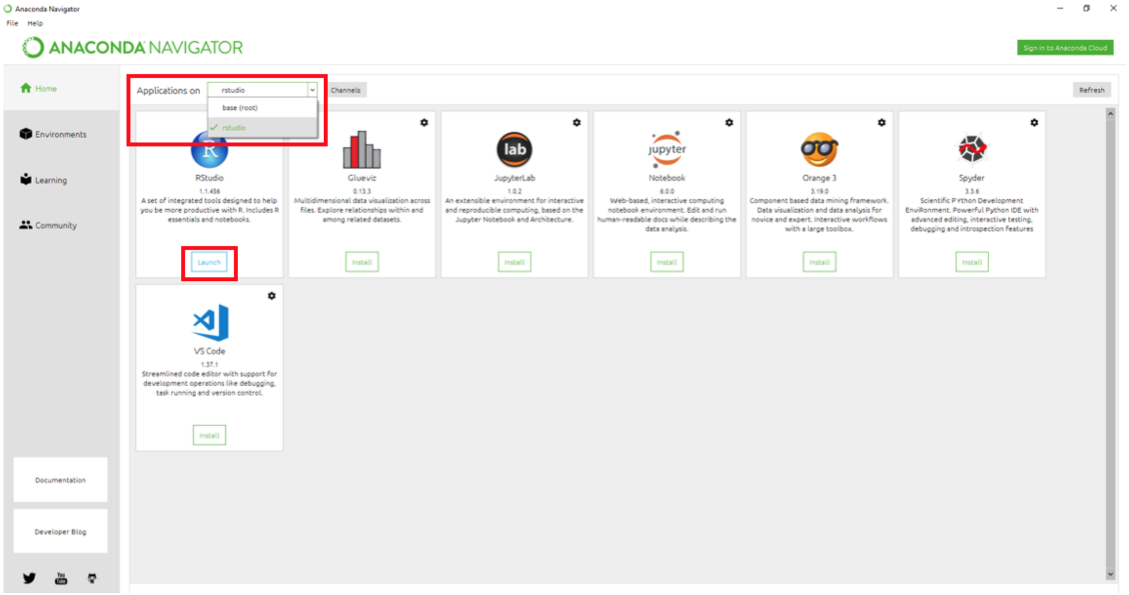


```
R version 3.6.1 (2019-07-05) -- "Action of the Toes"
Copyright (C) 2019 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> |
```

Name	Size	Modified
.Rhistory	0 B	Feb 18, 2020, 3:19 PM
Apowersoft		
Custom Office Templates		
Downloads		
Python Scripts		

Appendix C - Rstudio connect with Git

1. Open the Anaconda 3.
2. Change “Application on” to your new created environment (e.g. “rstudio”). Click “Launch” to open RStudio



Applications on: rstudio

RStudio 1.1.456 — A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks.

Glueviz 0.13.3 — Multidimensional data visualization across files. Explore relationships within and among related datasets.

JupyterLab 1.0.2 — An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.

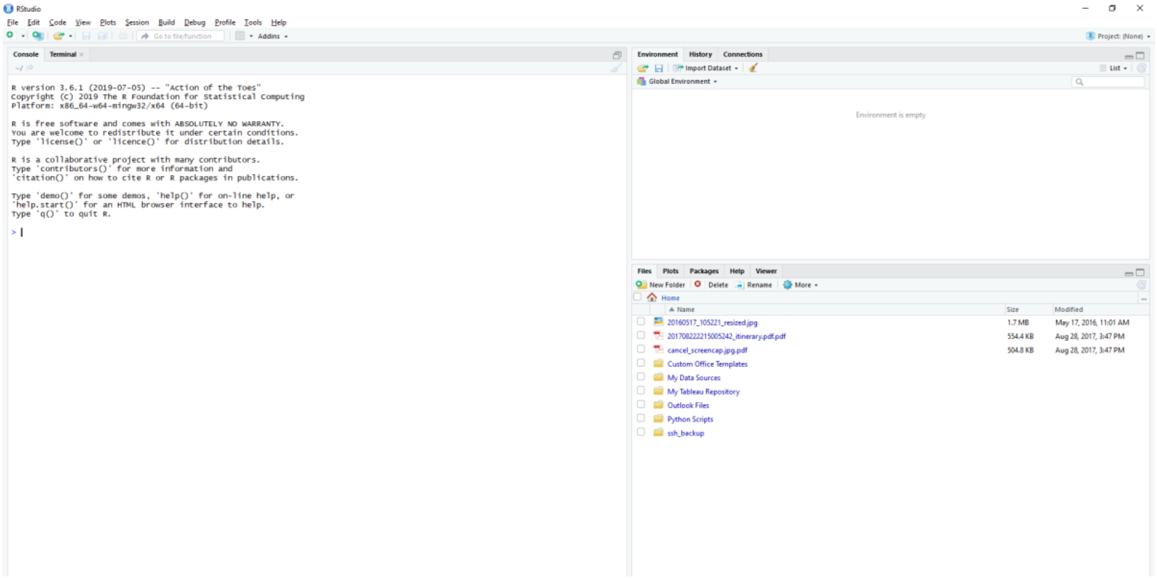
Notebook 6.0.0 — Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.

Orange 3 3.19.0 — Component based data mining framework. Data visualization and data analysis for novice and expert. Interactive workflows with a large toolbox.

Spyder 3.3.6 — Scientific PYthon Development EnviRonment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features

VS Code 1.37.1 — Streamlined code editor with support for development operations like debugging, task running and version control.

3. The RStudio will be opened.



```
R version 3.6.1 (2019-07-05) -- "Action of the Toes"
Copyright (C) 2019 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

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R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> |
```
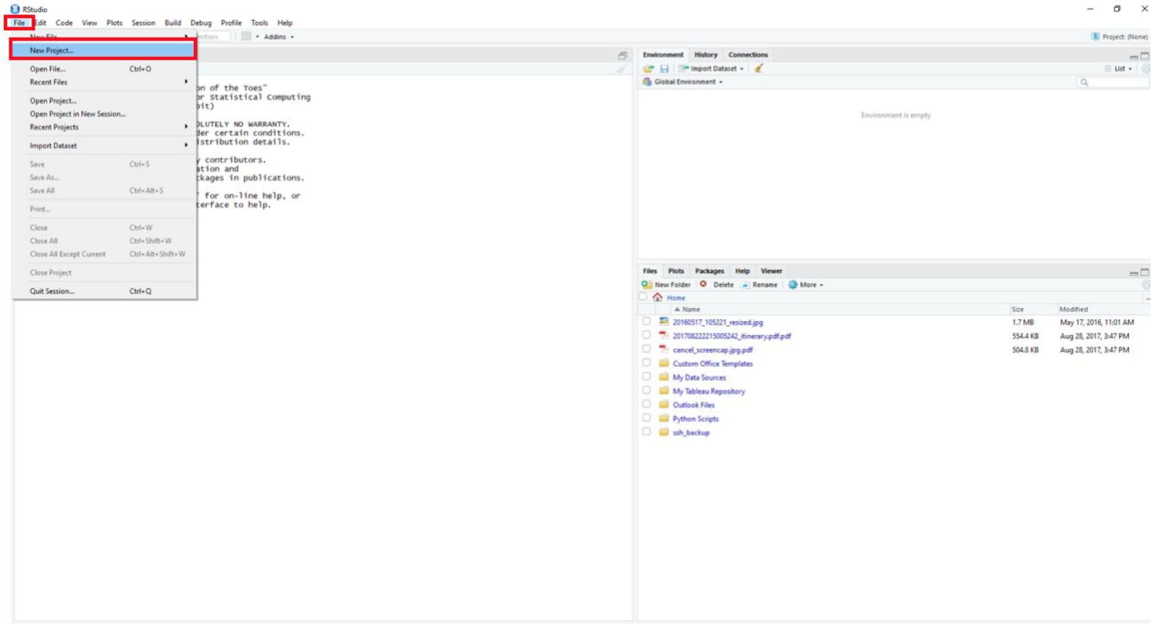
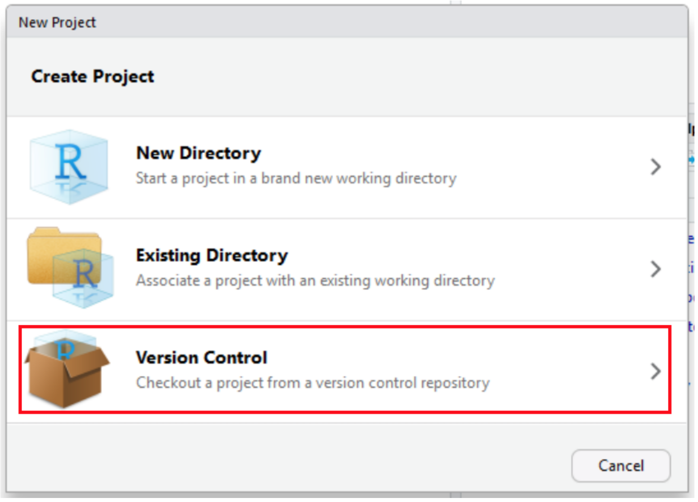

Name	Size	Modified
20160517_105221_resized.jpg	1.7 MB	May 17, 2016, 11:01 AM
20170822221500 5242_itinerary.pdf.pdf	554.4 KB	Aug 28, 2017, 3:47 PM
cancel_screencap.jpg.pdf	504.8 KB	Aug 28, 2017, 3:47 PM
Custom Office Templates		
My Data Sources		
My Tableau Repository		
Outlook Files		
Python Scripts		
ssh_backup		

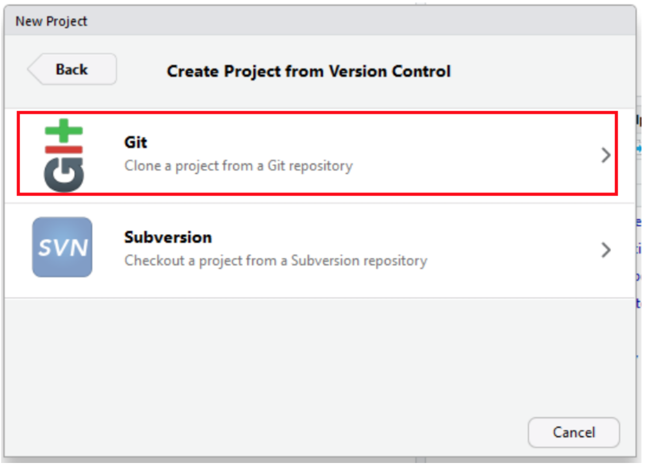
4. Click File -> New project.


RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
New File
New Project...
Open File... Ctrl+O
Recent Files
Open Project...
Open Project in New Session...
Recent Projects
Import Dataset
Save Ctrl+S
Save As...
Save All Ctrl+Alt+S
Print...
Close Ctrl+W
Close All Ctrl+Shift+W
Close All Except Current Ctrl+Alt+Shift+W
Close Project
Quit Session... Ctrl+Q
Environment History Connections
Import Dataset
Global Environment
Environment is empty
Files Plots Packages Help Viewer
New Folder Delete Rename More
Home
Name Size Modified
20160517_105221_resized.jpg 1.7 MB May 17, 2016, 11:01 AM
20170822221500S242_itinerary.pdf.pdf 554.4 KB Aug 28, 2017, 3:47 PM
cancel_screencap.jpg.pdf 504.8 KB Aug 28, 2017, 3:47 PM
Custom Office Templates
My Data Sources
My Tableau Repository
Outlook Files
Python Scripts
ssh_backup
Project: (None)

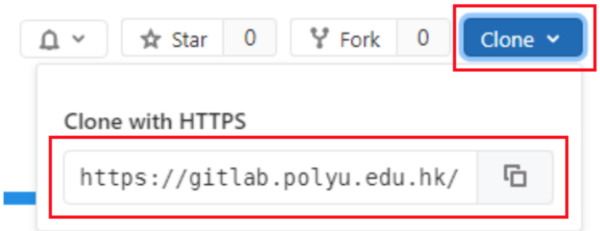
5. Select Version control


New Project
Create Project
New Directory
Start a project in a brand new working directory
Existing Directory
Associate a project with an existing working directory
Version Control
Checkout a project from a version control repository
Cancel

6. Select Git.

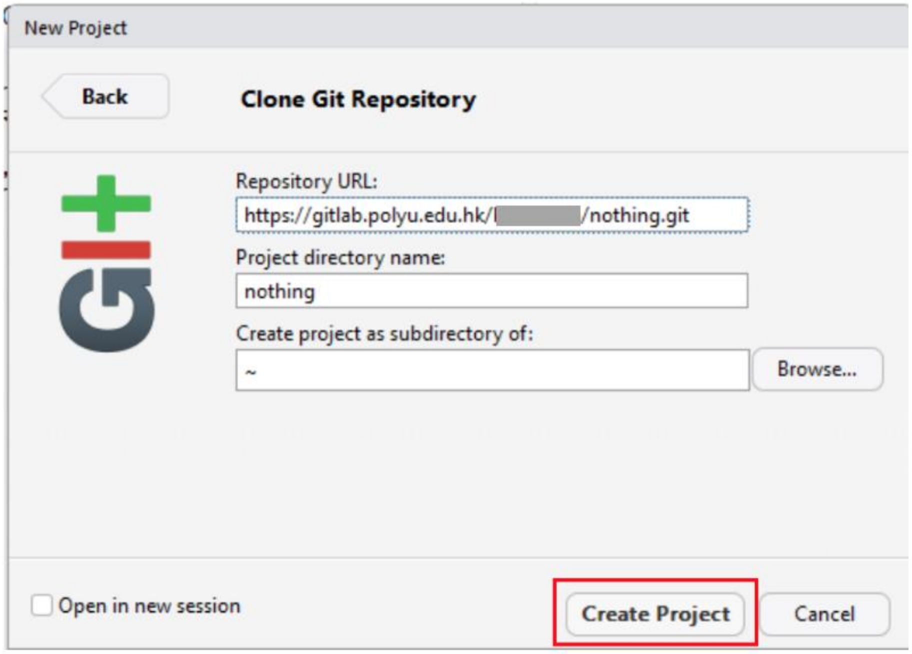

New Project
Back
Create Project from Version Control
Git
Clone a project from a Git repository
Subversion
Checkout a project from a Subversion repository
Cancel

7. Login to Git and select the project. Select clone with HTTPS.



```
https://gitlab.polyu.edu.hk/
```

8. Copy and paste the URL and enter the information for the new project.
9. Click “Create Project”.



New Project

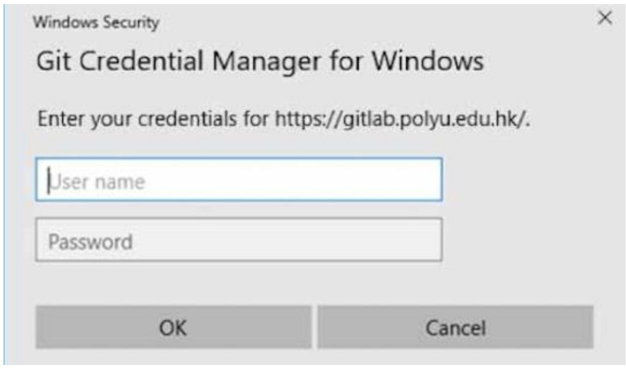
Clone Git Repository

Repository URL: https://gitlab.polyu.edu.hk/[redacted]/nothing.git

Project directory name: nothing

Create project as subdirectory of: ~

10. Enter login information (NetID and NetPassword) and click “OK” to login

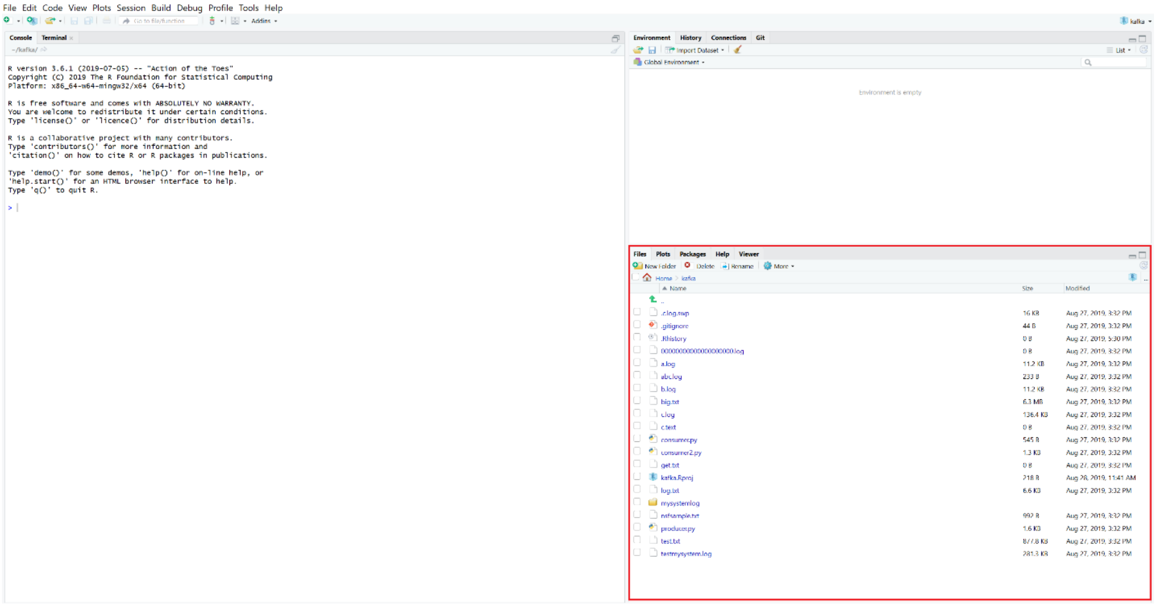


Windows Security

Git Credential Manager for Windows

Enter your credentials for https://gitlab.polyu.edu.hk/.

11. The Git directory will be showed at the bottom right.

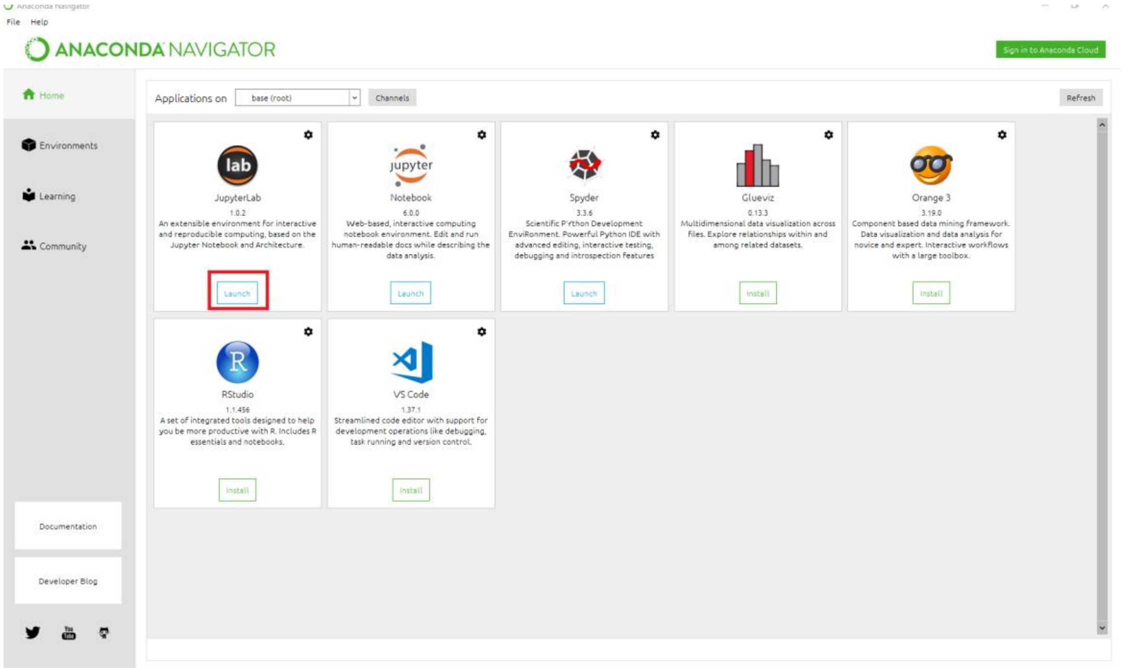


```
R version 3.6.1 (2019-07-05) -- "Action of the Toes"
Copyright (C) 2019 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> 
```

