Assessment Name: Database System Final Assignment

Report Title: User Guide

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User Guide

Overview: This project is about implementing the database that I have created and use the database. The database contains the details of olympic participants, winners and game details. Please get your MySQL installed on your Ubuntu as this implementation uses MySQL server and it works on Linux environment. Here's the version of mysql: Server version: 8.0.39-0ubuntu0.22.04.1 (Ubuntu).

If you have not installed mysql server on your computer, please enter "sudo apt install mysql-server" on your Ubuntu Terminal. After installing it, please connect to the server by typing the command "sudo mysql" . Successful connection will lead to the outcome below.

```
administrator@LAPTOP-53KM86FP:~$ sudo mysql -u root -p
[sudo] password for administrator:
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 137
Server version: 8.0.39-0ubuntu0.22.04.1 (Ubuntu)

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

Guides:

I have written the SQL script to create database, tables, advanced features and meaningful queries.

Step1: Let's create a database first. There's a SQL script called "Create_Database.sql". To run the queries, please type "source Create_Database.sql" in your mysql command to create and use the database. After running the command, you will see the outcome below. If you don't see the outcome below, please check if there's a typo in your command or check the directory of your file.

```
mysql> source Create_Database.sql
Query OK, 10 rows affected (0.32 sec)

Query OK, 1 row affected (0.01 sec)

Database changed
```

Step2: Let's create the tables after creating the database. Please run the "Create_Tables.sql" script by type "source Create_Tables.sql" in your SQL command. You should get the outcome below after running the command.

```
mysql> source Create_Database.sql
Query OK, 10 rows affected (0.32 sec)

Query OK, 1 row affected (0.01 sec)

Database changed
mysql> source Create_Tables.sql
Query OK, 0 rows affected, 1 warning (0.01 sec)

Query OK, 0 rows affected, 1 warning (0.01 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.01 sec)

Query OK, 0 rows affected, 1 warning (0.01 sec)

Query OK, 0 rows affected, 1 warning (0.01 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.01 sec)

Query OK, 0 rows affected (0.07 sec)

Query OK, 0 rows affected (0.06 sec)

Query OK, 0 rows affected (0.05 sec)

Query OK, 0 rows affected (0.05 sec)

Query OK, 0 rows affected (0.05 sec)

Query OK, 0 rows affected (0.05 sec)

Query OK, 0 rows affected (0.06 sec)

Query OK, 0 rows affected (0.06 sec)
```

Step3: Let's insert the sample data into the tables. Please type "source RunningInsertScripts.sql" in your server to insert the data into the tables. You should get the outcome below after running the command.

```
mysql> source RunningInsertScripts.sql
Query OK, 300 rows affected (0.04 sec)
Records: 300  Duplicates: 0  Warnings: 0

Query OK, 300 rows affected (0.02 sec)
Records: 300  Duplicates: 0  Warnings: 0

Query OK, 300 rows affected (0.02 sec)
Records: 300  Duplicates: 0  Warnings: 0

Query OK, 399 rows affected (0.06 sec)
Records: 399  Duplicates: 0  Warnings: 0

Query OK, 300 rows affected (0.02 sec)
Records: 300  Duplicates: 0  Warnings: 0

Query OK, 300 rows affected (0.02 sec)
Records: 300  Duplicates: 0  Warnings: 0

Query OK, 399 rows affected (0.03 sec)
Records: 399  Duplicates: 0  Warnings: 0

Query OK, 399 rows affected (0.02 sec)
Records: 399  Duplicates: 0  Warnings: 0
```

Step4: Let's run the meaningful queries. Please type "source DesigningAndImplementingQueries.sql". The outcome of this command is super long. I will show the outcome during the assignment demostration. There're 15 questions and answers in SQL query in the script.

Step 5: Let's create the stored procedures by running the command "source ./Advanced Features/StoredProcedures1Use.sql" , "source ./Advanced Features/StoredProcedures2Use.sql" and "source ./Advanced

Features/StoredProcedures3Use.sql”in your server. Here’s the outcome:

