

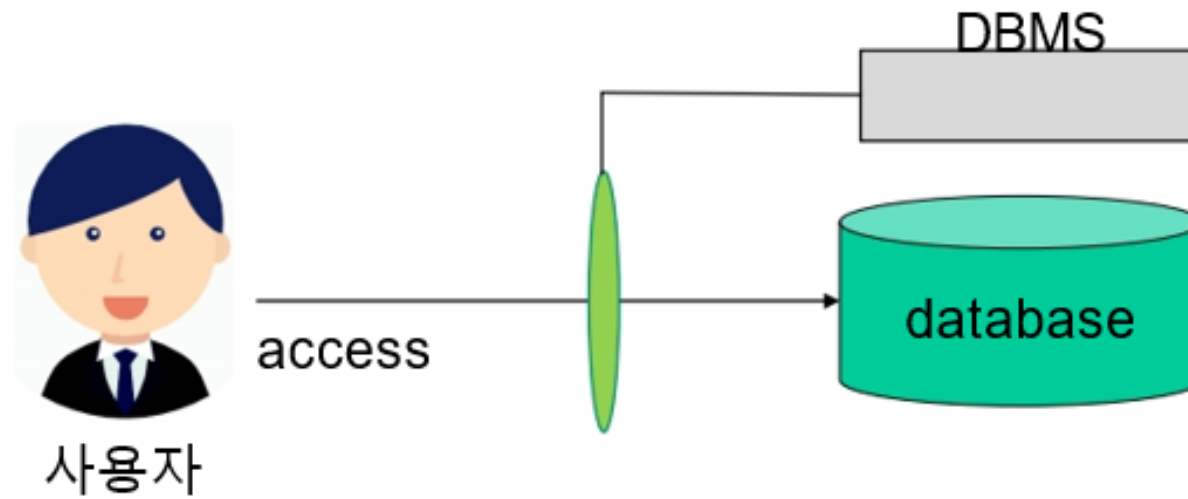
데이터베이스 보안

A decorative graphic consisting of a 3x3 grid. The top-left square is purple, the top-right square is light blue, and the middle-right square is teal. The bottom-right square contains a black circle. The rest of the grid is white.

