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## dbt setup with mysql (local)

In this document we will be learning about

- how we can connect dbt with mysql
- how to run dbt locally using vscode

### prerequisites

- Python is already installed
- MySQL is installed

## 1. Create a python environment

run below command in command Terminal

- Creating python virtual environment for dbt project

```
> python -m venv dbt_env
```

- activate python dbt\_env environmen

```
> source dbt_env/bin/activate
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

(base) rajnish@Rajnishs-MacBook-Air dbt_mysql % pwd
/Users/rajnish/dbt/dbt_mysql
(base) rajnish@Rajnishs-MacBook-Air dbt_mysql % python -m venv dbt_env
(base) rajnish@Rajnishs-MacBook-Air dbt_mysql % source dbt_env/bin/activate
(dbt_env) (base) rajnish@Rajnishs-MacBook-Air dbt_mysql %
```

## 2. to check if any python library is installed or not in the new virtual environment

```
> pip freeze
```

### 3. official link for setup -

[Click Here](#)

### 4. run below command to install required libraries

```
> pip install dbt-core dbt-mysql
```

5. pip freeze to check if below libraries are installed or not

- dbt-core
- dbt-mysql

### 6. run below command to initialise dbt project

```
> dbt init
```

it will prompt for few details

- Enter a name for your project (letters, digits, underscore): **dbt\_with\_mysql**

```
(base) rajnish@Rajnishs-MacBook-Air dbt-with-mysql % dbt init
Running with dbt=1.7.18
```

- Enter a name for your project (letters, digits, underscore): **dbt\_with\_mysql**

- enter the number to select the database (database number can be different for your case)

```
13:38:35 Setting up your profile.
Which database would you like to use?
[1] mysql5
[2] mariadb
[3] mysql
```

```
(Don't see the one you want? https://docs.getdbt.com/docs/available-adapters)
```

```
Enter a number: 3
```

ScreenShot

### 7. now change the directory and go to the project folder

```
> cd dbt_with_mysql
```

### 8. run below command to check now if connection is setup properly

```
> dbt debug
```

it should fail as we have not yet connected mysql

```
(dbt_env) (base) rajnish@Rajnishs-MacBook-Air dbt_with_mysql % dbt debug
13:55:00 Running with dbt=1.7.18
13:55:00 dbt version: 1.7.18
13:55:00 python version: 3.12.4
13:55:00 python path: /Users/rajnish/dbt/dbt_mysql/dbt_env/bin/python
13:55:00 os info: macOS-15.0-arm64-arm-64bit
13:55:00 Using profiles dir at /Users/rajnish/.dbt
13:55:00 Using profiles.yml file at /Users/rajnish/.dbt/profiles.yml
13:55:00 Using dbt_project.yml file at /Users/rajnish/dbt/dbt_mysql/dbt_with_mysql/dbt_project.yml
13:55:00 Configuration:
13:55:00   profiles.yml file [ERROR invalid]
13:55:00   dbt_project.yml file [OK found and valid]
13:55:00 Required dependencies:
13:55:00   - git [OK found]

13:55:00 Connection test skipped since no profile was found
13:55:00 1 check failed:
13:55:00 Profile loading failed for the following reason:
Runtime Error
Credentials in profile "dbt_with_mysql", target "dev" invalid: ['schema'] is not valid under any of the given schemas
```

9. now update the profiles.yml file with the details of the database and again run dbt debug it should work fine

profiles.yml

/Users/.dbt/profiles.yml

```
! dbt_project.yml  ! profiles.yml ×
Users > rajnish > .dbt > ! profiles.yml
1  dbt_with_mysql:
2    target: dev
3    outputs:
4      dev:
5        type: mysql
6        server: localhost
7        port: 3306 # optional
8        # database: [schema] # optional, should be same as schema
9        schema: employees
10       username: root
11       password: welcome1
12       driver: MySQL ODBC 8.0 ANSI Driver
13     # prod:
14     #   type: mysql
15     #   server: [server/host]
16     #   port: [port] # optional
17     #   database: [schema] # optional, should be same as schema
18     #   schema: [schema]
19     #   username: [username]
20     #   password: [password]
21     #   driver: MySQL ODBC 8.0 ANSI Driver
```

> dbt debug

```

(dbt_env) (base) rajnish@Rajnishs-MacBook-Air dbt_with_mysql % dbt debug
14:15:38 Running with dbt=1.7.18
14:15:38 dbt version: 1.7.18
14:15:38 python version: 3.12.4
14:15:38 python path: /Users/rajnish/dbt/dbt_mysql/dbt_env/bin/python
14:15:38 os info: macOS-15.0-arm64-arm-64bit
14:15:38 Using profiles dir at /Users/rajnish/.dbt
14:15:38 Using profiles.yml file at /Users/rajnish/.dbt/profiles.yml
14:15:38 Using dbt_project.yml file at /Users/rajnish/dbt/dbt_mysql/dbt_with_mysql/dbt_project.yml
14:15:38 adapter type: mysql
14:15:38 adapter version: 1.7.0
14:15:38 Configuration:
14:15:38   profiles.yml file [OK found and valid]
14:15:38   dbt_project.yml file [OK found and valid]
14:15:38 Required dependencies:
14:15:38   - git [OK found]

14:15:38 Connection:
14:15:38   server: localhost
14:15:38   unix_socket: None
14:15:38   port: 3306
14:15:38   database: None
14:15:38   schema: employees
14:15:38   user: root
14:15:38 Registered adapter: mysql=1.7.0
14:15:38 Connection test: [OK connection ok]

14:15:38 All checks passed!
(dbt_env) (base) rajnish@Rajnishs-MacBook-Air dbt_with_mysql %

```

Screenshot

Screen Reader

## 10. run below command

> dbt run

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
14:15:38 All checks passed!
(dbt_env) (base) rajnish@Rajnishs-MacBook-Air dbt_with_mysql % dbt run
14:27:28 Running with dbt=1.7.18
14:27:28 Registered adapter: mysql=1.7.0
14:27:28 Unable to do partial parsing because saved manifest not found. Starting full parse.
14:27:28 Found 2 models, 4 tests, 0 sources, 0 exposures, 0 metrics, 375 macros, 0 groups, 0 semantic models
14:27:28 Concurrency: 1 threads (target='dev')
14:27:28 1 of 2 START sql table model employees.my_first_dbt_model ..... [RUN]
14:27:28 1 of 2 OK created sql table model employees.my_first_dbt_model ..... [SUCCESS 2 in 0.08s]
14:27:28 2 of 2 START sql view model employees.my_second_dbt_model ..... [RUN]
14:27:28 2 of 2 OK created sql view model employees.my_second_dbt_model ..... [SUCCESS 0 in 0.03s]
14:27:28 Finished running 1 table model, 1 view model in 0 hours 0 minutes and 0.24 seconds (0.24s).
14:27:28 Completed successfully
14:27:28 Done. PASS=2 WARN=0 ERROR=0 SKIP=0 TOTAL=2
(dbt_env) (base) rajnish@Rajnishs-MacBook-Air dbt_with_mysql %

```

Screenshot

## 11. check in mysql workbench

Filter Objects

employees

Tables

departments

dept\_emp

dept\_manager

employees

my\_first\_dbt\_model

salaries

titles

Views

current\_dept\_emp

dept\_emp\_latest\_date

my\_second\_dbt\_model

```
1 use employees;
2
3 select * from my_first_dbt_model;
4
5 select * from my_second_dbt_model;
```

100% 35:5

Result Grid Filter Rows: Search

id
1

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