Avaliação 07 de Banco de Dados

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```
!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:
  libcgi-fast-perl libcgi-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:
  libcgi-fast-perl libcgi-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]
```

```
[2]  !service mysql start

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

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

CREATE TABLE 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 ;

CALL adicionar_funcionario('Maria Clara', 3000.00);

SELECT nome, salario, calcular_bonus(salario) AS bonus
FROM funcionarios;
"""
with open("setup.sql", "w") as f:
    f.write(sql_script)
```

```
!mysql -u root -proot < setup.sql
```

```
mysql: [Warning] Using a password on the command line interface can be insecure.
nome    salario bonus
Maria Clara     3000.00 300.00
```

```
[6]  pip install mysql-connector-python
```

```
Collecting mysql-connector-python
    Downloading mysql_connector_python-9.4.0-cp311-cp311-manylinux_2_28_x86_64.whl.metadata (7.3 kB)
    Downloading mysql_connector_python-9.4.0-cp311-cp311-manylinux_2_28_x86_64.whl (33.9 MB)
    ──────────────────────────────────────── 33.9/33.9 MB 55.5 MB/s eta 0:00:00
Installing collected packages: mysql-connector-python
Successfully installed mysql-connector-python-9.4.0
```

```python
[13] import mysql.connector

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

```python
[14] def adicionar_funcionario(nome, salario):
         cursor.callproc('adicionar_funcionario', [nome, salario])
         conn.commit()

     adicionar_funcionario('Carlos Silva', 4000.00)
```

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

```
('Maria Clara', Decimal('3000.00'), Decimal('300.00'))
('Carlos Silva', Decimal('4000.00'), Decimal('400.00'))
```

```python
cursor.close()
conn.close()
```