

Database System Labs

- Prepare

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OBJECTIVES

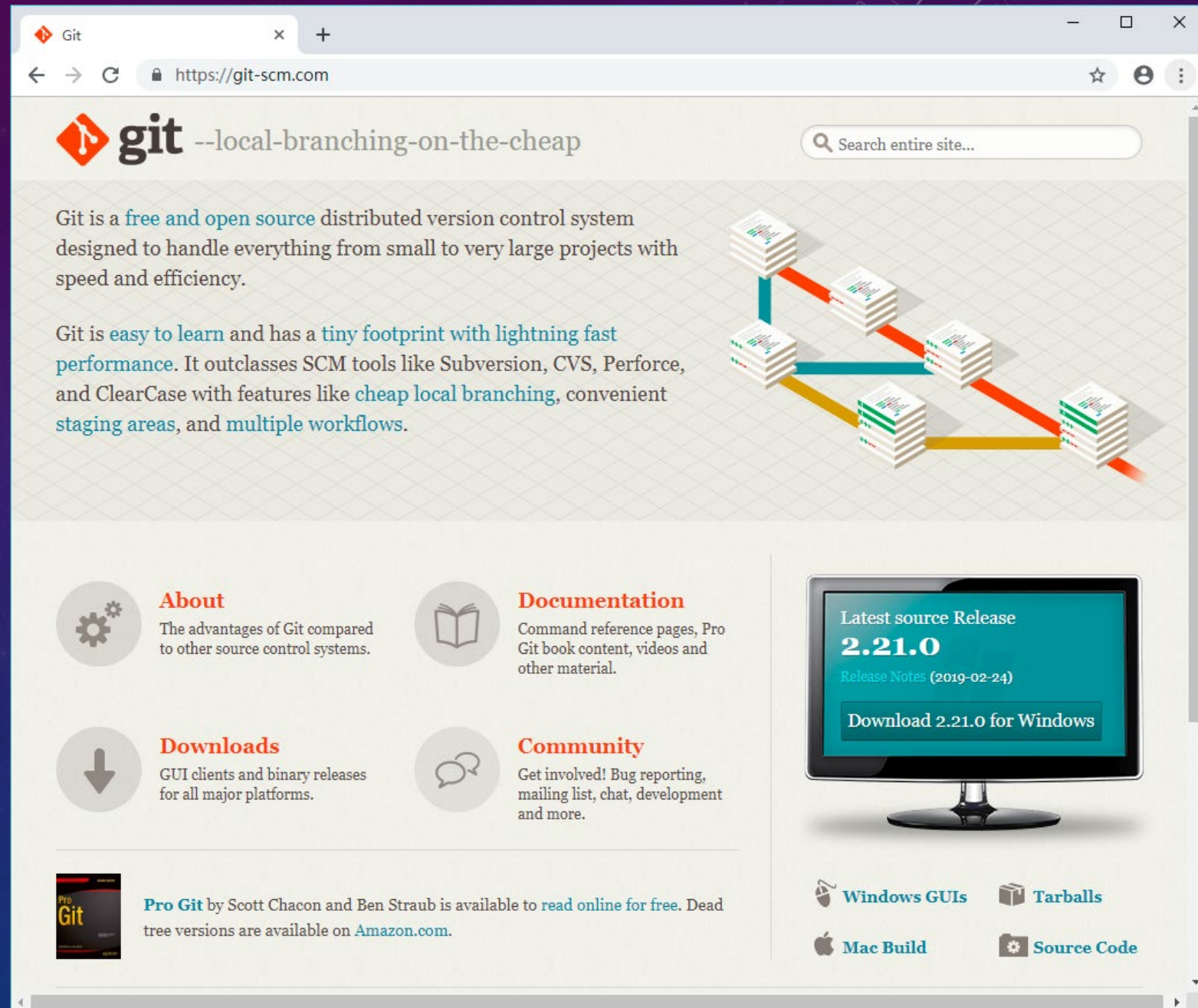
- Download courseware
- DBMS Installation: Server (MySQL), Client (MysqlWorkbench)
- DBMS Login using super user
- Install Python3.6 and Pycharm
- Connect MySQL using python

The background is a gradient of dark blue and purple, speckled with small white dots resembling stars. On the right side, there are faint, light blue geometric patterns, including a large circular scale with degree markings (0 to 210) and concentric circles with arrows. In the bottom left corner, there is a small circular graphic with an arrow pointing clockwise.

Download courseware

LABS PREPARE

- git
 - <https://git-scm.com>
 - Download
 - Install



git clone https://github.com/albertleecn/dblabs.git

LABS PREPARE

- material of DB course
 - git clone
<https://github.com/albertleecn/dblabs>
 - git pull
- Get the latest documentation

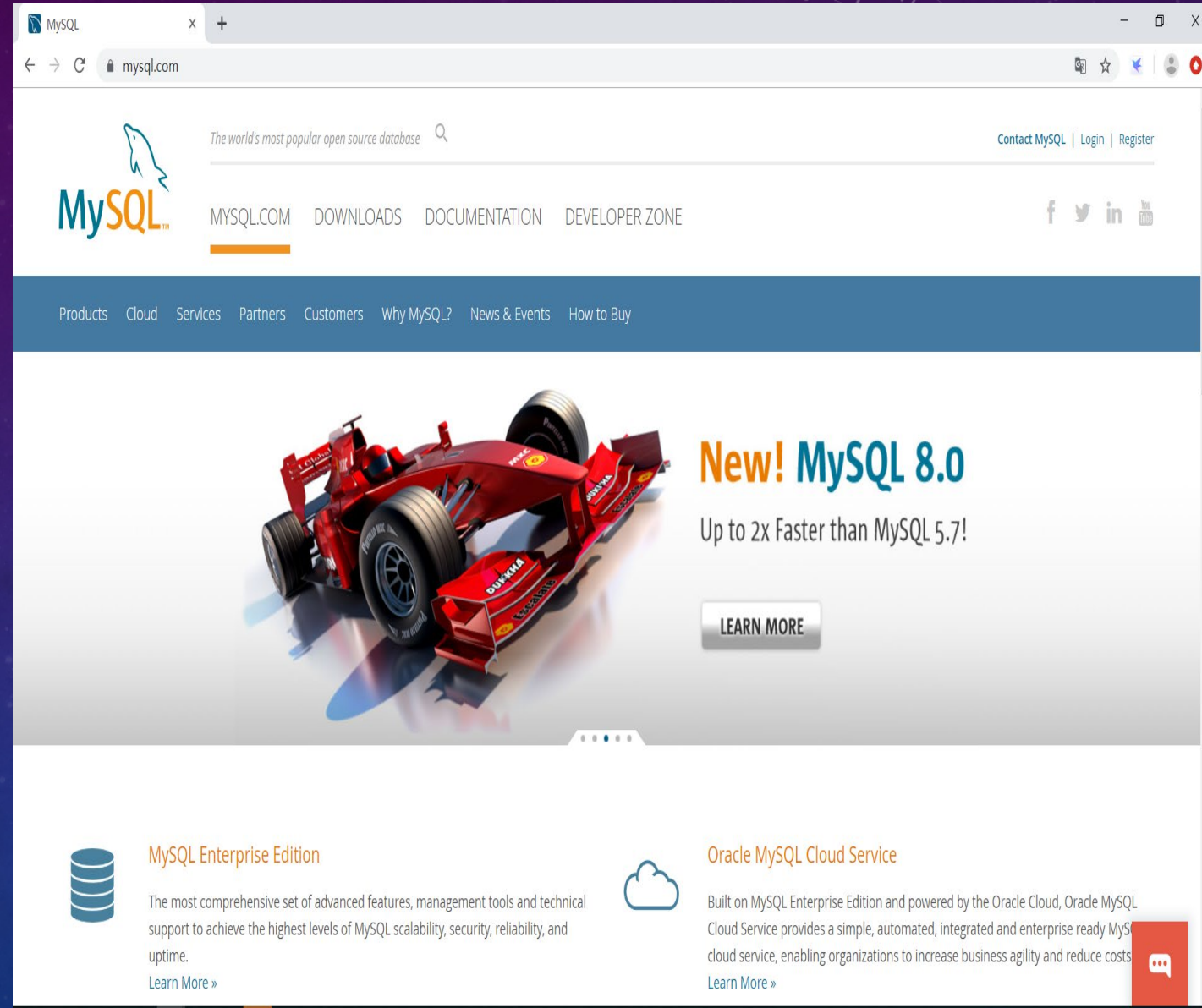
The screenshot shows the GitHub repository page for 'albertleecn/dblabs'. The page includes a navigation bar with links to 'Why GitHub?', 'Enterprise', 'Explore', 'Marketplace', and 'Pricing'. Below the navigation bar, the repository name 'albertleecn / dblabs' is displayed, along with 'Watch', 'Star', and 'Fork' buttons. The 'Code' tab is selected, showing a list of files and their commit history. The files listed are 'labs', 'papers', 'README.md', 'lecture01DbSystemIntroR6.pdf', 'lecture02DbSystemRDbModelR6.pdf', and 'lecture03DbSystemSQL1basicR6.pdf'. The commit history for each file is shown, including the commit message and the time since the last commit.