```
mysql> source ./Advanced Features/StoredProcedures1Use.sql
Query OK, 0 rows affected, 1 warning (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

mysql> source ./Advanced Features/StoredProcedures2Use.sql
Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected (0.02 sec)
```

```
mysql> source ./Advanced Features/StoredProcedures3Use.sql;
Query OK, 0 rows affected, 1 warning (0.01 sec)

Query OK, 0 rows affected (0.02 sec)
```

Step 6: Let’s create the trigger and views by running the command “source ./Advanced Features/Trigger.sql” , “source ./Advanced Features/Trigger2.sql”, “source ./Advanced Features/Views1Use.sql” , “source ./Advanced Features/Views2Use.sql” and “source ./Advanced Features/Views3Use.sql”. Here’s the outcome:

```
mysql> source ./Advanced Features/Views1Use.sql;
Query OK, 0 rows affected (0.02 sec)

Query OK, 0 rows affected (0.02 sec)

mysql> source ./Advanced Features/Views2Use.sql;
Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected (0.01 sec)

mysql> source ./Advanced Features/Trigger.sql;
Query OK, 0 rows affected (0.02 sec)

Query OK, 0 rows affected (0.02 sec)
```

```
mysql> source ./Advanced Features/Views3Use.sql;
Query OK, 0 rows affected, 1 warning (0.01 sec)

Query OK, 0 rows affected (0.01 sec)
```

```
mysql> source ./Advanced Features/Trigger2.sql;
Query OK, 0 rows affected, 1 warning (0.02 sec)

Query OK, 0 rows affected (0.03 sec)
```

Step 7:

There's a python code to connect to MySQL server. Please execute the code by typing python3 Connect.py on your Ubuntu terminal. Please install python3 and mysql.connector on your Ubuntu before executing the code. After connecting, you should see the outcome below. Here're the outcome:

```
administrator@LAPTOP-53KM86FP:~/DBS/Assignment$ python3 Connect.py
Please enter the username of your mysql server: root
Please enter your password to connect to your mysql server: A456789a@+
You have connected to the mysql server successfully! Yay!!!
Please press enter key to continue ...
```

Failing to connect will result in the following output.

```
administrator@LAPTOP-53KM86FP:~/DBS/Assignment$ /bin/python3 /home/administrator/DBS/Assignment/Connect.py
Please enter the username of your mysql server: root
Please enter your password to connect to your mysql server: 456789
Traceback (most recent call last):
  File "/home/administrator/.local/lib/python3.10/site-packages/mysql/connector/connection_cext.py", line 334, in _open_connecti
on
    self._cmysql.connect(**cnx_kwargs)
_mysql_connector.MySQLInterfaceError: Access denied for user 'root'@'localhost' (using password: YES)

The above exception was the direct cause of the following exception:

Traceback (most recent call last):
  File "/home/administrator/DBS/Assignment/Connect.py", line 7, in <module>
    mydb = mysql.connector.connect(
  File "/home/administrator/.local/lib/python3.10/site-packages/mysql/connector/pooling.py", line 322, in connect
    return CMySQLConnection(*args, **kwargs)
  File "/home/administrator/.local/lib/python3.10/site-packages/mysql/connector/connection_cext.py", line 151, in __init__
    self.connect(**kwargs)
  File "/home/administrator/.local/lib/python3.10/site-packages/mysql/connector/abstracts.py", line 1399, in connect
    self._open_connection()
  File "/home/administrator/.local/lib/python3.10/site-packages/mysql/connector/connection_cext.py", line 339, in _open_connecti
on
    raise get_mysql_exception(
mysql.connector.errors.ProgrammingError: 1045 (28000): Access denied for user 'root'@'localhost' (using password: YES)
```

Alternatively:
I have created a script called RunningAllSQLScripts.sql to do step 1 to step 6. Please type "source RunningAllSQLScripts.sql" in your server. The outcomes are the same as step1 to step6.