

Final Report

Staff-Graded Assignment: AWS RDS – MySQL

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AWS MySQL Database Dashboard:

The screenshot shows the AWS MySQL Database Dashboard for the 'movie-db' database. The left sidebar shows navigation options like Aurora and RDS, Databases, and Performance Insights. The main summary section displays the DB Identifier (movie-db), Status (Available), Role (Instance), Engine (MySQL Community), and Recommendations. Below the summary, the 'Connectivity & security' tab is selected, showing details about the Endpoint (movie-db.cj000ag242l7.eu-north-1.rds.amazonaws.com), Port (3306), Networking (Availability Zone: eu-north-1b, VPC: vpc-0c625a82622074960), and Security (VPC security groups: default (sg-084f62ce550f039a8) - Active). Other tabs include Monitoring, Logs & events, Configuration, Zero-ETL integrations, and Maintenance &.

- Created AWS account and created free tier database.
- Used **Endpoint** to connect File to database.

First General Test if all are connected and working well

The terminal window shows the command 'ashfaaqta@Ashfaaq's-MacBook-Air SGA AWS % clear' being run. The file 'assignment_assign_db.sql' is open in the Explorer, and its contents are visible in the code editor:

```
assignment_assign_db.sql
assignment_assign_db.sql
115 GROUP BY genre
```

- ◊ Entered all the Queries in SQL file and ran a general Test after connecting to the database through terminal.

Query 1:

```
SELECT *
  FROM Movie
 WHERE year > 2000;
```

```
ashfaaqkt@Ashfaaqts-MacBook-Air SGA % mysql -h movie-db.cj000ag242l7.eu-north-1.rds.amazonaws.com -P 3306 -u admin -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 29
Server version: 8.0.42 Source distribution
```

```
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```

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owners.
```

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

```
mysql> SELECT *
    ->   FROM Movie
    -> WHERE year > 2000;
ERROR 1046 (3D000): No database selected
```

```
mysql> USE moviedb;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
```

```
Database changed
```

```
mysql> SELECT *
    ->   FROM Movie
    -> WHERE year > 2000;
+----+-----+-----+-----+-----+
| id | name | description | year | rating | genre |
+----+-----+-----+-----+-----+
| 1  | Inception | A mind-bending sci-fi thriller | 2010 | 8.8 | Science Fiction |
| 2  | The Dark Knight | Batman faces the Joker | 2008 | 9 | Action |
| 3  | Interstellar | Space exploration drama | 2014 | 8.6 | Science Fiction |
+----+-----+-----+-----+-----+
3 rows in set (0.281 sec)
```

```
mysql> ■
```

```
Ln 59, Col 1 (38 selected) Spaces: 4 UTF-8 LF {} SQL ⚙ Go Live ⌂
```

Used the database

The query 1 output.

Query 2:

```
SELECT name  
FROM Person  
WHERE role = 'Director';
```

```
mysql> SELECT name  
-> FROM Person  
-> WHERE role = 'Director';  
+-----+  
| name |  
+-----+  
| Christopher Nolan |  
| James Cameron |  
+-----+  
2 rows in set (0.686 sec)
```

```
mysql> ■
```

Ln 66, Col 25 (48 selected) Spaces: 4 UTF-8 LF () SQL ⚙ Go Live ☰

Query 3:

```
SELECT *  
FROM Movie  
WHERE rating > 8.0;
```

```
mysql> SELECT *  
-> FROM Movie  
-> WHERE rating > 8.0;  
+----+-----+-----+-----+-----+  
| id | name | description | year | rating | genre |  
+----+-----+-----+-----+-----+  
| 1 | Inception | A mind-bending sci-fi thriller | 2010 | 8.8 | Science Fiction |  
| 2 | The Dark Knight | Batman faces the Joker | 2008 | 9 | Action |  
| 3 | Interstellar | Space exploration drama | 2014 | 8.6 | Science Fiction |  
| 5 | The Shawshank Redemption | A tale of hope in a prison | 1994 | 9.3 | Drama |  
+----+-----+-----+-----+-----+  
4 rows in set (0.291 sec)
```

```
mysql> ■
```