File	Commit Message	Time
labs	initial labs	11 minutes ago
papers	ok	18 minutes ago
README.md	modify README.md	a year ago
lecture01DbSystemIntroR6.pdf	add new lecture01	a year ago
lecture02DbSystemRDbModelR6.pdf	modify lecture02	a day ago
lecture03DbSystemSQL1basicR6.pdf	add lecture03	11 months ago

Install mysql db server and client

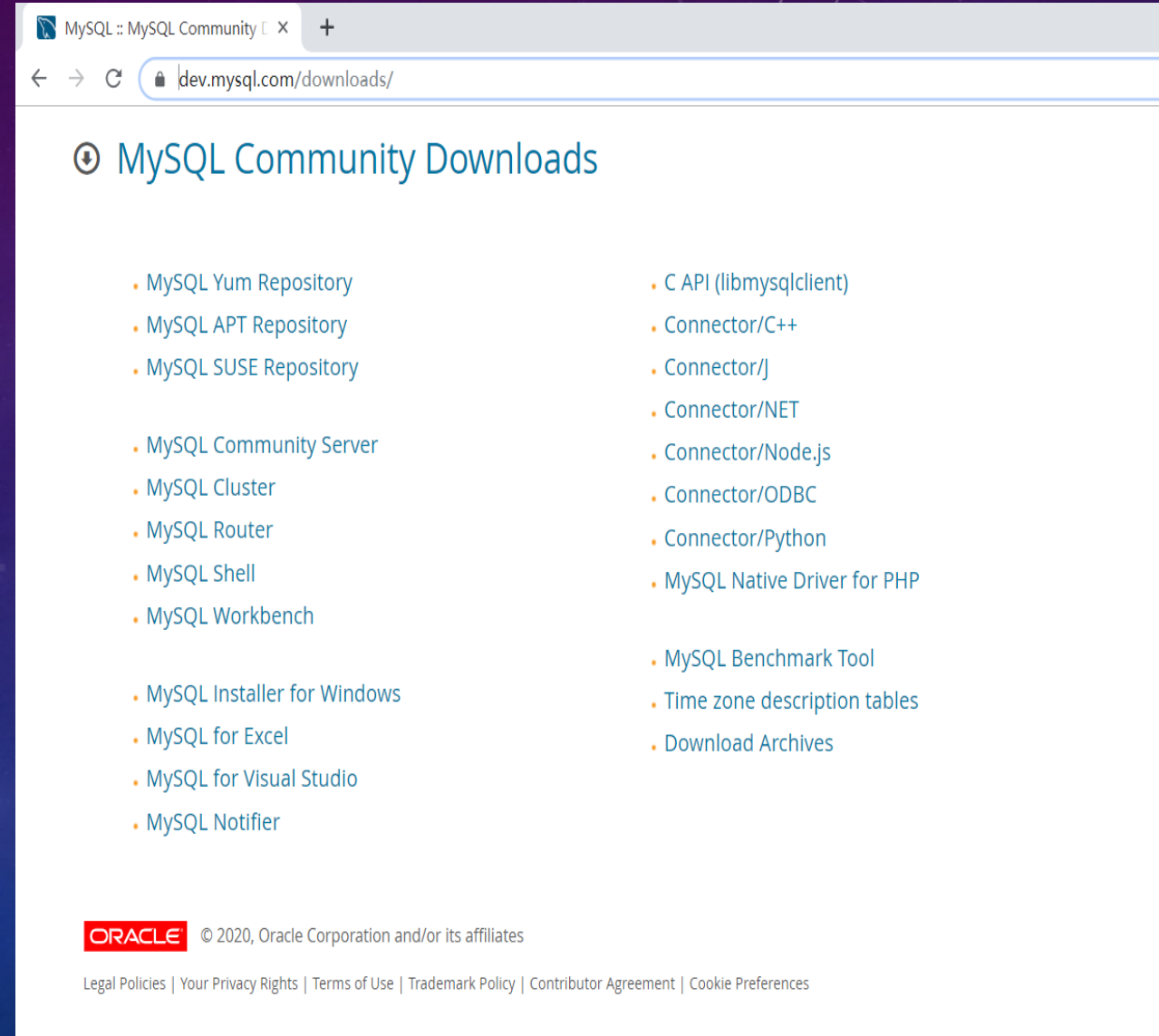
LABS PREPARE

- mysql
 - <https://www.mysql.com/>
 - MySQL 8.0
 - MySQL Community Edition (GPL)