Name	Size	Modified
..		
.c.log.swp	16 KB	Aug 27, 2019, 3:32 PM
.gitignore	44 B	Aug 27, 2019, 3:32 PM
.Rhistory	0 B	Aug 27, 2019, 5:30 PM
00000000000000000000.log	0 B	Aug 27, 2019, 3:32 PM
a.log	11.2 KB	Aug 27, 2019, 3:32 PM
abc.log	233 B	Aug 27, 2019, 3:32 PM
b.log	11.2 KB	Aug 27, 2019, 3:32 PM
big.txt	6.3 MB	Aug 27, 2019, 3:32 PM
c.log	136.4 KB	Aug 27, 2019, 3:32 PM
c.text	0 B	Aug 27, 2019, 3:32 PM
consumer.py	545 B	Aug 27, 2019, 3:32 PM
consumer2.py	1.3 KB	Aug 27, 2019, 3:32 PM
get.txt	0 B	Aug 27, 2019, 3:32 PM
kafka.Rproj	218 B	Aug 28, 2019, 11:41 AM
log.txt	6.6 KB	Aug 27, 2019, 3:32 PM
mysystemlog		
nsfsample.txt	992 B	Aug 27, 2019, 3:32 PM
producer.py	1.6 KB	Aug 27, 2019, 3:32 PM
test.txt	877.8 KB	Aug 27, 2019, 3:32 PM
testmysystem.log	281.3 KB	Aug 27, 2019, 3:32 PM

Appendix D - JupyterLab connect with Git

1. Open the Anaconda 3 and click “Launch” under JupyterLab.



JupyterLab: An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.

Notebook: Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.

Spyder: Scientific PYthon Development EnviRonment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features

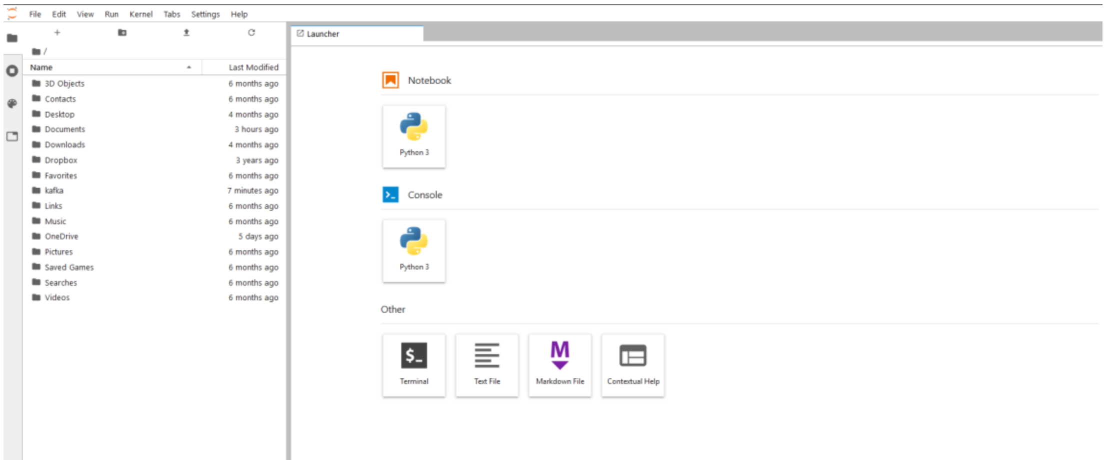
Glueviz: Multidimensional data visualization across files. Explore relationships within and among related datasets.

Orange 3: Component based data mining framework. Data visualization and data analysis for novice and expert. Interactive workflows with a large toolbox.

RStudio: A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks.

VS Code: Streamlined code editor with support for development operations like debugging, task running and version control.

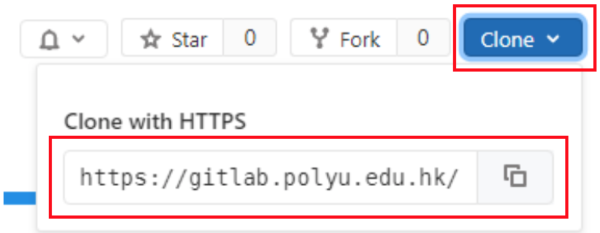
2. JupyterLab will run in the web browser.



/

Name	Last Modified
3D Objects	6 months ago
Contacts	6 months ago
Desktop	4 months ago
Documents	3 hours ago
Downloads	4 months ago
Dropbox	3 years ago
Favorites	6 months ago
kafka	7 minutes ago
Links	6 months ago
Music	6 months ago
OneDrive	5 days ago
Pictures	6 months ago
Saved Games	6 months ago
Searches	6 months ago
Videos	6 months ago

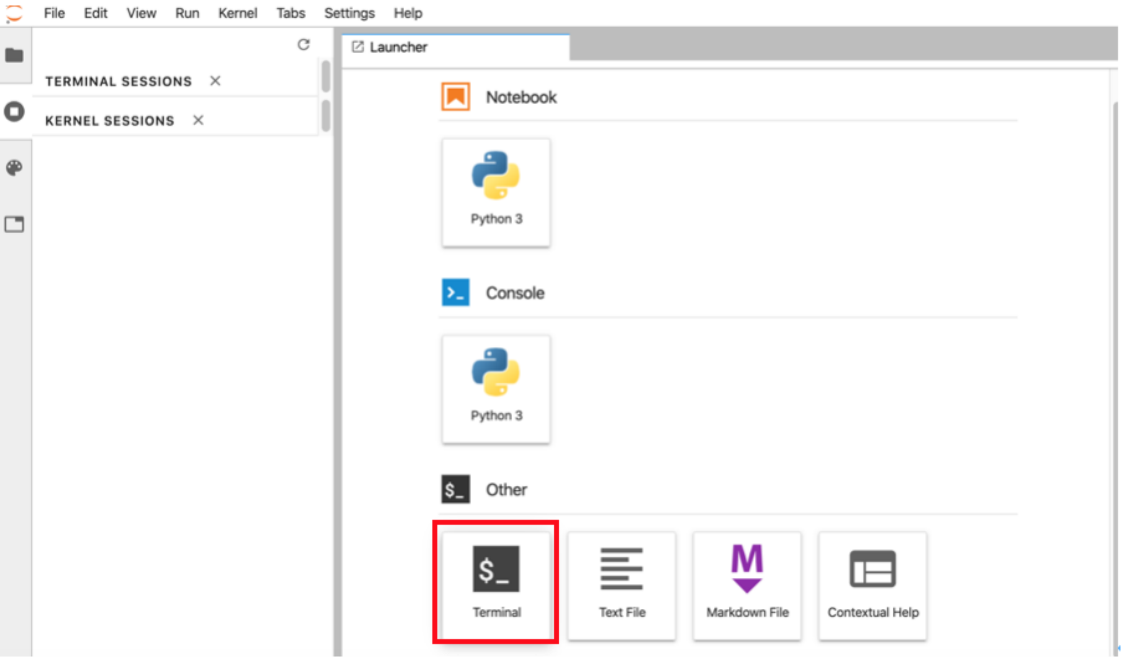
3. Login to Git and select the project. Click “Clone” and copy the link from “clone with HTTPS”.



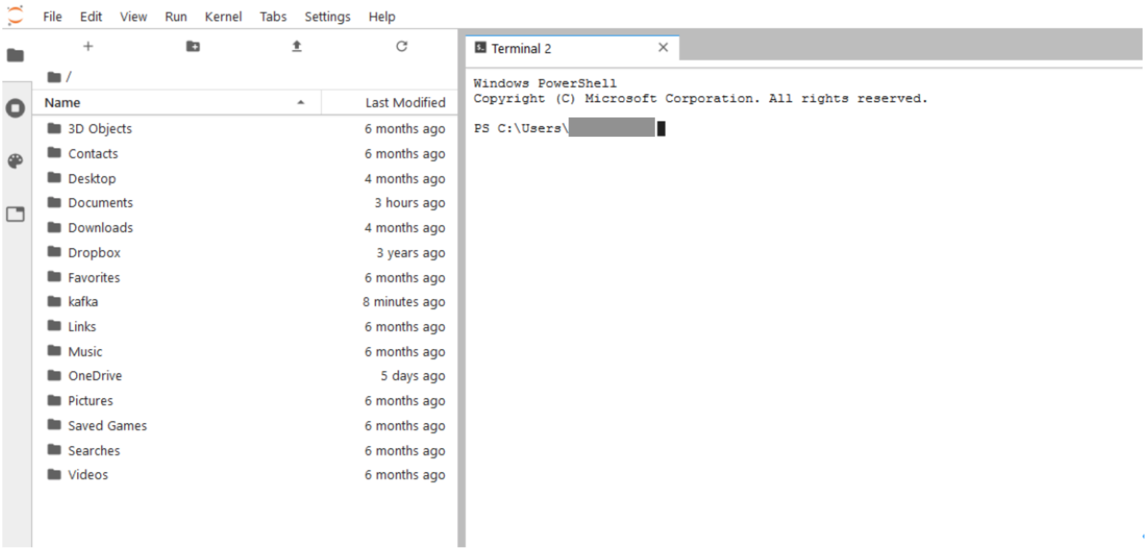
Clone with HTTPS

```
https://gitlab.polyu.edu.hk/
```

4. Select Terminal under “Other”.



5. The Terminal panel will be shown.



Name	Last Modified
3D Objects	6 months ago
Contacts	6 months ago
Desktop	4 months ago
Documents	3 hours ago
Downloads	4 months ago
Dropbox	3 years ago
Favorites	6 months ago
kafka	8 minutes ago
Links	6 months ago
Music	6 months ago
OneDrive	5 days ago
Pictures	6 months ago
Saved Games	6 months ago
Searches	6 months ago
Videos	6 months ago

