

ALUNO: LUIS GUILHERME ARAUJO GURGEL DO AMARAL

```
!apt-get -y install mysql-server

Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libbcgi-fast-perl libbcgi-pm-perl libclone-perl libencode-locale-perl
  libfcgi-bin libfcgi-perl libfcgi0ldbl libhtml-parser-perl
  libhtml-tagset-perl libhtml-template-perl libhttp-date-perl
  libhttp-message-perl libio-html-perl liblwp-mediatypes-perl libmecab2
  libprotobuf-lite23 liburi-perl mecab-ipadic mecab-ipadic-utf8 mecab-utils
  mysql-client-8.0 mysql-client-core-8.0 mysql-server-8.0
  mysql-server-core-8.0
Suggested packages:
  libdata-dump-perl libipc-sharedcache-perl libbusiness-isbn-perl libwww-perl
  mailx tinyca
The following NEW packages will be installed:
  libbcgi-fast-perl libbcgi-pm-perl libclone-perl libencode-locale-perl
  libfcgi-bin libfcgi-perl libfcgi0ldbl libhtml-parser-perl
  libhtml-tagset-perl libhtml-template-perl libhttp-date-perl
  libhttp-message-perl libio-html-perl liblwp-mediatypes-perl libmecab2
  libprotobuf-lite23 liburi-perl mecab-ipadic mecab-ipadic-utf8 mecab-utils
  mysql-client-8.0 mysql-client-core-8.0 mysql-server mysql-server-8.0
  mysql-server-core-8.0
0 upgraded, 25 newly installed, 0 to remove and 35 not upgraded.
Need to get 29.8 MB of archives.
After this operation, 243 MB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-core-8.0 amd64 8.0.42-0ubuntu0.22.04.2 [2,715 kB]
Get:2 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-8.0 amd64 8.0.42-0ubuntu0.22.04.2 [22.7 kB]
Get:3 http://archive.ubuntu.com/ubuntu jammy/main amd64 libmecab2 amd64 0.996-14build9 [199 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libprotobuf-lite23 amd64 3.12.4-1ubuntu7.22.04.4 [209 kB]
Get:5 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-server-core-8.0 amd64 8.0.42-0ubuntu0.22.04.2 [17.8 MB]
Get:6 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-server-8.0 amd64 8.0.42-0ubuntu0.22.04.2 [1,446 kB]
Get:7 http://archive.ubuntu.com/ubuntu jammy/main amd64 libhtml-tagset-perl all 3.20-4 [12.5 kB]
Get:8 http://archive.ubuntu.com/ubuntu jammy/main amd64 liburi-perl all 5.10-1 [78.8 kB]
Get:9 http://archive.ubuntu.com/ubuntu jammy/main amd64 libhtml-parser-perl amd64 3.76-1build2 [88.4 kB]
Get:10 http://archive.ubuntu.com/ubuntu jammy/main amd64 libbcgi-pm-perl all 4.54-1 [188 kB]
Get:11 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libfcgi0ldbl amd64 2.4.2-2ubuntu0.1 [28.1 kB]
Get:12 http://archive.ubuntu.com/ubuntu jammy/main amd64 libfcgi-perl amd64 0.82ids-1build1 [22.8 kB]
Get:13 http://archive.ubuntu.com/ubuntu jammy/main amd64 libbcgi-fast-perl all 1:2.15-1 [10.5 kB]
Get:14 http://archive.ubuntu.com/ubuntu jammy/main amd64 libclone-perl amd64 0.45-1build3 [11.0 kB]
Get:15 http://archive.ubuntu.com/ubuntu jammy/main amd64 libencode-locale-perl all 1.05-1.1 [11.8 kB]
Get:16 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libfcgi-bin amd64 2.4.2-2ubuntu0.1 [11.1 kB]
Get:17 http://archive.ubuntu.com/ubuntu jammy/main amd64 libhtml-template-perl all 2.97-1.1 [59.1 kB]
```

```
[7] !pip install mysql-connector-python

Requirement already satisfied: mysql-connector-python in /usr/local/lib/python3.11/dist-packages (9.3.0)

[8] !service mysql start

* Starting MySQL database server mysqld
su: warning: cannot change directory to /nonexistent: No such file or directory
...done.

!mysql -e "ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY 'root'; FLUSH PRIVILEGES;"

!mysql -u root -proot -e "SHOW DATABASES;"

mysql: [Warning] Using a password on the command line interface can be insecure.
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
+-----+
```

```
sql_script = """
CREATE DATABASE IF NOT EXISTS empresa;
USE empresa;

CREATE TABLE IF NOT EXISTS funcionarios (
  id INT AUTO_INCREMENT PRIMARY KEY,
  nome VARCHAR(100),
  salario DECIMAL(10,2)
);

DELIMITER //
CREATE FUNCTION calcular_bonus (sal DECIMAL(10,2))
RETURNS DECIMAL(10,2)
DETERMINISTIC
BEGIN
  RETURN sal * 0.10;
END//
DELIMITER ;

DELIMITER //
CREATE PROCEDURE adicionar_funcionario (
  IN p_nome VARCHAR(100),
  IN p_salario DECIMAL(10,2)
)
BEGIN
  INSERT INTO funcionarios (nome, salario) VALUES (p_nome, p_salario);
END//
DELIMITER ;
"""

with open("setup.sql", "w") as f:
  f.write(sql_script)

[12] !mysql -u root -proot < setup.sql

mysql: [Warning] Using a password on the command line interface can be insecure.
```

```
[12] !mysql -u root -proot < setup.sql
mysql: [Warning] Using a password on the command line interface can be insecure.
```

```
[13] import mysql.connector
```

```
    conn = mysql.connector.connect(
        host="localhost",
        user="root",
        password="root",
        database="empresa"
    )
    cursor = conn.cursor()
```

```
[14] cursor.callproc('adicionar_funcionario', ['Ana Souza', 3500.00])
    conn.commit()
```

```
[15] cursor.execute("""
      SELECT nome, salario, calcular_bonus(salario) AS bonus
      FROM funcionarios
      """)
    for row in cursor.fetchall():
        print(row)

('Ana Souza', Decimal('3500.00'), Decimal('350.00'))
```

```
[16] cursor.close()
    conn.close()
```