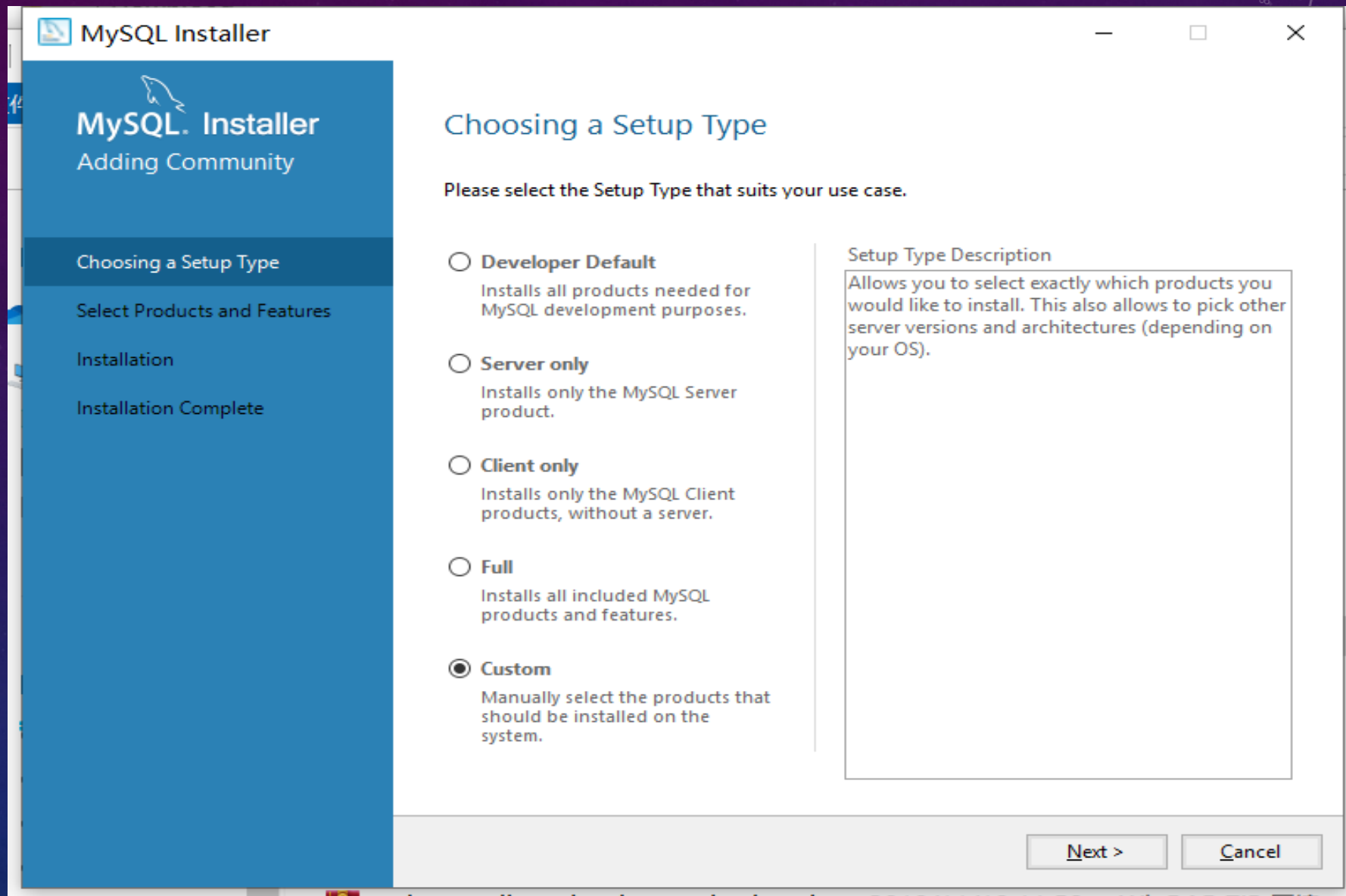


LABS PREPARE

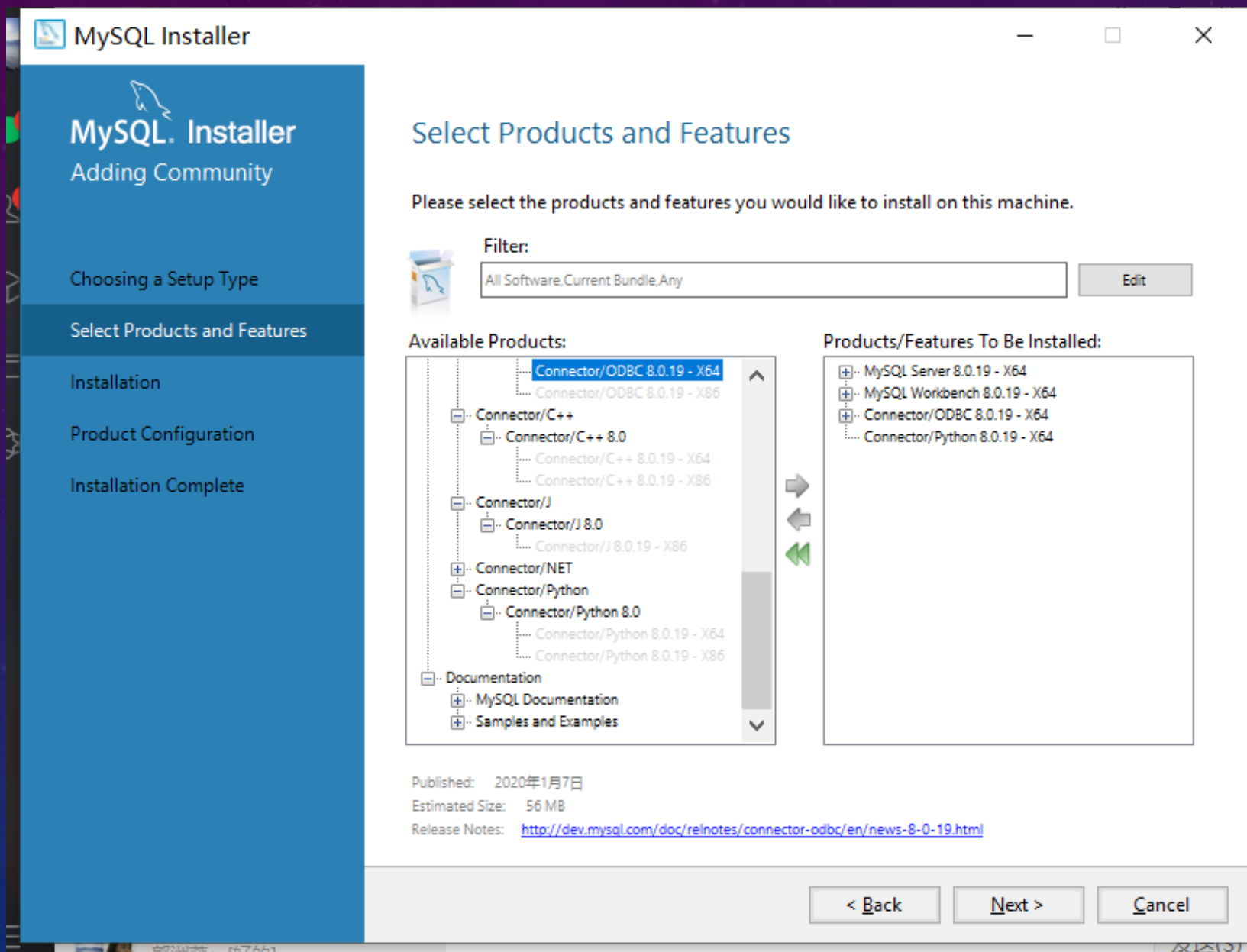
- mysql
 - <https://www.mysql.com/>
 - MySQL 8.0
 - MySQL Community Edition (GPL)
 - Server & Client & Connectors