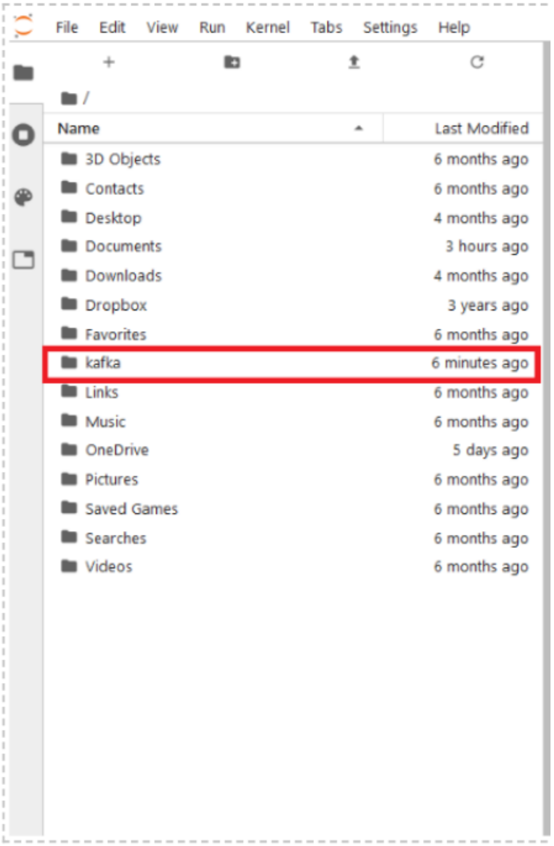
```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Users\[redacted]
```

6. Using below command to connect in Terminal.

```
$ git clone https://gitlab.polyu.edu.hk/NetID/kafka.git
```

```
Cloning into 'kafka'...
Username for 'https://gitlab.polyu.edu.hk': (Enter your NetID)
Password for 'https://NetID@gitlab.polyu.edu.hk': (Enter your NetPassword)
remote: Enumerating objects: 49, done.
remote: Counting objects: 100% (49/49), done.
remote: Compressing objects: 100% (29/29), done.
remote: Total 49 (delta 27), reused 35 (delta 19)
Unpacking objects: 100% (49/49), done.
```

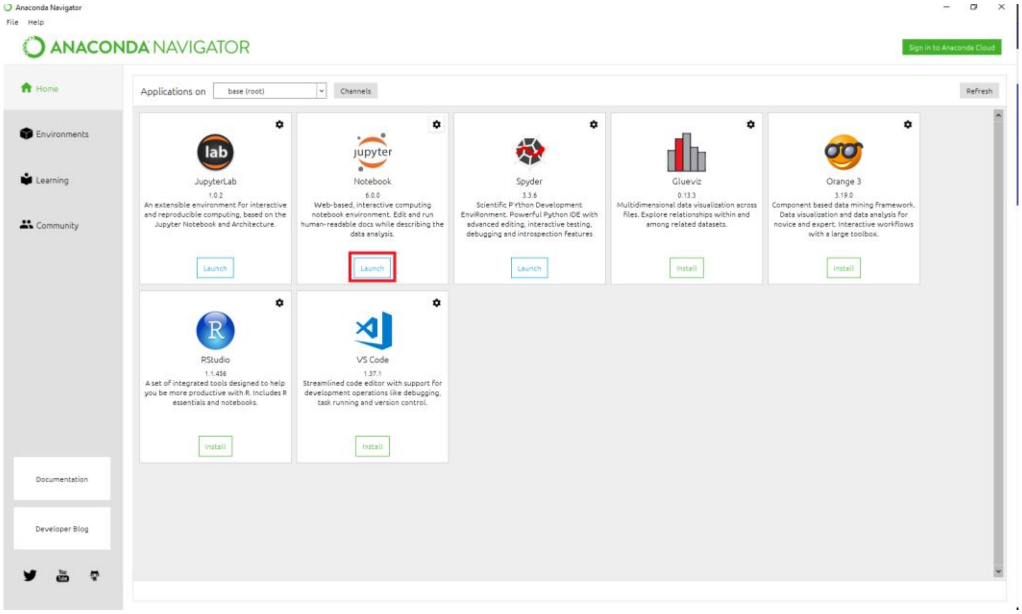
7. The folder of the git will be created.



Name	Last Modified
3D Objects	6 months ago
Contacts	6 months ago
Desktop	4 months ago
Documents	3 hours ago
Downloads	4 months ago
Dropbox	3 years ago
Favorites	6 months ago
kafka	6 minutes ago
Links	6 months ago
Music	6 months ago
OneDrive	5 days ago
Pictures	6 months ago
Saved Games	6 months ago
Searches	6 months ago
Videos	6 months ago

Appendix E - Jupyter notebook connect with Git

1. Open the Anaconda 3 and click “Launch” under Jupyter notebook.



JupyterLab: An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.

Notebook: Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.

Spyder: Scientific PYthon Development EnviRonment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features

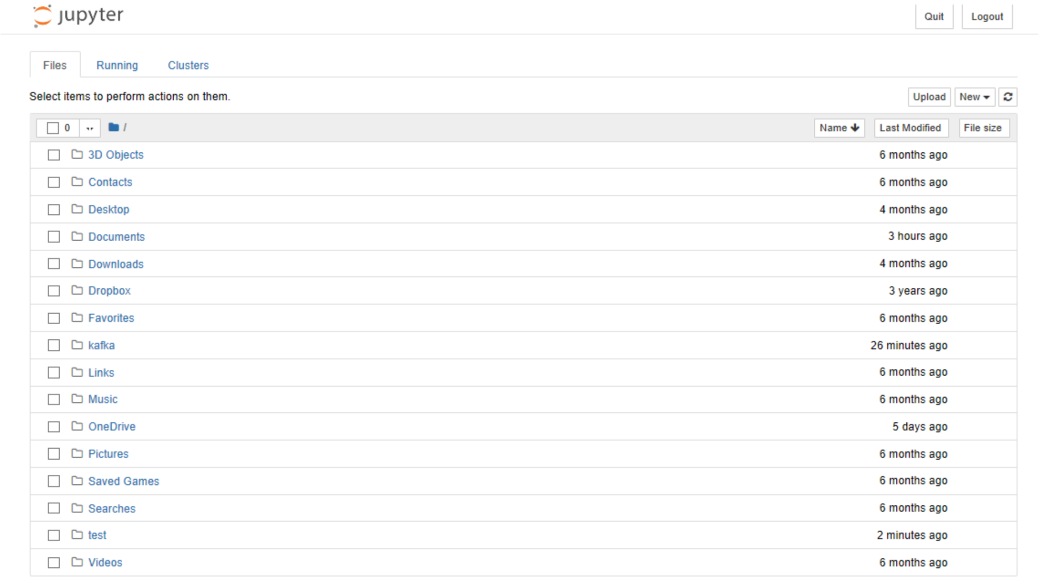
Glueviz: Multidimensional data visualization across files. Explore relationships within and among related datasets.

Orange 3: Component based data mining Framework. Data visualization and data analysis for novice and expert. Interactive workflows with a large toolbox.

RStudio: A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks.

VS Code: Streamlined code editor with support for development operations like debugging, task running and version control.

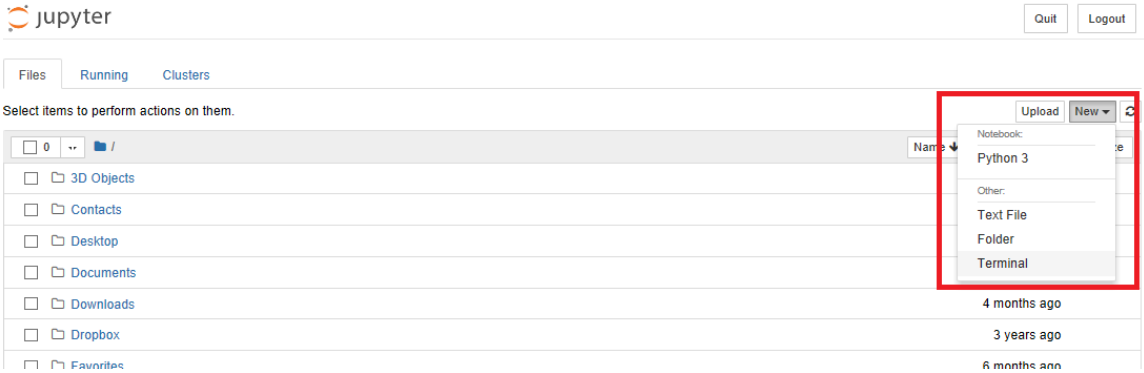
2. Then Jupyter notebook will open in browser.



Select items to perform actions on them.