- DBMS 의 목적중 하나는 데이터베이스에 저장된 정보를 안전하게 보호하는 것
- 이를 수행하기 위한 수단
 - 사용자 관리
 - 권한 관리

사용자 관리

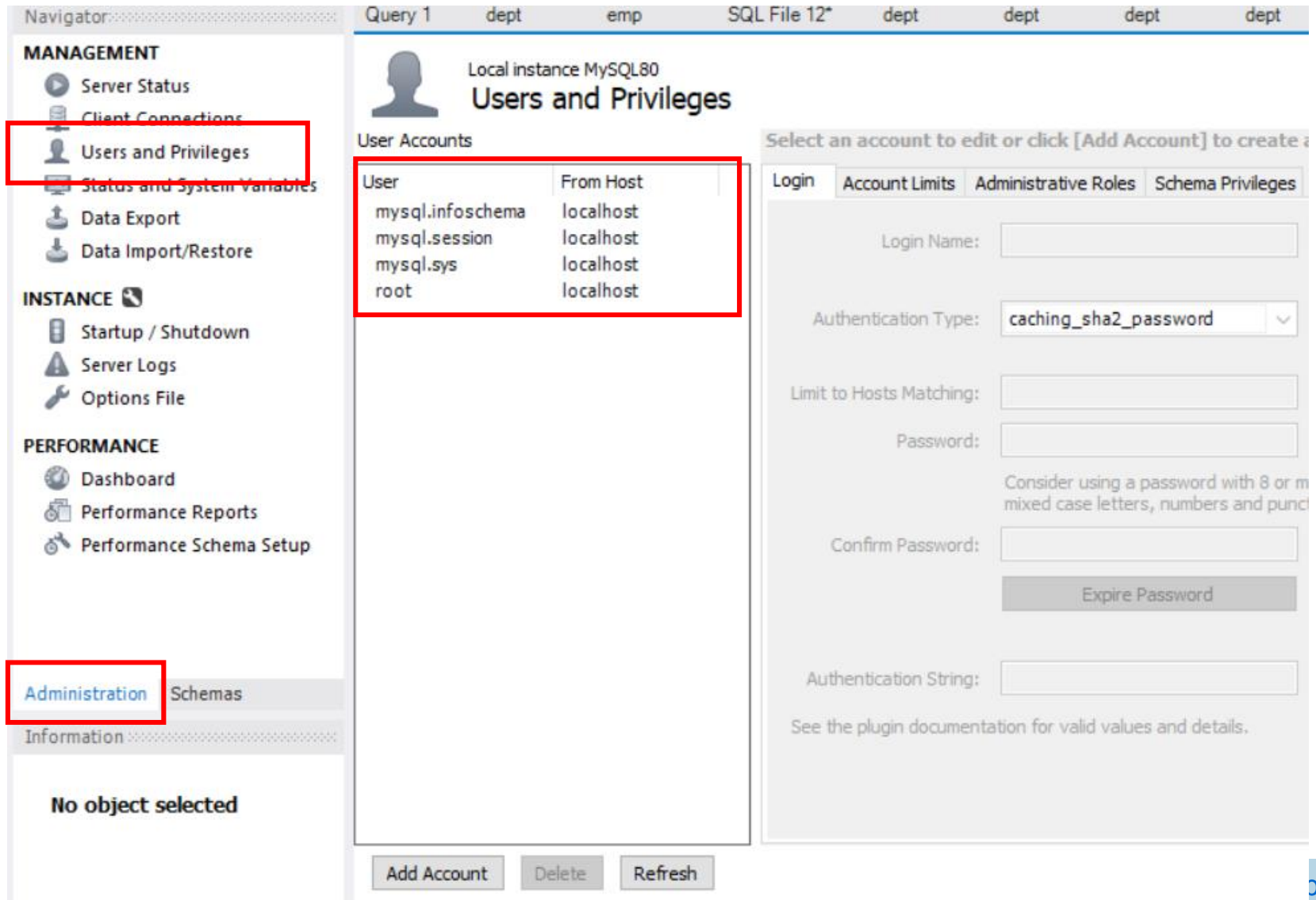
- 사용자가 Database 를 이용하기 위해서는 계정(account) 이 필요
- 사용자가 DBMS에 로그인하면 DBMS 는 등록된 사용자인지를 검사한다.
- 이를 위해 사전에 계정 생성이 필요



- root
 - 최고 권한을 가진 사용자 계정
 - 데이터베이스 및 DBMS 에 대한 모든 권한을 갖는다
 - 비밀번호가 노출되면 위험
 - 일반 사용자들에게 root 권한을 주는 것은 위험하기 때문에 별도의 계정을 만들어 사용하도록 해야 한다

사용자 관리

- 시스템에 등록된 사용자 알아보기



The screenshot shows the MySQL Workbench interface. In the left sidebar, the 'Users and Privileges' option under the 'MANAGEMENT' section is highlighted with a red box. At the bottom of the sidebar, the 'Administration' tab is also highlighted with a red box. The main window displays the 'Users and Privileges' configuration for a 'Local instance MySQL80'. A table titled 'User Accounts' is highlighted with a red box, showing the following data:

User	From Host
mysql.infoschema	localhost
mysql.session	localhost
mysql.sys	localhost
root	localhost

To the right of the table is a form for creating or editing a user account. It includes fields for 'Login Name', 'Authentication Type' (set to 'caching_sha2_password'), 'Limit to Hosts Matching', 'Password', 'Confirm Password', and 'Authentication String'. There is also an 'Expire Password' button. At the bottom of the window are 'Add Account', 'Delete', and 'Refresh' buttons.

사용자 관리

- 사용자 생성

Local instance MySQL80
Users and Privileges

User Accounts

User	From Host
mysql.infoschema	localhost
mysql.session	localhost
mysql.sys	localhost
root	localhost

Add Account Delete Refresh



Local instance MySQL80
Users and Privileges

User Accounts

User	From Host
mysql.infoschema	localhost
mysql.session	localhost
mysql.sys	localhost
root	localhost
user_1	localhost

Add Account **Delete** Refresh

사용자 관리

Details for account user_1@localhost

Login

Account Limits

Administrative Roles

Schema Privileges

Login Name:

user_1

You may create multiple accounts with the same name to connect from different hosts.

Authentication Type:

Standard

For the standard password and/or host based authentication select 'Standard'.