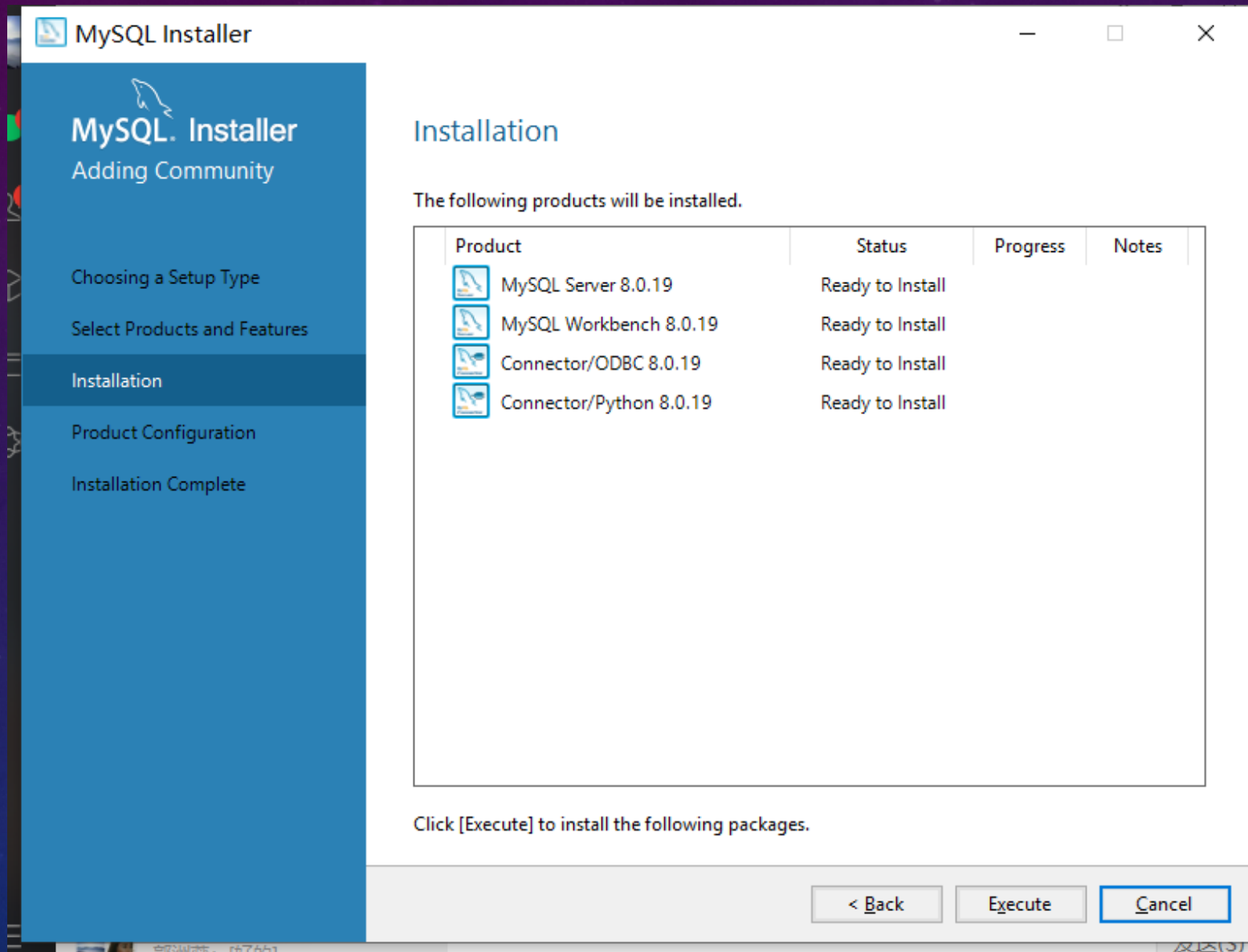
MYSQL INSTALL



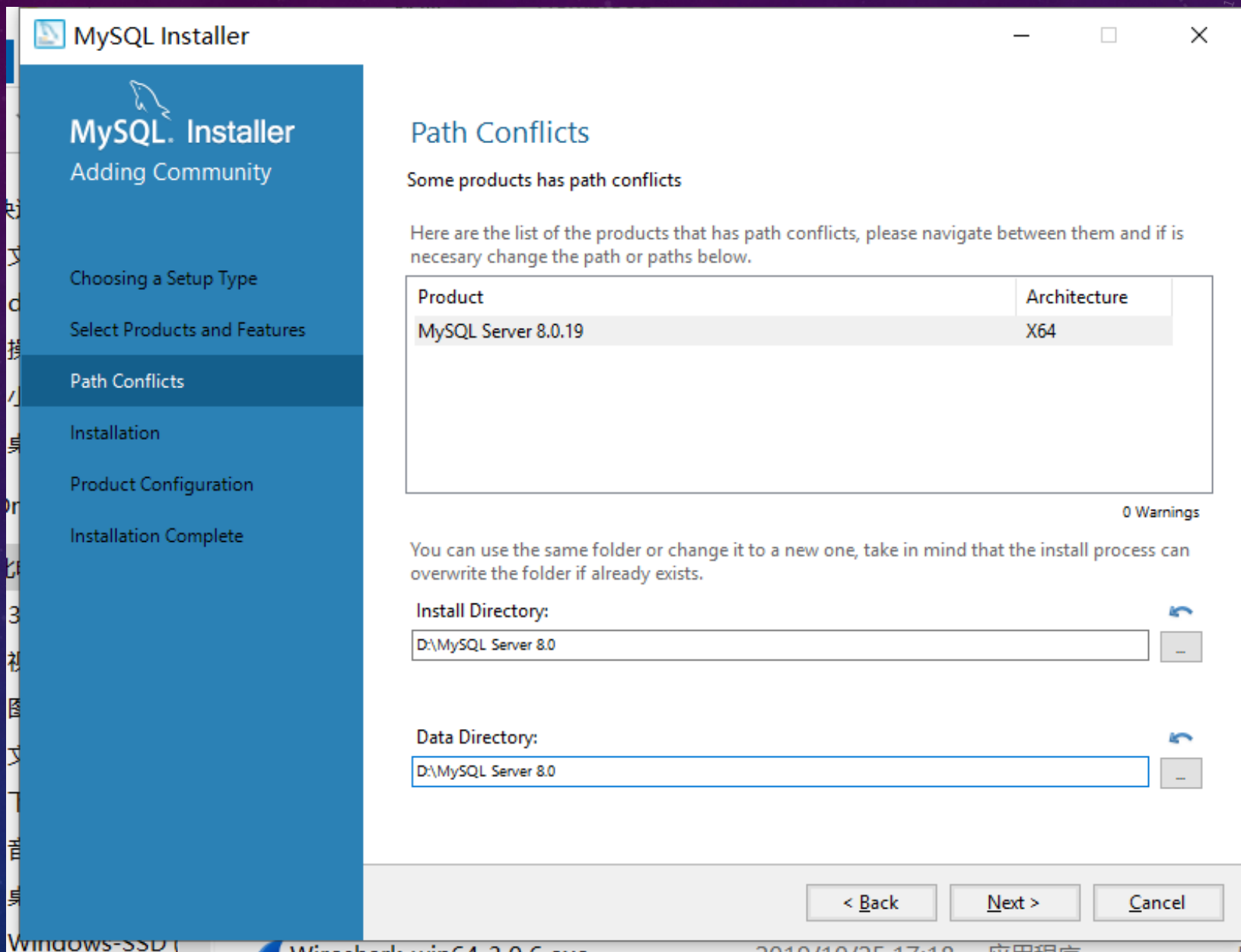
MYSQL INSTALL



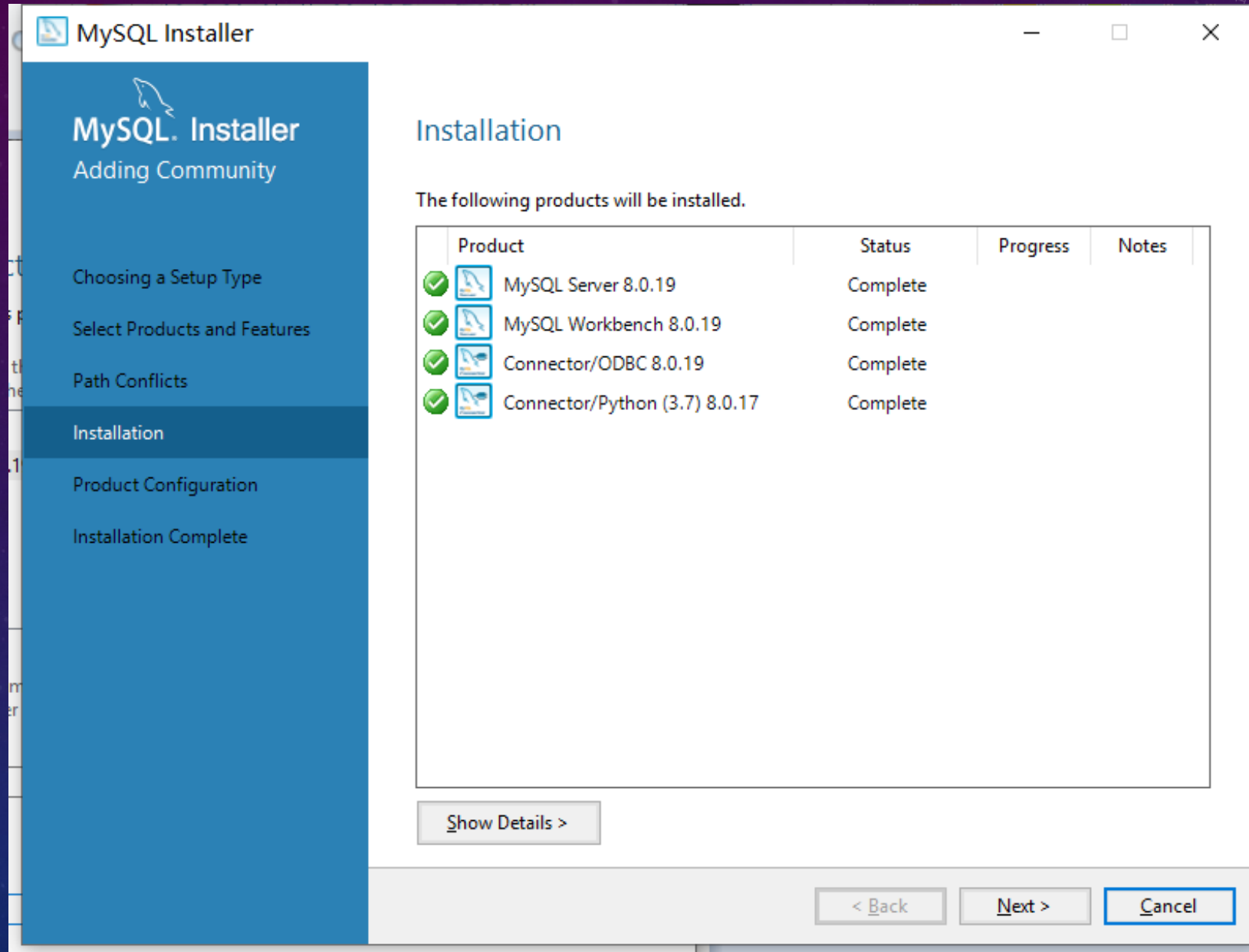
MYSQL INSTALL



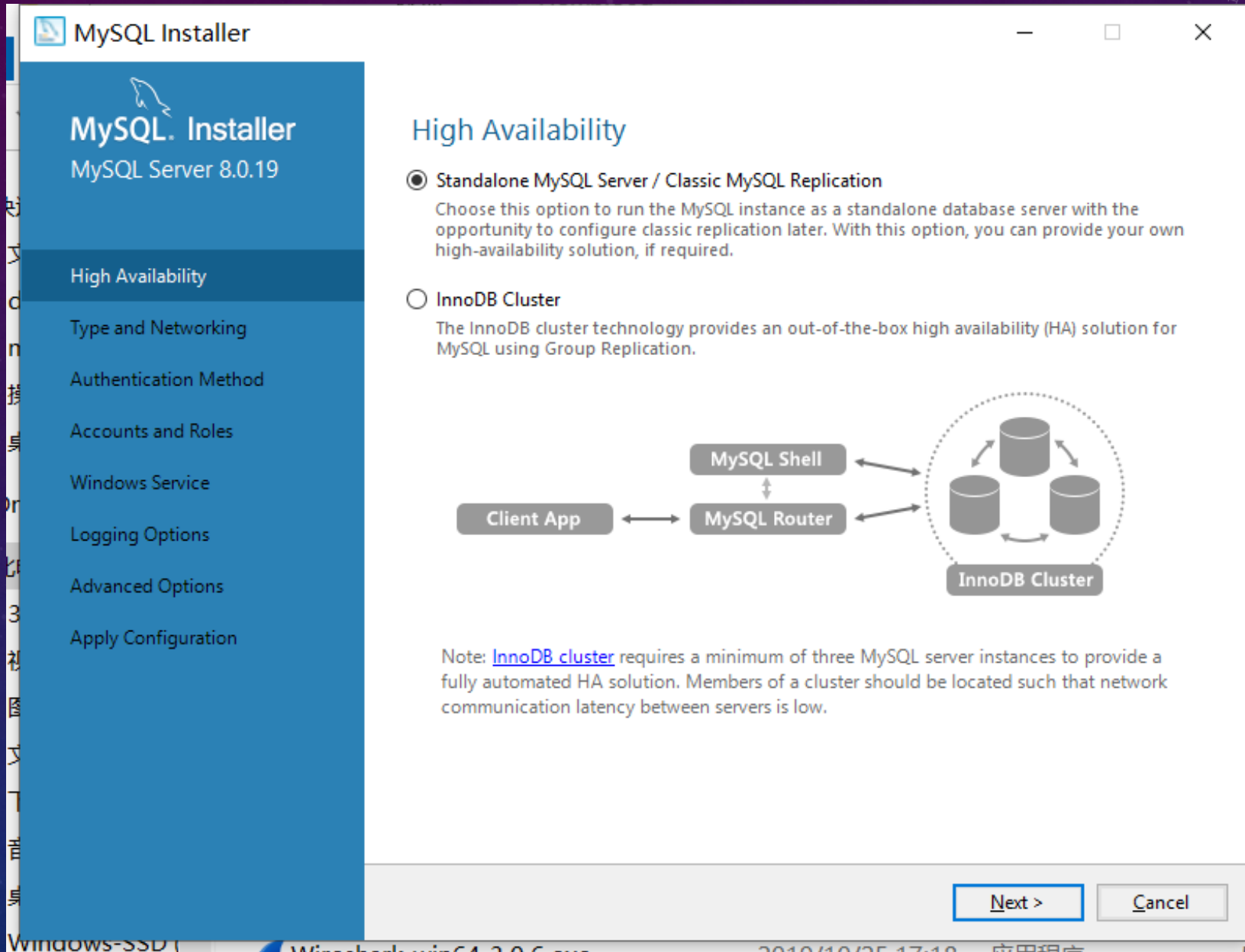
MYSQL INSTALL



MYSQL INSTALL



MYSQL INSTALL



MYSQL INSTALL

MySQL Installer
MySQL Server 5.7.17

Type and Networking

Accounts and Roles

Windows Service

Plugins and Extensions

Apply Server Configuration

Type and Networking

Server Configuration Type

Choose the correct server configuration type for this MySQL Server installation. This setting will define how much system resources are assigned to the MySQL Server instance.

Config Type:

Connectivity

Use the following controls to select how you would like to connect to this server.

☒ TCP/IP Port Number:

☒ Open Firewall port for network access

☐ Named Pipe Pipe Name:

☐ Shared Memory Memory Name:

Advanced Configuration

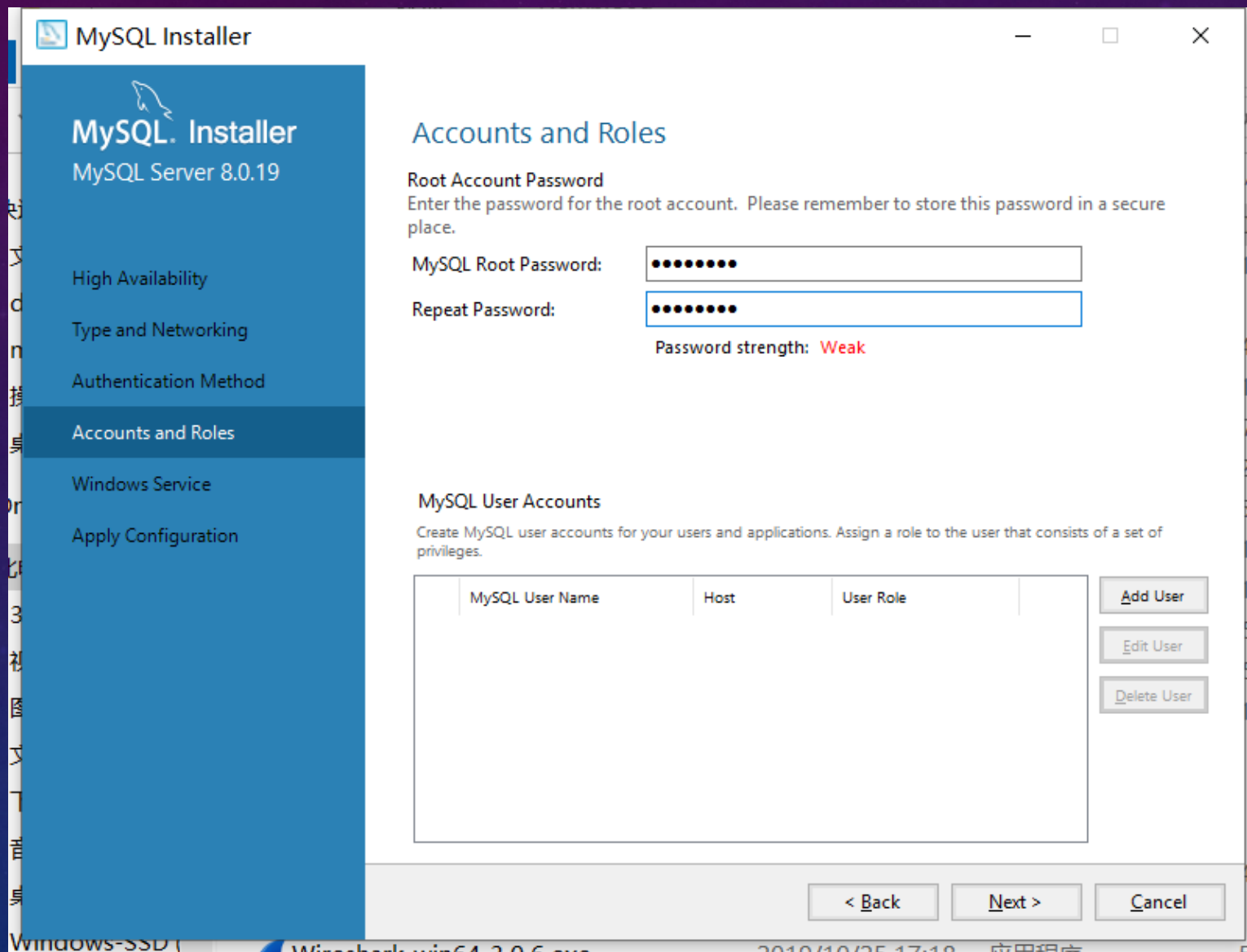
Select the checkbox below to get additional configuration page where you can set advanced options for this server instance.

☐ Show Advanced Options

<http://blog.codinginsight.com/mysql-install/>

Next > Cancel

MYSQL INSTALL



The image shows the MySQL Installer window for MySQL Server 8.0.19. The left sidebar contains the following options: High Availability, Type and Networking, Authentication Method, Accounts and Roles (selected), Windows Service, and Apply Configuration. The main area is titled 'Accounts and Roles' and contains two sections: 'Root Account Password' and 'MySQL User Accounts'. The 'Root Account Password' section has two password fields, both filled with dots, and a 'Password strength: Weak' indicator. The 'MySQL User Accounts' section has a table with columns 'MySQL User Name', 'Host', and 'User Role', and buttons for 'Add User', 'Edit User', and 'Delete User'. At the bottom are buttons for '< Back', 'Next >', and 'Cancel'.

MySQL Installer
MySQL Server 8.0.19

High Availability
Type and Networking
Authentication Method
Accounts and Roles
Windows Service
Apply Configuration

Accounts and Roles

Root Account Password
Enter the password for the root account. Please remember to store this password in a secure place.