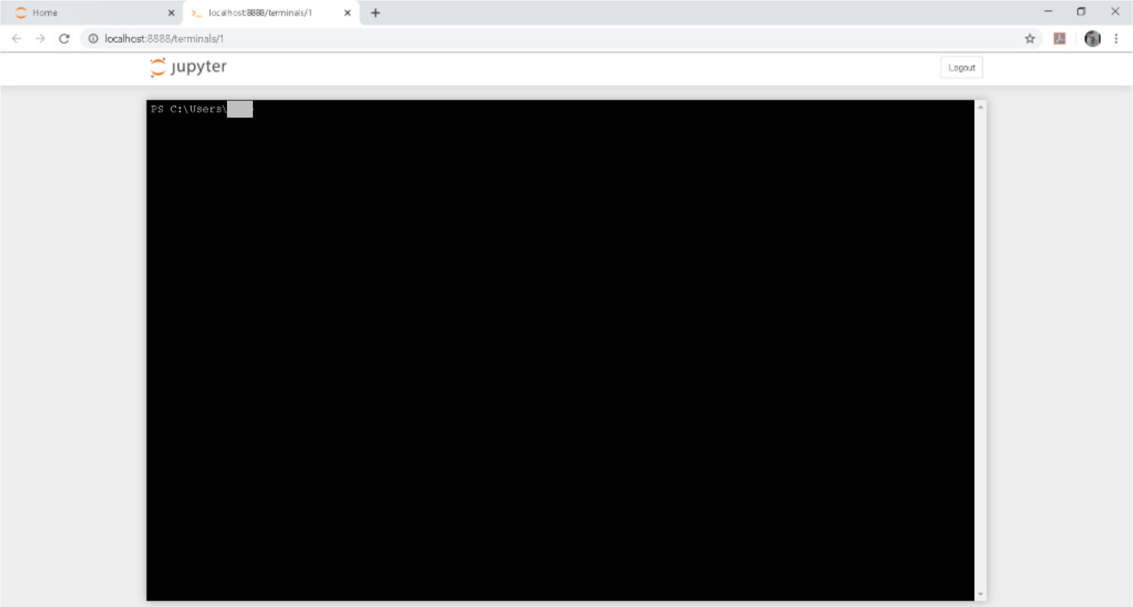
Name	Last Modified
3D Objects	6 months ago
Contacts	6 months ago
Desktop	4 months ago
Documents	3 hours ago
Downloads	4 months ago
Dropbox	3 years ago
Favorites	6 months ago
kafka	26 minutes ago
Links	6 months ago
Music	6 months ago
OneDrive	5 days ago
Pictures	6 months ago
Saved Games	6 months ago
Searches	6 months ago
test	2 minutes ago
Videos	6 months ago

3. Select New -> Terminal.



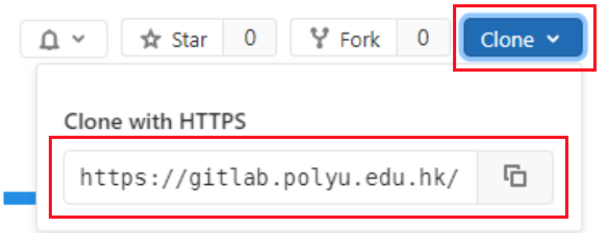
Select items to perform actions on them.

4. Then terminal will open in a new tab.



```
PS C:\Users\
```

5. Login to Git and select the project. Click “Clone” and copy the link from “clone with HTTPS”.

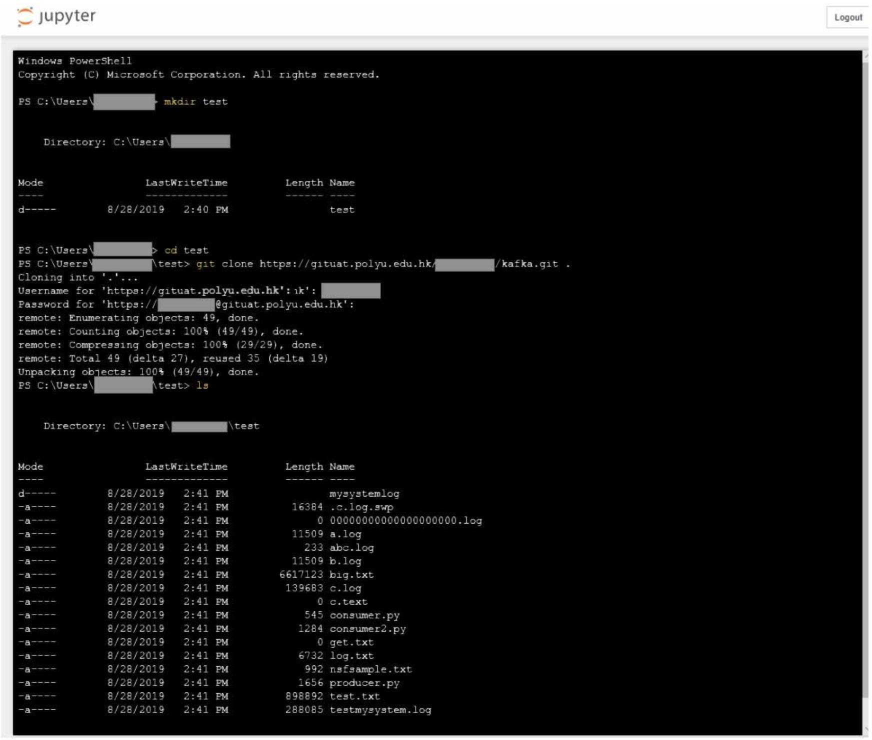


https://gitlab.polyu.edu.hk/

6. Using below command to connect in the Terminal.

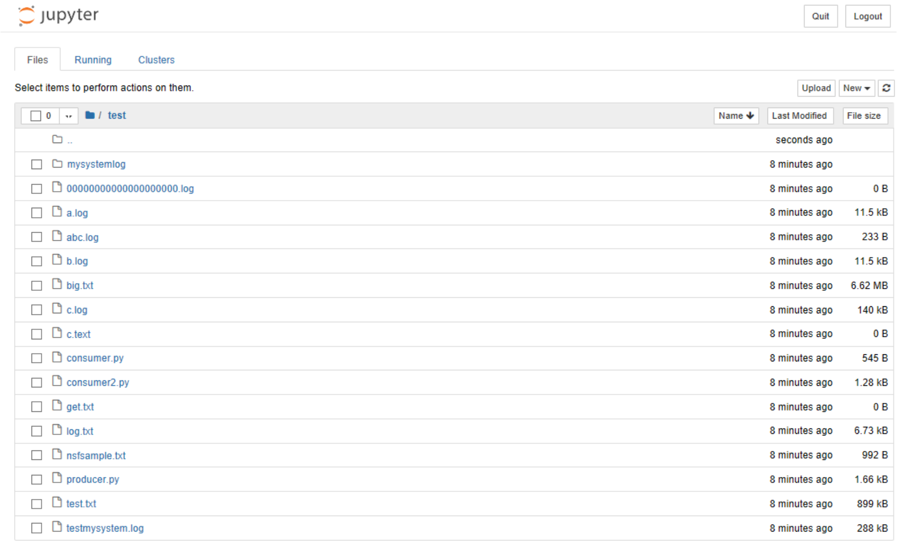
```
Create a folder for git use
mkdir test
cd test
git clone https://git.polyu.edu.hk/NetID/kafka.git .
```

```
Username for 'https://git.polyu.edu.hk': (Enter you NetID)
Password for 'https://NetID@git.polyu.edu.hk': (Enter you NetPassword)
```



```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Users\[redacted]> mkdir test


    Directory: C:\Users\[redacted]


Mode                LastWriteTime         Length Name
----                -------------         ------ ----
d-----        8/28/2019   2:40 PM                test


PS C:\Users\[redacted]> cd test
PS C:\Users\[redacted]\test> git clone https://gituat.polyu.edu.hk/[redacted]/kafka.git .
Cloning into '.'...
Username for 'https://gituat.polyu.edu.hk':ık': [redacted]
Password for 'https://[redacted]@gituat.polyu.edu.hk':
remote: Enumerating objects: 49, done.
remote: Counting objects: 100% (49/49), done.
remote: Compressing objects: 100% (29/29), done.
remote: Total 49 (delta 27), reused 35 (delta 19)
Unpacking objects: 100% (49/49), done.
PS C:\Users\[redacted]\test> ls


    Directory: C:\Users\[redacted]\test


Mode                LastWriteTime         Length Name
----                -------------         ------ ----
d-----        8/28/2019   2:41 PM                mysystemlog
-a----        8/28/2019   2:41 PM          16384 .c.log.swp
-a----        8/28/2019   2:41 PM              0 00000000000000000000.log
-a----        8/28/2019   2:41 PM          11509 a.log
-a----        8/28/2019   2:41 PM            233 abc.log
-a----        8/28/2019   2:41 PM          11509 b.log
-a----        8/28/2019   2:41 PM        6617123 big.txt
-a----        8/28/2019   2:41 PM         139683 c.log
-a----        8/28/2019   2:41 PM              0 c.text
-a----        8/28/2019   2:41 PM            545 consumer.py
-a----        8/28/2019   2:41 PM           1284 consumer2.py
-a----        8/28/2019   2:41 PM              0 get.txt
-a----        8/28/2019   2:41 PM           6732 log.txt
-a----        8/28/2019   2:41 PM            992 nsfsample.txt
-a----        8/28/2019   2:41 PM           1656 producer.py
-a----        8/28/2019   2:41 PM         898892 test.txt
-a----        8/28/2019   2:41 PM         288085 testmysystem.log
```

7. Back to the jupyter note and click to folder 'test'. The folder and folder are created in Juptyer note.

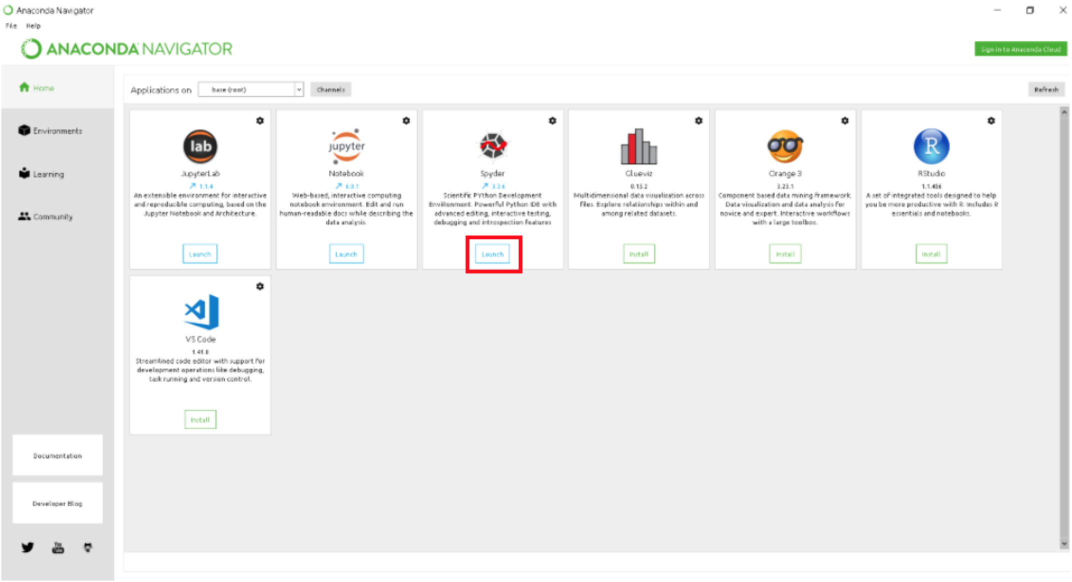


Select items to perform actions on them.