Limit to Hosts Matching:

localhost

% and _ wildcards may be used

Password:

Type a password to reset it.

Consider using a password with 8 or more characters with mixed case letters, numbers and punctuation marks.

Confirm Password:

Enter password again to confirm.

Expire Password

Revert

Apply

사용자 관리

- 권한 부여

The screenshot shows the MySQL Users and Privileges tool interface. On the left, the 'User Accounts' table lists several users, with 'user_1' highlighted. On the right, the 'Details for account user_1@localhost' window is open, showing the 'Schema Privileges' tab. The 'Schema' and 'Privileges' columns are empty, indicating no privileges are currently assigned. The 'Add Entry..' button is highlighted, and a red box is around the 'Schema Privileges' tab label.

User	From Host
mysql.infoschema	localhost
mysql.session	localhost
mysql.sys	localhost
root	localhost
user_1	localhost

Details for account user_1@localhost

Schema Privileges

Schema	Privileges
--------	------------

Schema and Host fields may use % and _ wildcards. The server will match specific entries before wildcarded ones.

Revoke All Privileges Delete Entry Add Entry..

모든 권한 회수
권한 추가
현재 아무 권한이 없음

New Schema Privilege Definition

Select the Schema for which the user 'user_1' will have the privileges you want to define.

Schema

☐ All Schema (%) This rule will apply to any schema name.

☐ Schemas matching pattern: This rule will apply to schemas that match the given name or pattern. You may use _ and % as wildcards in a pattern. Escape these characters with \ in case you want their literal value.

☒ Selected schema: my_db Select a specific schema name for the rule to apply to.

Cancel OK

사용자 관리

Details for account user_1@localhost

Login Account Limits Administrative Roles Schema Privileges

Schema	Privileges
my_db	SELECT, SHOW VIEW

<

Schema and Host fields may use % and _ wildcards.
The server will match specific entries before wildcarded ones.

Revoke All Privileges Delete Entry Add Entry..

The user 'user_1'@'localhost' will have the following access rights to schemas matching 'my_db':

Object Rights

- ☒ SELECT
- ☐ INSERT
- ☐ UPDATE
- ☐ DELETE
- ☐ EXECUTE
- ☒ SHOW VIEW

DDL Rights

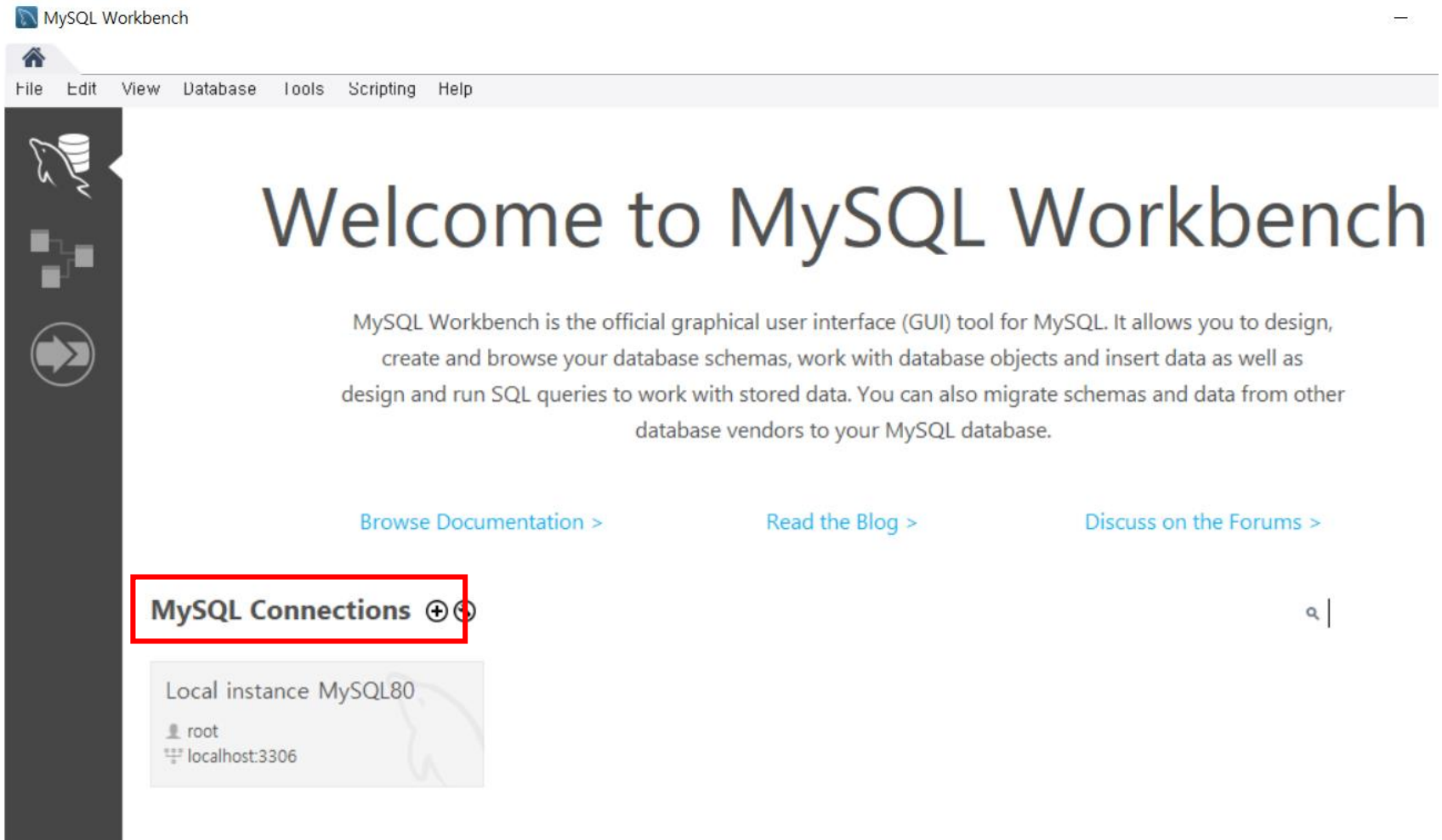
- ☐ CREATE
- ☐ ALTER
- ☐ REFERENCES
- ☐ INDEX
- ☐ CREATE VIEW
- ☐ CREATE ROUTINE
- ☐ ALTER ROUTINE
- ☐ EVENT
- ☐ DROP
- ☐ TRIGGER