MySQL Root Password:

Repeat Password:

Password strength: **Weak**

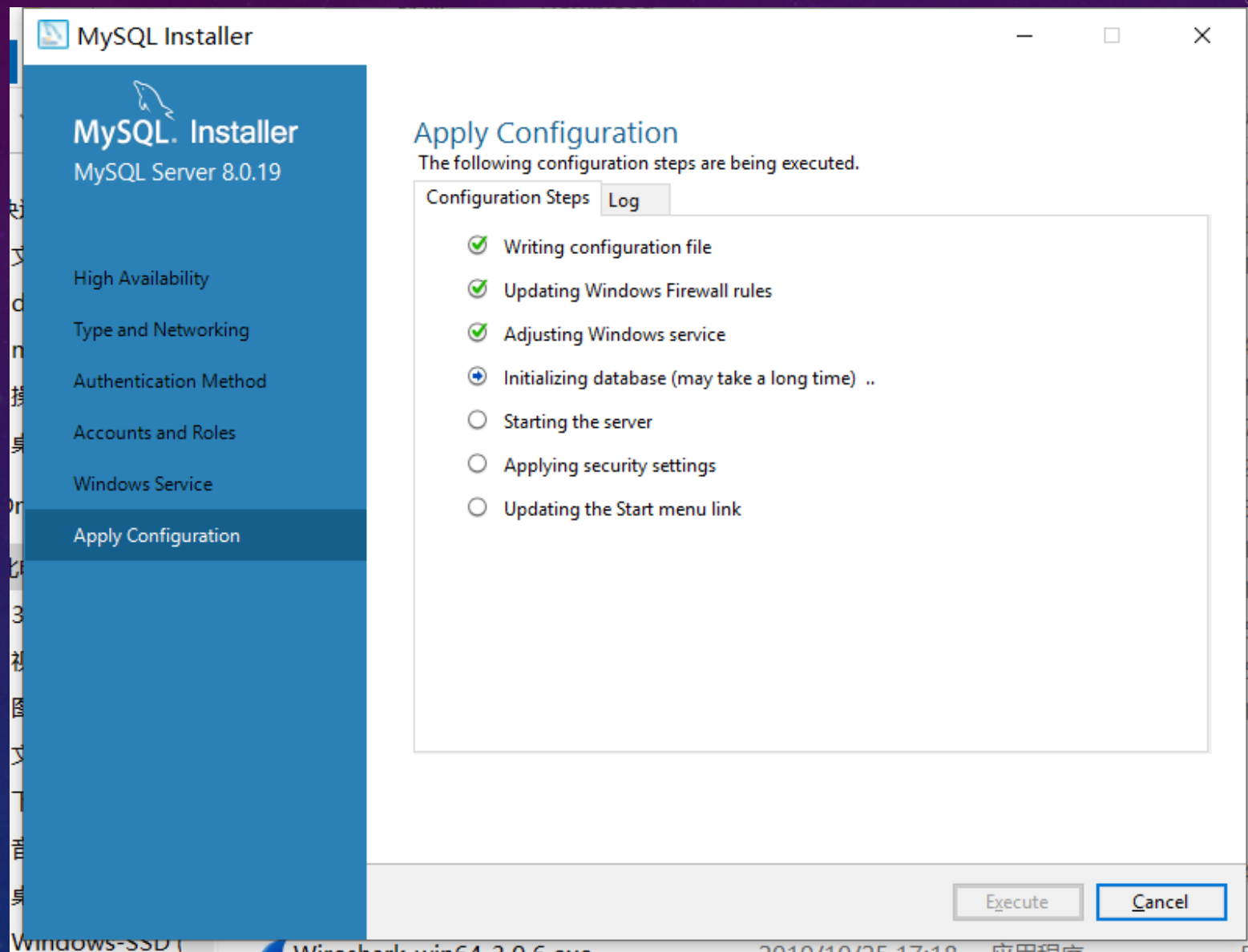
MySQL User Accounts
Create MySQL user accounts for your users and applications. Assign a role to the user that consists of a set of privileges.

MySQL User Name	Host	User Role
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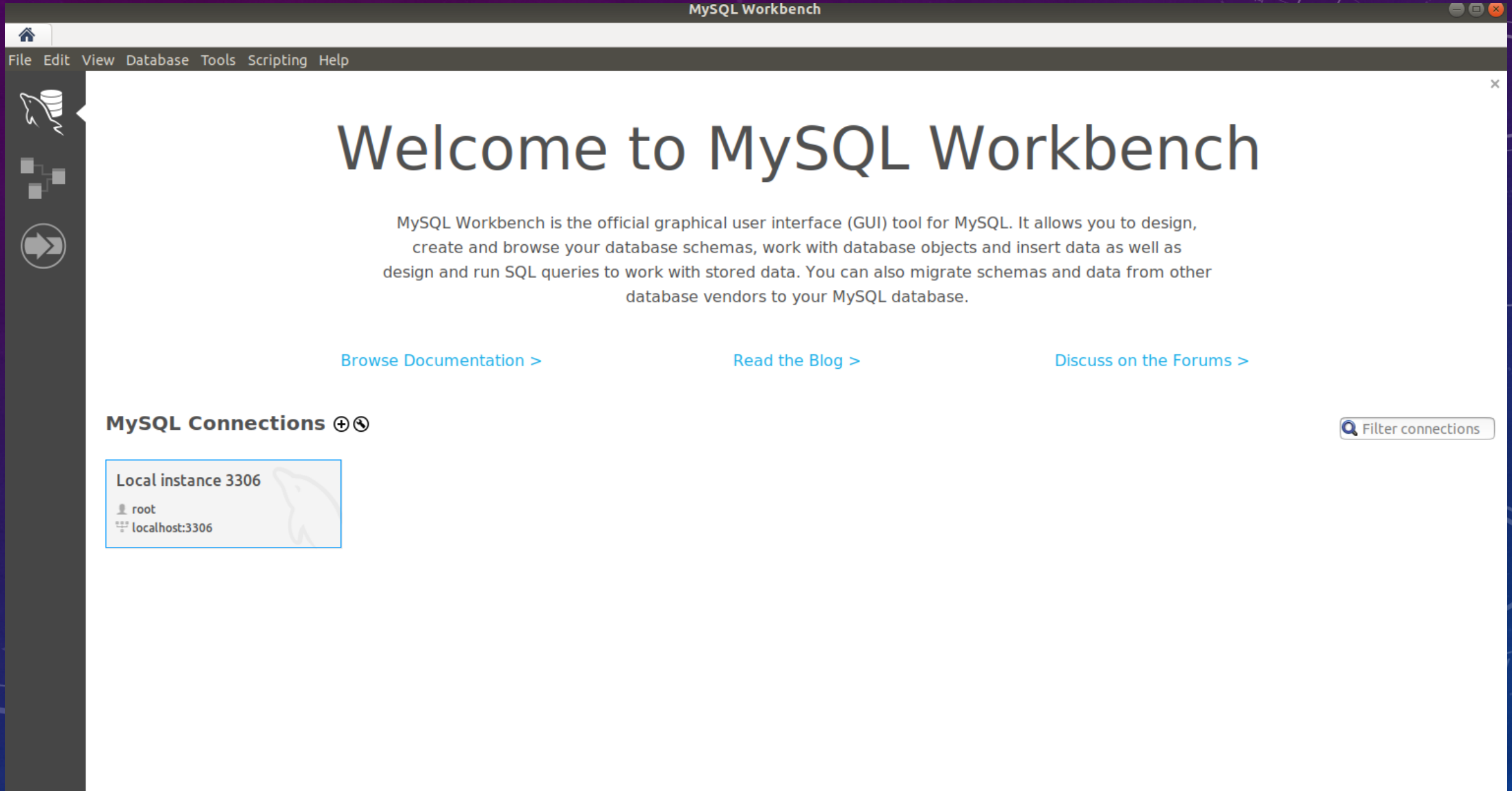
[Add User](#)
[Edit User](#)
[Delete User](#)

< Back Next > Cancel

MYSQL INSTALL



MYSQL: GUI CLIENT APPLICATION



MYSQL: GUI CLIENT APPLICATION

The screenshot displays the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. The left sidebar shows the SCHEMAS tree with 'sys' expanded, revealing 'sys_config' and its columns: 'variable', 'value', 'set_time', and 'set_by'. The main query editor shows a query: `select variable , value from sys.sys_config;`. The 'Result Grid' tab is active, displaying the following data:

#	variable	value
1	diagnostics.allow_i_s_tables	OFF
2	diagnostics.include_raw	OFF
3	ps_thread_trx_info.max_length	65535
4	statement_performance_analyzer.limit	100
5	statement_performance_analyzer.vi...	NULL
6	statement_truncate_len	64
*	NULL	NULL

The bottom status bar indicates 'Query Completed' and 'sys_config 1'. A right-hand sidebar contains a 'Context Help' panel with a message: 'Automatic context help is available in the toolbar to manually open the current caret position or automatic help.'