Name	Last Modified	File size
..	seconds ago	
□ mysystemlog	8 minutes ago	
□ 00000000000000000000.log	8 minutes ago	0 B
□ a.log	8 minutes ago	11.5 kB
□ abc.log	8 minutes ago	233 B
□ b.log	8 minutes ago	11.5 kB
□ big.txt	8 minutes ago	6.62 MB
□ c.log	8 minutes ago	140 kB
□ c.text	8 minutes ago	0 B
□ consumer.py	8 minutes ago	545 B
□ consumer2.py	8 minutes ago	1.28 kB
□ get.txt	8 minutes ago	0 B
□ log.txt	8 minutes ago	6.73 kB
□ nsfsample.txt	8 minutes ago	992 B
□ producer.py	8 minutes ago	1.66 kB
□ test.txt	8 minutes ago	899 kB
□ testmysystem.log	8 minutes ago	288 kB

Appendix F - Spyder connect with Git

1. Open the Anaconda 3 and click launch under Spyder.



An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.

Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.

Scientific PYthon Development EnviRonment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features

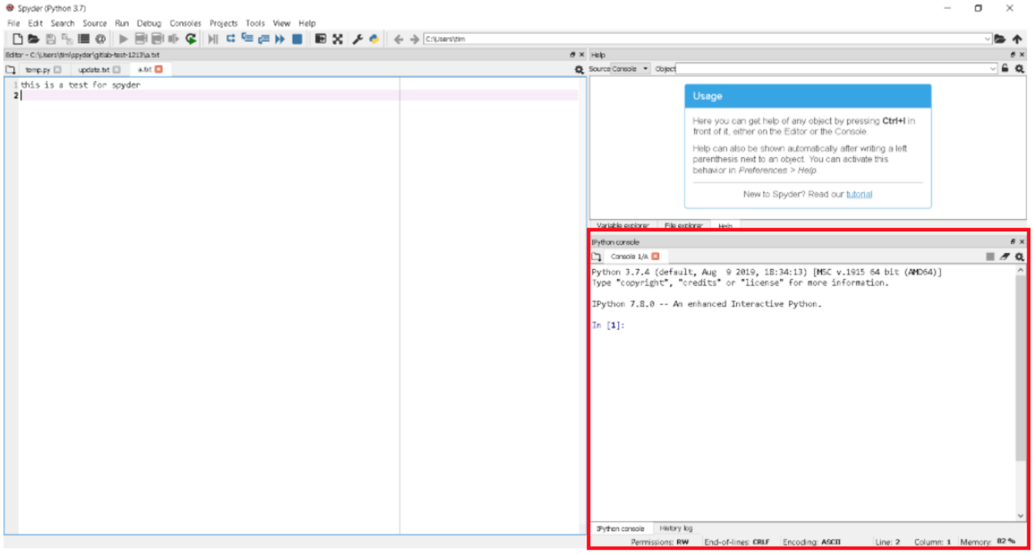
Multidimensional data visualization across files. Explore relationships within and among related datasets.

Component based data mining framework. Data visualization and data analysis for novice and expert. Interactive workflows with a large toolbox.

A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks.

Streamlined code editor with support for development operations like debugging, task running and version control.

2. Then Spyder will be opened.
3. Enter the command to connect Git at the bottom right corner.



```
this is a test for spyder
```

Here you can get help of any object by pressing **Ctrl+I** in front of it, either on the Editor or the Console.

Help can also be shown automatically after writing a left parenthesis next to an object. You can activate this behavior in *Preferences > Help*.

New to Spyder? Read our tutorial

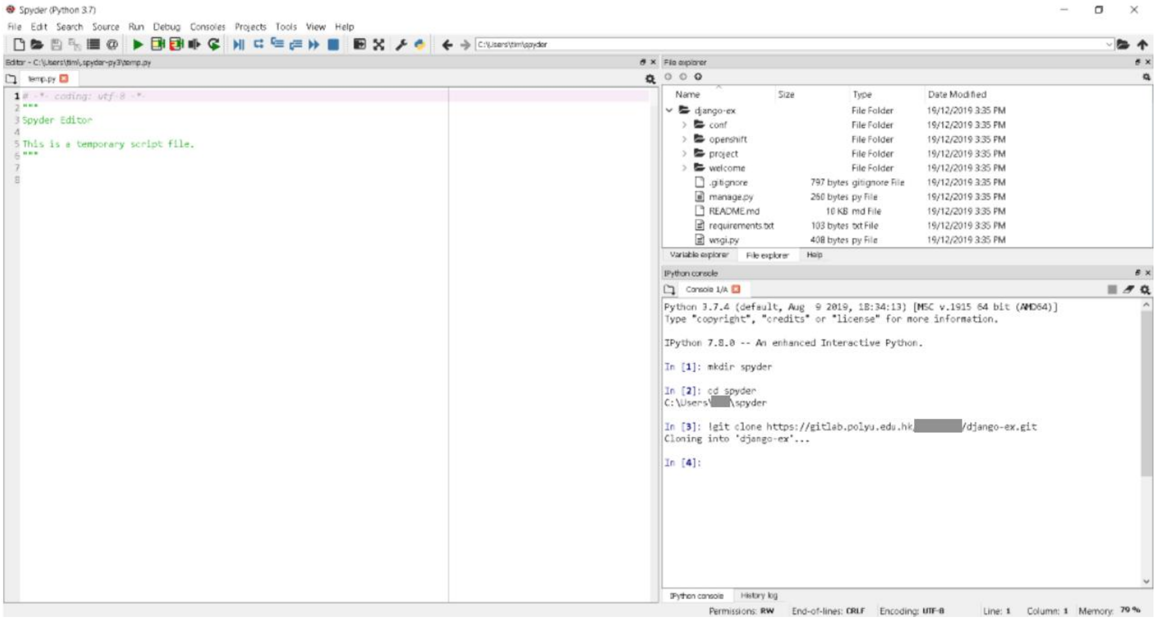
```
Python 3.7.4 (default, Aug  9 2019, 18:34:13) [MSC v.1915 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 7.8.0 -- An enhanced Interactive Python.

In [1]:
```

```
IPython 7.6.1 -- An enhanced Interactive Python.
```

```
mkdir spyder
cd spyder
C:\Users\username\spyder
```

```
!git clone https://gitlab.polyu.edu.hk/NetID/django-ex.git
Cloning into 'django-ex'...
```

4. The Git will clone to the folder and you could view at the File explorer at the right upper corner.



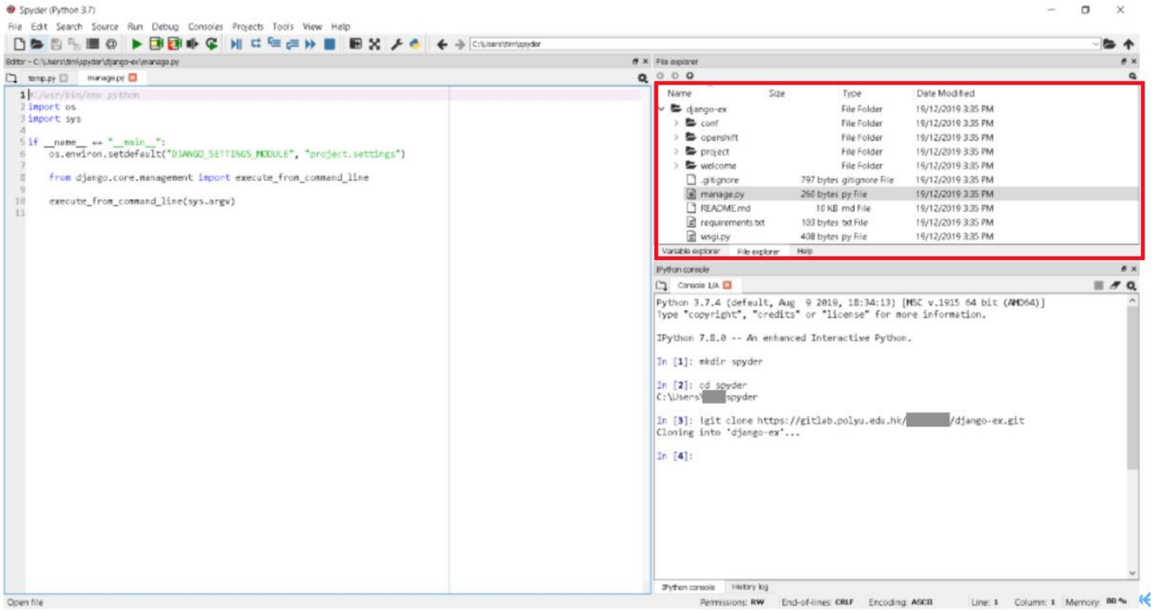
```
# -*- coding: utf-8 -*-
"""
Spyder Editor

This is a temporary script file.
"""
```

Name	Size	Type	Date Modified
django-ex		File Folder	19/12/2019 3:35 PM
conf		File Folder	19/12/2019 3:35 PM
openshift		File Folder	19/12/2019 3:35 PM
project		File Folder	19/12/2019 3:35 PM
welcome		File Folder	19/12/2019 3:35 PM
.gitignore	797 bytes	gitignore File	19/12/2019 3:35 PM
manage.py	260 bytes	py File	19/12/2019 3:35 PM
README.md	10 KB	md File	19/12/2019 3:35 PM
requirements.txt	103 bytes	txt File	19/12/2019 3:35 PM
wsgi.py	408 bytes	py File	19/12/2019 3:35 PM

```
Python 3.7.4 (default, Aug  9 2019, 18:34:13) [MSC v.1915 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 7.8.0 -- An enhanced Interactive Python.

In [1]: mkdir spyder

In [2]: cd spyder
C:\Users\[redacted]\spyder

In [3]: !git clone https://gitlab.polyu.edu.hk[redacted]/django-ex.git
Cloning into 'django-ex'...

In [4]:
```