Other Rights

- ☐ GRANT OPTION
- ☐ CREATE TEMPORARY TABLES
- ☐ LOCK TABLES

Revert Apply

- Mysql workbench 커넥션 생성



사용자 관리

- Mysql workbench 커넥션 생성

Setup New Connection

Connection Name: Type a name for the connection

Connection Method: Method to use to connect to the RDBMS

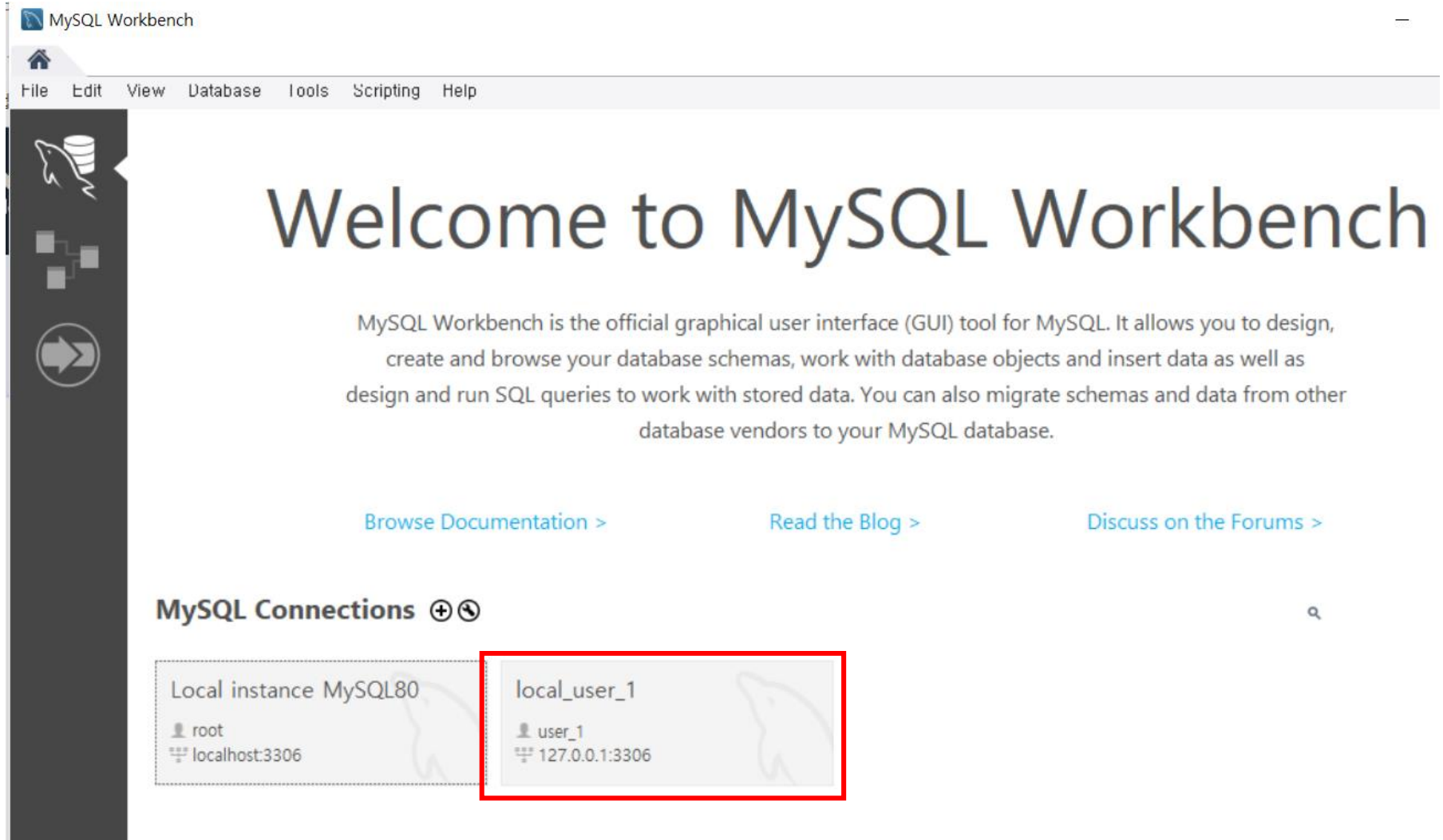
Parameters SSL Advanced

Hostname: Port: Name or IP address of the server host - and TCP/IP port.

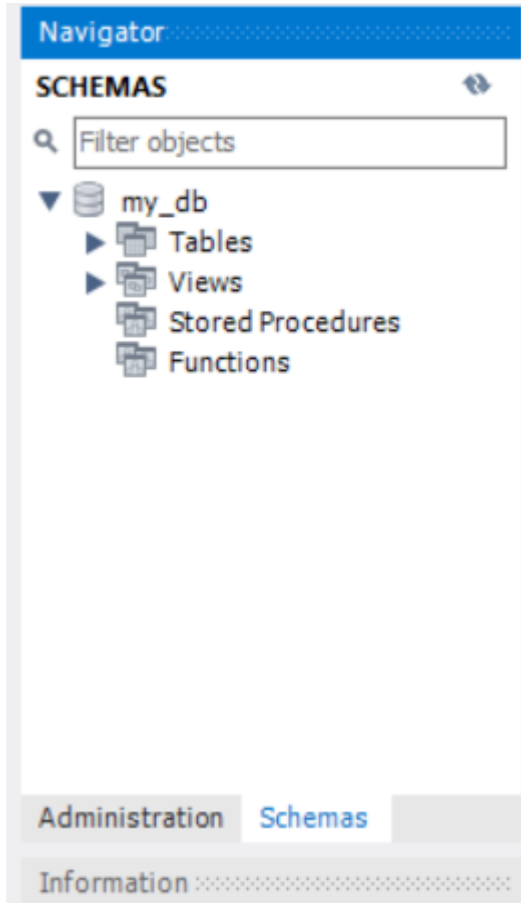
Username: Name of the user to connect with.

Password: The user's password. Will be requested later if it's not set.

Default Schema: The schema to use as default schema. Leave blank to select it later.



사용자 관리



- Note
 - Mysql workbench는 DB 단위로 권한 부여/회수
 - SQL 명령문 (grant, revoke) 을 이용하면 테이블 단위로도 권한을 부여/회수 할수 있다.

```
GRANT select ON my_db.emp TO user_1@localhost;
```

```
GRANT select, insert, update ON my_db.dept  
TO user_1@localhost;
```