Install Python3.6 and Pycharm

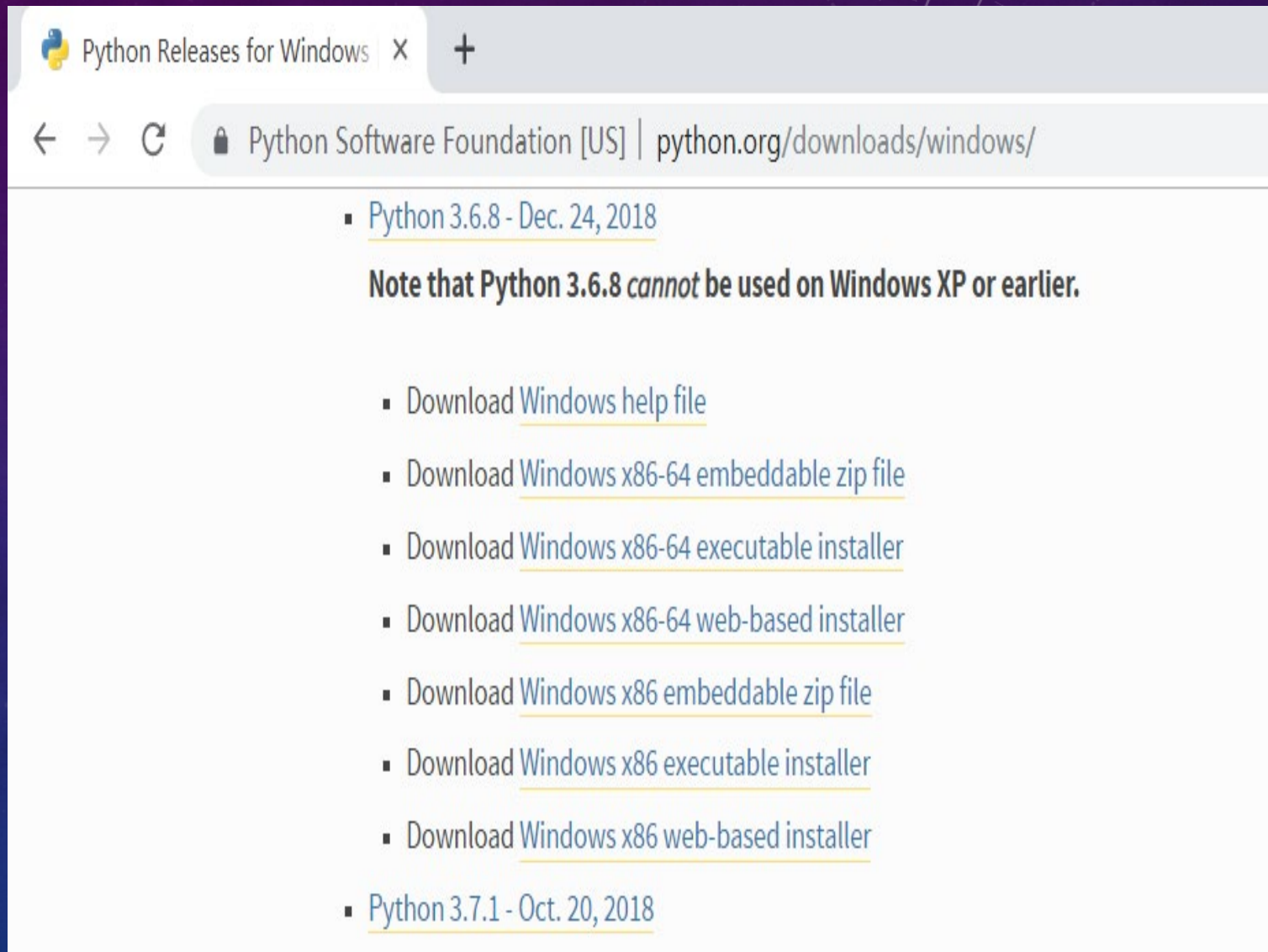
LABS PREPARE

- python

- <https://www.python.org/downloads/windows/>

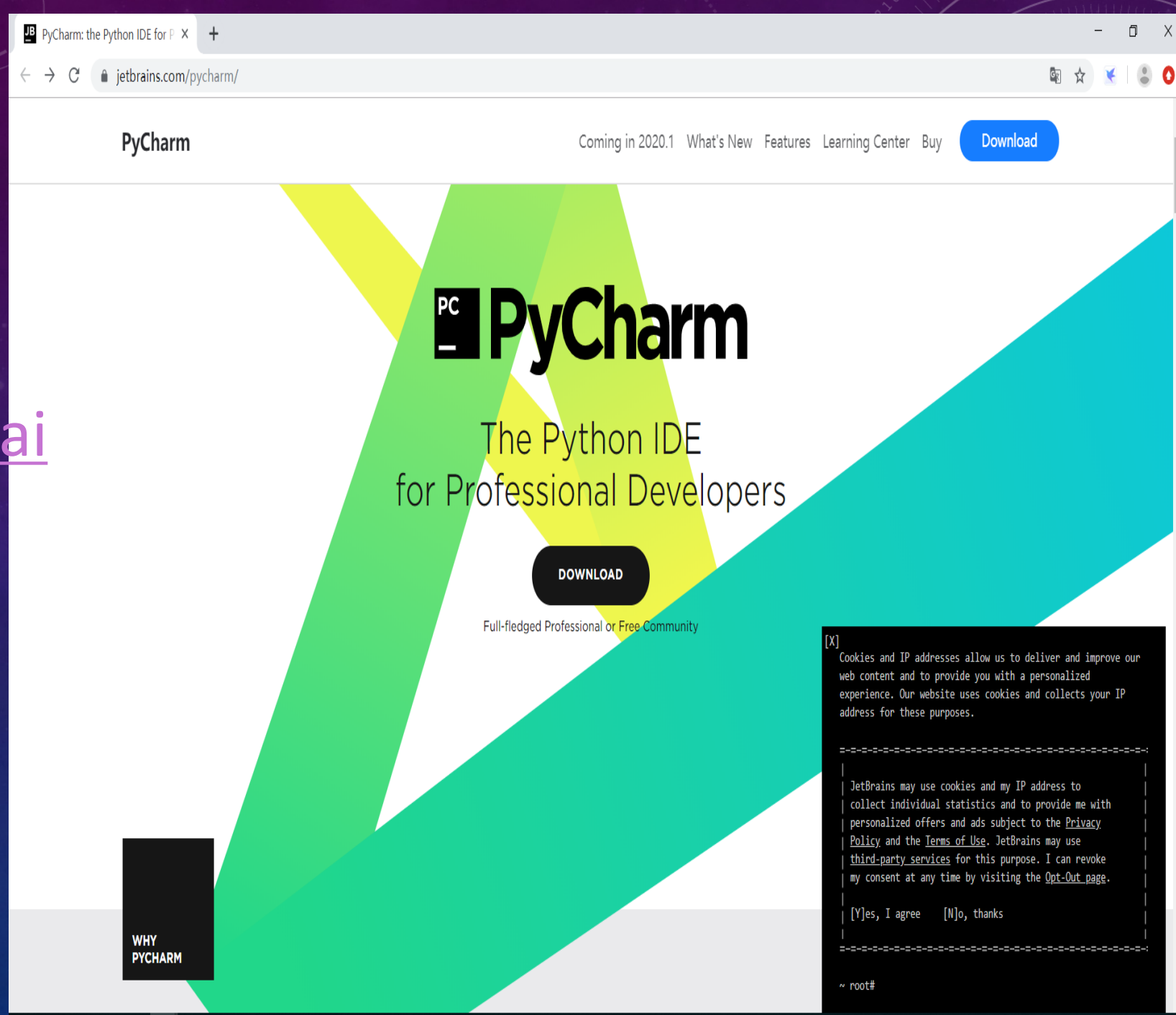
- Download

- Install



LABS PREPARE

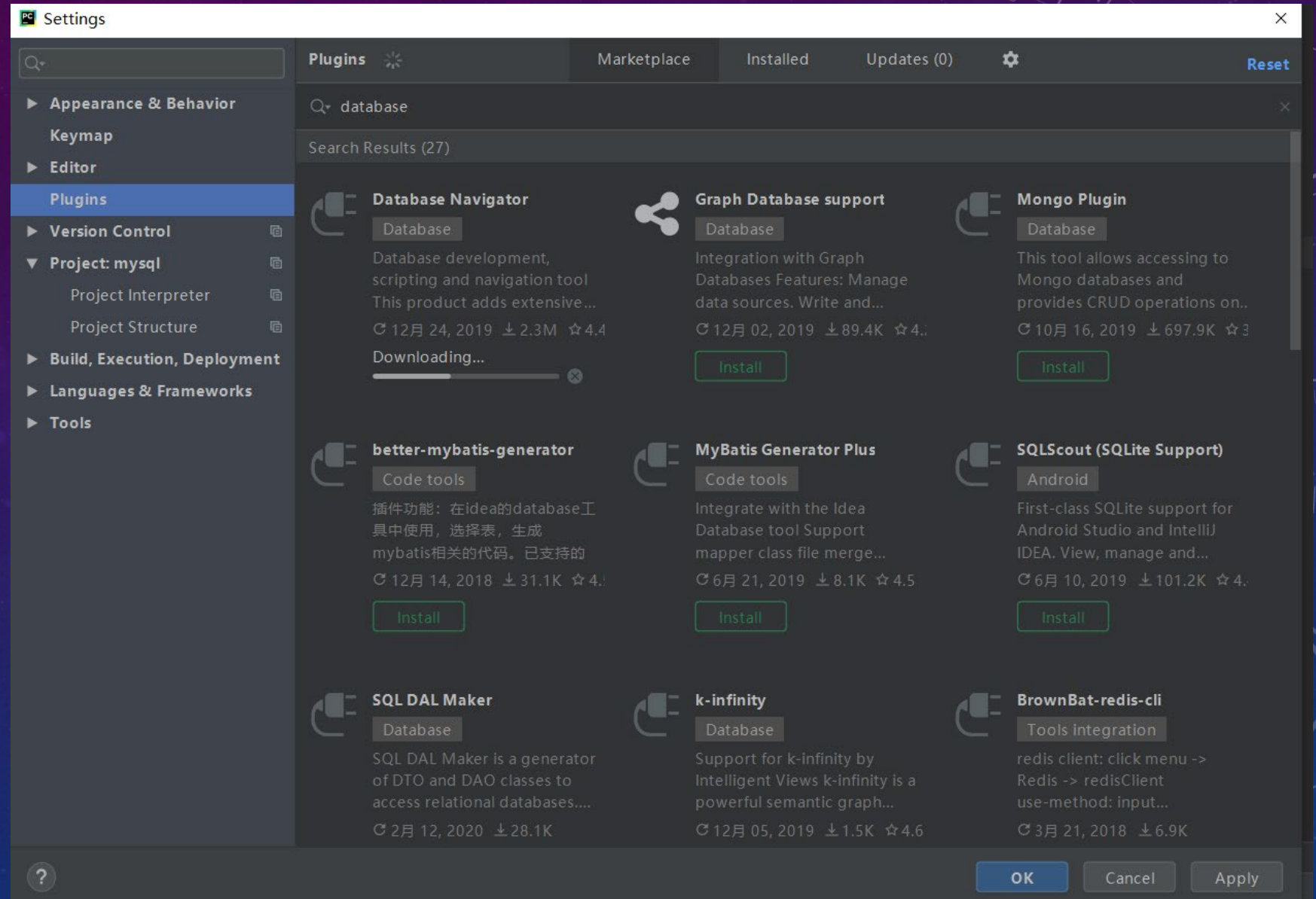
- pycharm
 - <https://www.jetbrains.com/pycharm/>
 - Download
 - Install



Connect MySQL using python

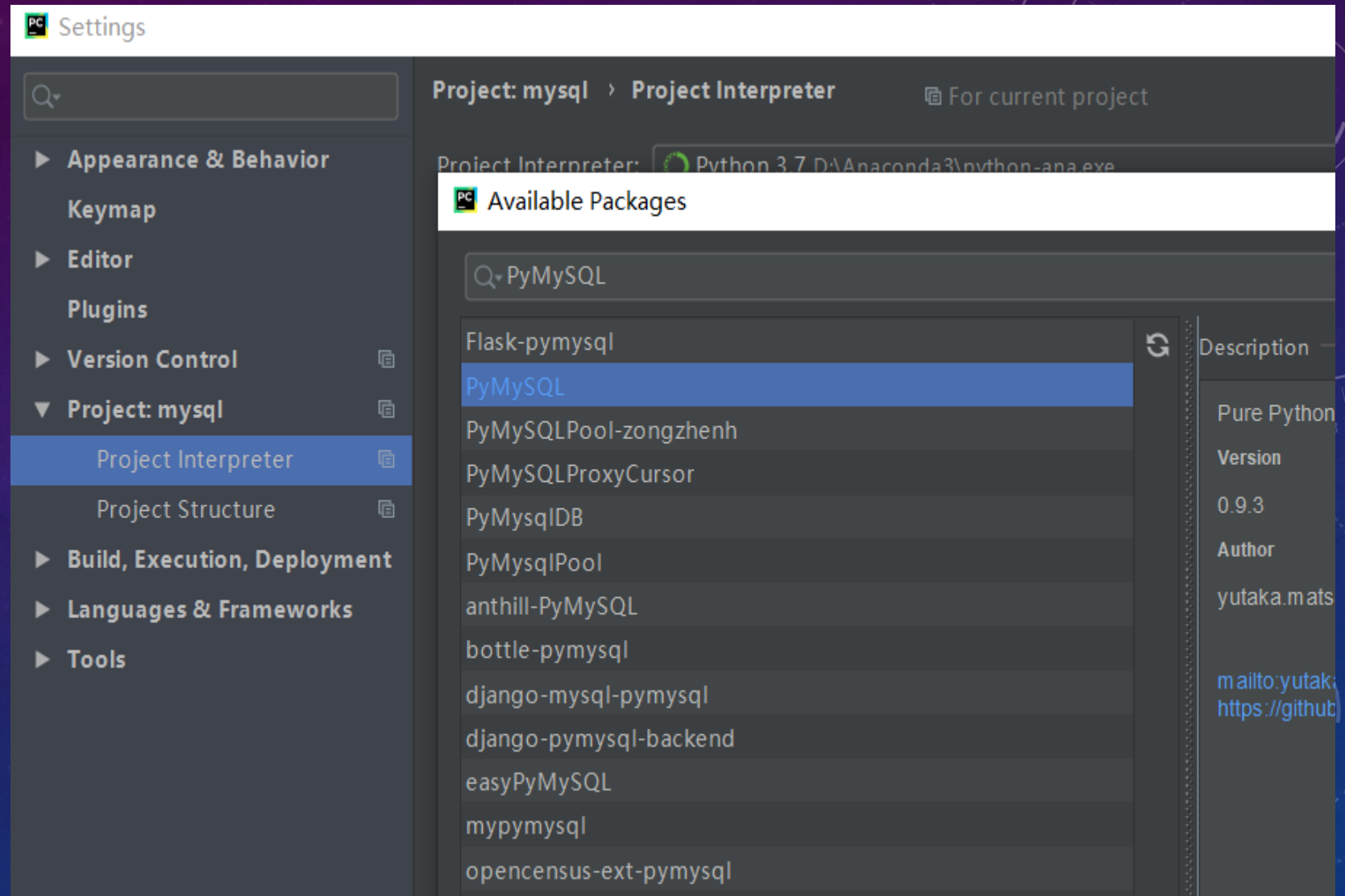
PYCHARM

- Add reference
 - PyMySQL
 - Pip install PyMySQL



PYCHARM

- Add reference
 - PyMySQL
 - Pip install PyMySQL



CONNECTION

```
import pymysql
conn=pymysql.connect(host='localhost',user='root',password='123',database='sys',charset='utf8')
cursor=conn.cursor()
sql = 'select version()'
cursor.execute(sql)
retdata = cursor.fetchall()
for row in retdata:
    print(row[0])
cursor.close()
conn.close()
```

Database version : 8.0.19

Process finished with exit code 0



THANKS!

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