Permissions: RW   End-of-lines: CRLF   Encoding: UTF-8   Line: 1   Column: 1   Memory: 79 %

5. Double click to open the python file.



```
#!/usr/bin/env python
import os
import sys

if __name__ == "__main__":
    os.environ.setdefault("DJANGO_SETTINGS_MODULE", "project.settings")

    from django.core.management import execute_from_command_line

    execute_from_command_line(sys.argv)

```

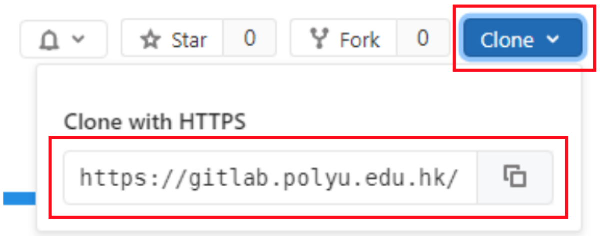
Name	Size	Type	Date Modified
django-ex		File Folder	19/12/2019 3:35 PM
conf		File Folder	19/12/2019 3:35 PM
openshift		File Folder	19/12/2019 3:35 PM
project		File Folder	19/12/2019 3:35 PM
welcome		File Folder	19/12/2019 3:35 PM
.gitignore	797 bytes	gitignore File	19/12/2019 3:35 PM
manage.py	260 bytes	py File	19/12/2019 3:35 PM
README.md	10 KB	md File	19/12/2019 3:35 PM
requirements.txt	103 bytes	txt File	19/12/2019 3:35 PM
wsgi.py	408 bytes	py File	19/12/2019 3:35 PM

```
Python 3.7.4 (default, Aug  9 2019, 18:34:13) [MSC v.1915 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 7.8.0 -- An enhanced Interactive Python.

In [1]: mkdir spyder

In [2]: cd spyder
C:\Users\[redacted]spyder

In [3]: !git clone https://gitlab.polyu.edu.hk/[redacted]/django-ex.git
Cloning into 'django-ex'...

In [4]:
```

Permissions: RW End-of-lines: CRLF Encoding: ASCII Line: 1 Column: 1 Memory: 80 %

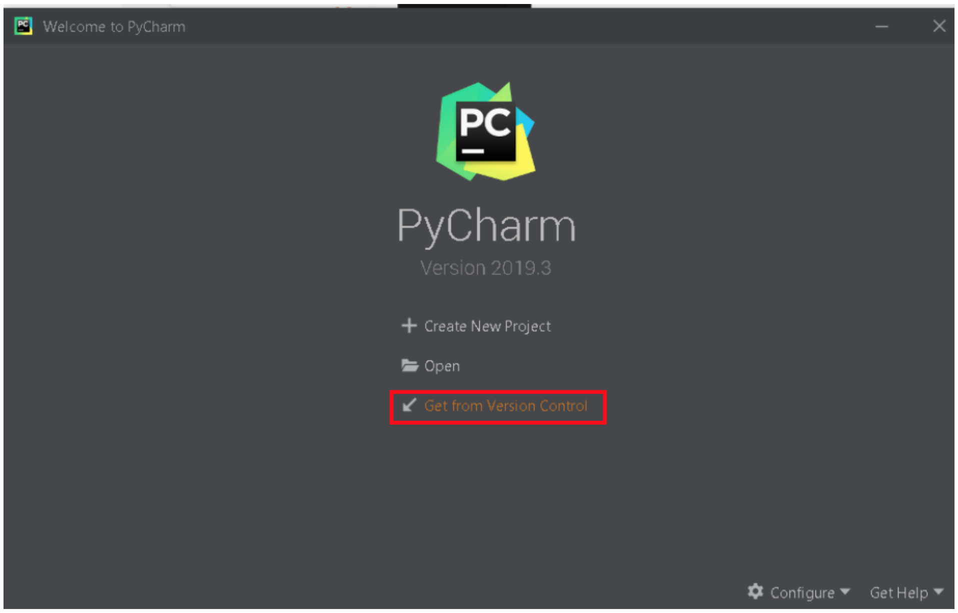
Appendix G - PyCharm connect with Git

1. Login to Git and select the project. Click “Clone” and copy the link from “clone with HTTPS”.

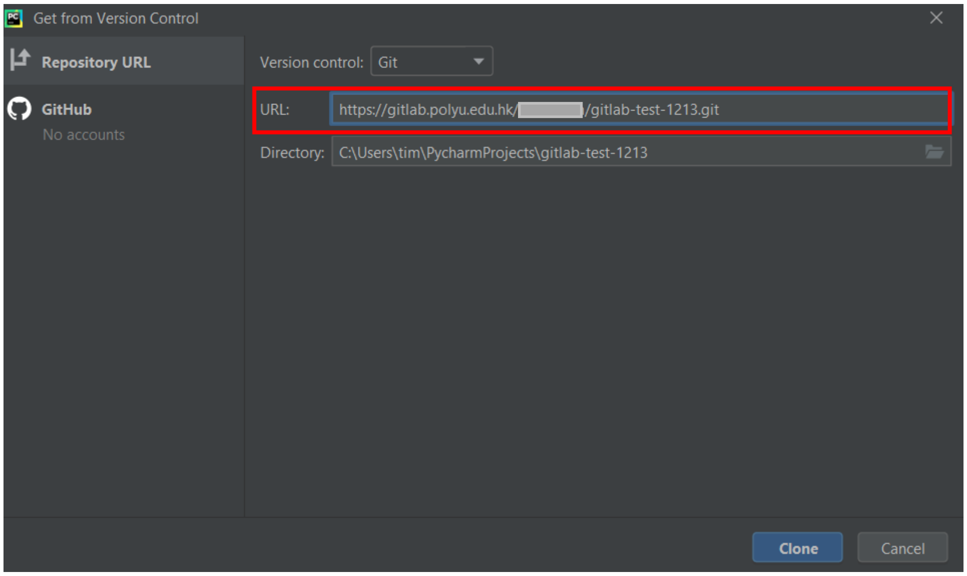


https://gitlab.polyu.edu.hk/

2. Click Get from Version Control.



3. Paste the Git link at “URL”, then click “Clone”.



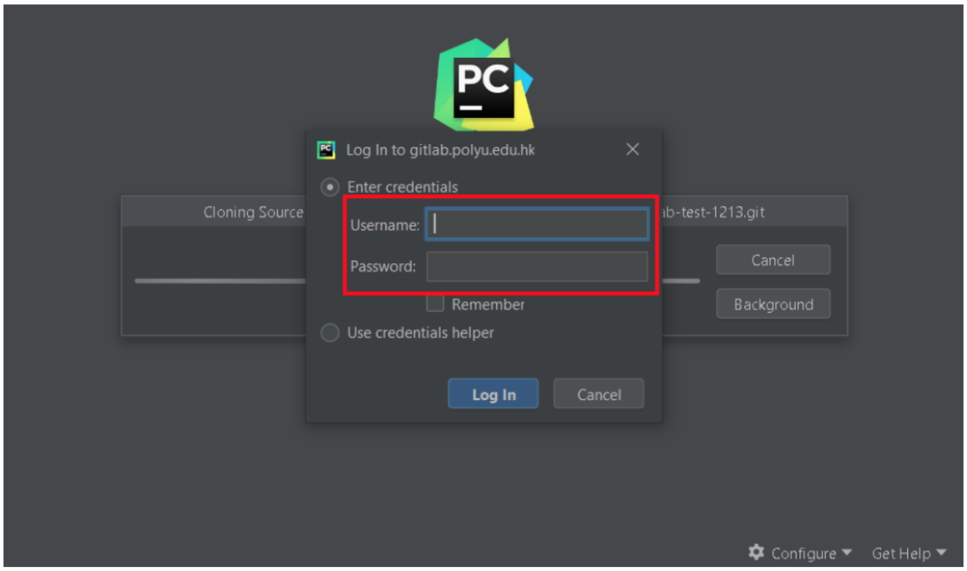
Get from Version Control

Version control: Git

URL: https://gitlab.polyu.edu.hk/[redacted]/gitlab-test-1213.git

Directory: C:\Users\tim\PycharmProjects\gitlab-test-1213

4. Input your login information.



Log In to gitlab.polyu.edu.hk

● Enter credentials

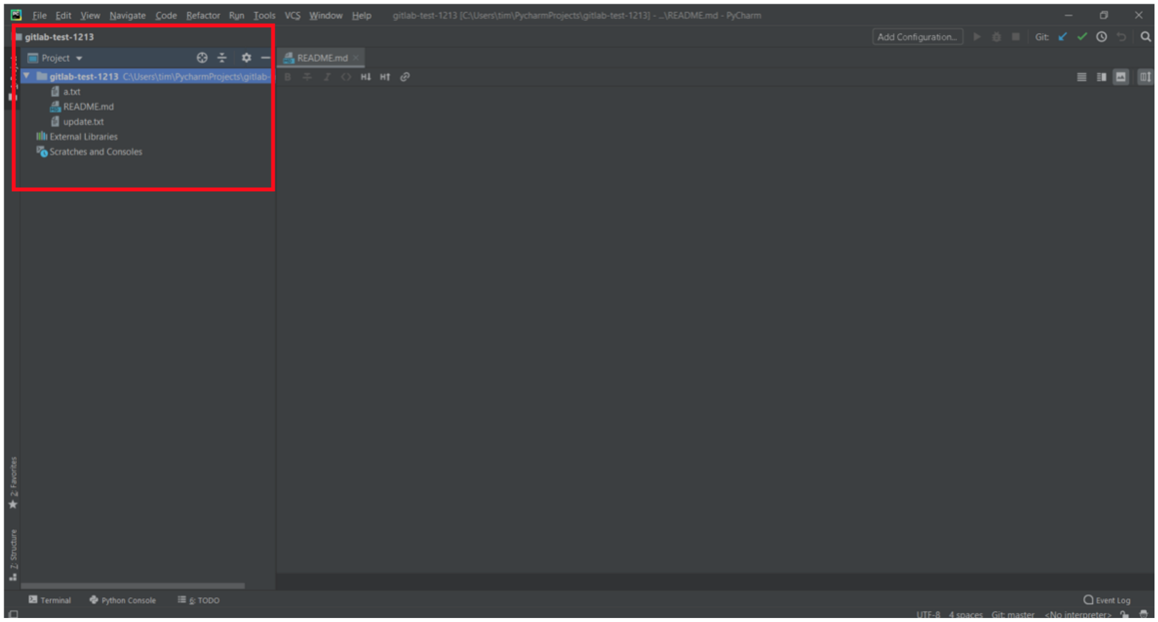
Username:

Password:

□ Remember

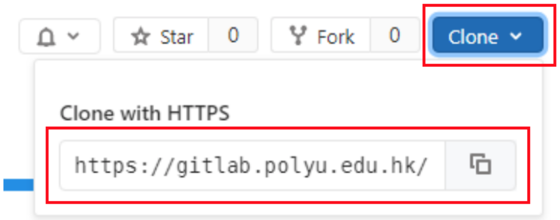
○ Use credentials helper

5. Then the Git will show on the left.


File
Edit
View
Navigate
Code
Refactor
Run
Tools
VCS
Window
Help
gitlab-test-1213 [C:\Users\tim\PycharmProjects\gitlab-test-1213] - ...\README.md - PyCharm
Add Configuration...
Git:
gitlab-test-1213
Project
README.md
gitlab-test-1213 C:\Users\tim\PycharmProjects\gitlab-
a.txt
README.md
update.txt
External Libraries
Scratches and Consoles
2: Favorites
Z: Structure
Terminal
Python Console
6: TODO
Event Log
UTF-8
4 spaces
Git: master
<No interpreter>

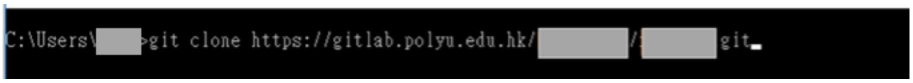
Appendix H - Atom connect with Git

1. Login to Git and select the project. Click “Clone” and copy the link from “clone with HTTPS”.



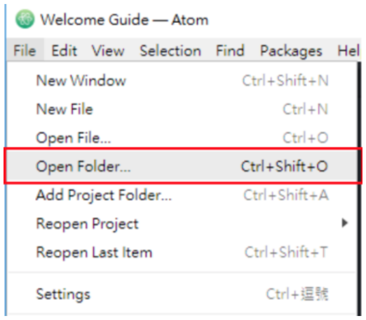
```
https://gitlab.polyu.edu.hk/
```

2. From the command prompt git clone the repository.

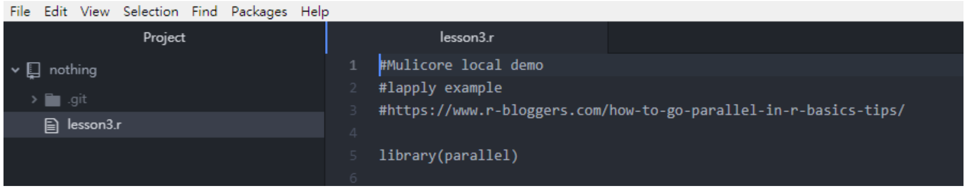


```
C:\Users\[redacted]>git clone https://gitlab.polyu.edu.hk/[redacted]/[redacted].git
```

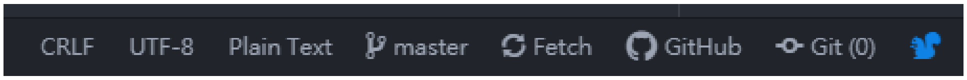
3. On Atom, click open folder.


Welcome Guide — Atom
File Edit View Selection Find Packages Hel
New Window Ctrl+Shift+N
New File Ctrl+N
Open File... Ctrl+O
Open Folder... Ctrl+Shift+O
Add Project Folder... Ctrl+Shift+A
Reopen Project
Reopen Last Item Ctrl+Shift+T
Settings Ctrl+逗號

4. On the left, you could see the Git repository is loaded and at the bottom, several buttons of Git operations are activated.

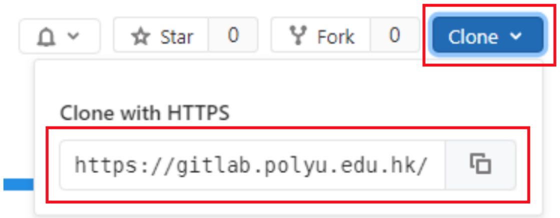


```
#Mulicore local demo
#lapply example
#https://www.r-bloggers.com/how-to-go-parallel-in-r-basics-tips/

library(parallel)
```



Appendix I - VSCode connect with Git

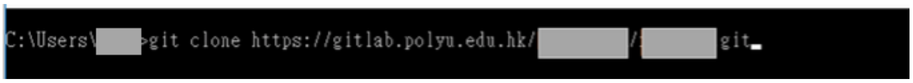
1. Login to Git and select the project. Click “Clone” and copy the link from “clone with HTTPS”.



Clone with HTTPS

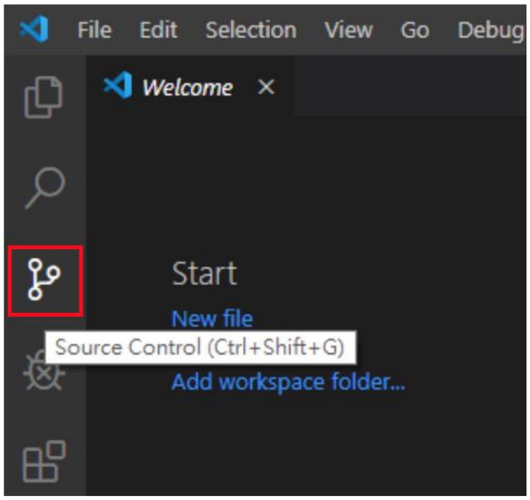
https://gitlab.polyu.edu.hk/

2. From the command prompt git clone the repository.

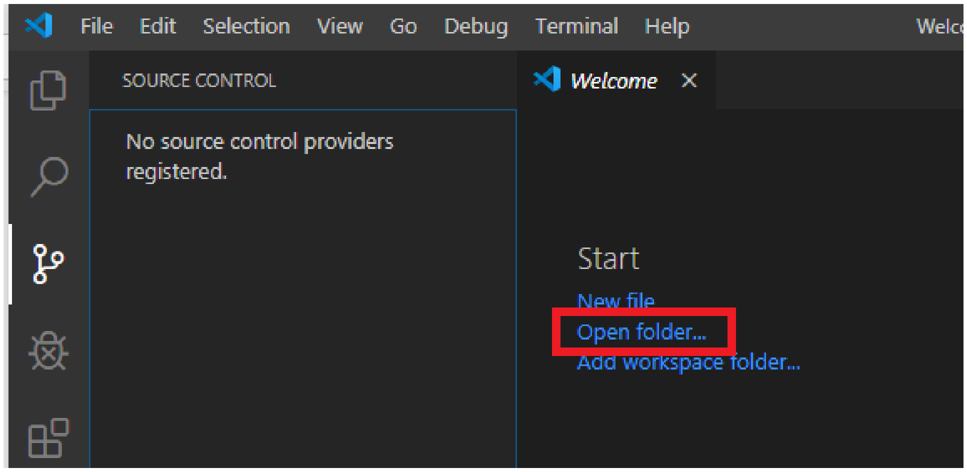


```
C:\Users\[redacted]>git clone https://gitlab.polyu.edu.hk/[redacted]/[redacted].git
```

3. Click source control on the left.

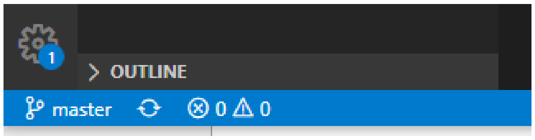


4. Click Open folder.



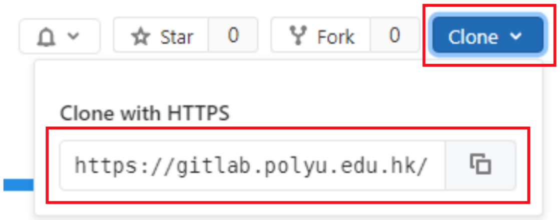
No source control providers registered.

5. Buttons for git operations are activated at the bottom.



Appendix J – Pilot HPC Platform connect with Git

1. Please make sure you are the Pilot HPC Platform registered user, details please refer to IT Support for Research Website.
2. Login "*h05.its.polyu.edu.hk*" to Pilot HPC Platform with your NetID and NetPassword, details please refer to the Pilot HPC Platform management guide.
3. Login to Git and select the project. Click "Clone" and copy the link from "clone with HTTPS".



```
https://gitlab.polyu.edu.hk/
```

4. Using below command to connect and check the result.

```
$ git clone https://gitlab.polyu.edu.hk/NetID/django-ex.git
```

```
Cloning into 'django-ex'...
Username for 'https://gitlab.polyu.edu.hk': (Enter your NedID)
Password for 'https://NedID@gitlab.polyu.edu.hk': (Enter your NetPassword)
remote: Enumerating objects: 861, done.
remote: Counting objects: 100% (861/861), done.
remote: Compressing objects: 100% (423/423), done.
remote: Total 861 (delta 386), reused 861 (delta 386)
Receiving objects: 100% (861/861), 251.68 KiB | 0 bytes/s, done.
Resolving deltas: 100% (386/386), done.
```

```
$ cd django-ex/
$ ls
```

```
conf       openshift  README.md         welcome
manage.py  project    requirements.txt  wsgi.py
```

If you have any question or enquiry, please contact IT HelpCentre.

Hotline: 2766 5900

WhatsApp/ WeChat: 6577 9669

Location: Room M201, Li Ka Shing Tower, PolyU

Online enquiry: IT Online ServiceDesk https://www.polyu.edu.hk/itservicedesk