Ln 69, Col 1 (39 selected) Spaces: 4 UTF-8 LF () SQL ⚙ Go Live ☰

Query 4:

```
SELECT COUNT(*) AS total_movies  
FROM Movie;
```

```
mysql> SELECT *  
-> FROM Movie  
-> WHERE rating > 8.0;  
+----+-----+-----+-----+-----+  
| id | name | description | year | rating | genre |  
+----+-----+-----+-----+-----+  
| 1 | Inception | A mind-bending sci-fi thriller | 2010 | 8.8 | Science Fiction |  
| 2 | The Dark Knight | Batman faces the Joker | 2008 | 9 | Action |  
| 3 | Interstellar | Space exploration drama | 2014 | 8.6 | Science Fiction |  
| 5 | The Shawshank Redemption | A tale of hope in a prison | 1994 | 9.3 | Drama |  
+----+-----+-----+-----+-----+  
4 rows in set (0.291 sec)
```

```
mysql> ■
```

Ln 69, Col 1 (39 selected) Spaces: 4 UTF-8 LF () SQL ⚙ Go Live ☰

Query 5:

```
SELECT m.name AS movie_name,
       p.name AS director_name
  FROM Movie m
 JOIN MoviePerson mp ON m.id = mp.movie_id
 JOIN Person p ON mp.person_id = p.id
 WHERE p.role = 'Director';
```

```
mysql> SELECT m.name AS movie_name,
    ->          p.name AS director_name
    ->     FROM Movie m
    ->   JOIN MoviePerson mp ON m.id = mp.movie_id
    ->   JOIN Person p ON mp.person_id = p.id
    ->  WHERE p.role = 'Director';
+-----+-----+
| movie_name | director_name |
+-----+-----+
| Inception  | Christopher Nolan |
| The Dark Knight | Christopher Nolan |
| Interstellar | Christopher Nolan |
| Titanic    | James Cameron   |
+-----+-----+
4 rows in set (0.336 sec)

mysql> ■
```

Ln 83, Col 27 (178 selected) Spaces: 4 UTF-8 LF () SQL ⚙ Go Live

Query 6:

```
SELECT p.name AS actor_name,
       COUNT(mp.movie_id) AS movie_count
  FROM Person p
 JOIN MoviePerson mp ON p.id = mp.person_id
 WHERE p.role IN ('Actor', 'Actress')
 GROUP BY p.id, p.name
 ORDER BY movie_count DESC;
```

```
mysql> SELECT p.name AS actor_name,
    ->          COUNT(mp.movie_id) AS movie_count
    ->     FROM Person p
    ->   JOIN MoviePerson mp ON p.id = mp.person_id
    ->  WHERE p.role IN ('Actor', 'Actress')
    -> GROUP BY p.id, p.name
    -> ORDER BY movie_count DESC;
+-----+-----+
| actor_name | movie_count |
+-----+-----+
| Anne Hathaway | 2 |
| Leonardo DiCaprio | 1 |
| Christian Bale | 1 |
| Morgan Freeman | 1 |
| Kate Winslet | 1 |
| Tim Robbins | 1 |
| Matthew McConaughey | 1 |
+-----+-----+
7 rows in set (0.250 sec)

mysql> ■
```

Ln 92, Col 27 (212 selected) Spaces: 4 UTF-8 LF () SQL ⚙ Go Live

Query 7:

```
SELECT name, rating
  FROM Movie
 ORDER BY rating DESC
 LIMIT 2;
```

```
mysql> SELECT name, rating
    ->   FROM Movie
    ->  ORDER BY rating DESC
    -> LIMIT 2;
+-----+-----+
| name | rating |
+-----+-----+
| The Shawshank Redemption | 9.3 |
| The Dark Knight | 9 |
+-----+-----+
2 rows in set (0.257 sec)

mysql> ■
```

Ln 98, Col 9 (60 selected) Spaces: 4 UTF-8 LF () SQL ⚙ Go Live

Query 8:

```
SELECT p.name AS actor_name,
       p.birth_year,
       m.name AS movie_name
  FROM Person p
 JOIN MoviePerson mp ON p.id = mp.person_id
 JOIN Movie m ON mp.movie_id = m.id
 WHERE p.role IN ('Actor', 'Actress')
   AND p.birth_year < 1975
ORDER BY p.name, m.name;
```

```
mysql> SELECT p.name AS actor_name,
->           p.birth_year,
->           m.name AS movie_name
->      FROM Person p
->     JOIN MoviePerson mp ON p.id = mp.person_id
->     JOIN Movie m ON mp.movie_id = m.id
->    WHERE p.role IN ('Actor', 'Actress')
->      AND p.birth_year < 1975
->    ORDER BY p.name, m.name;
+-----+-----+-----+
| actor_name | birth_year | movie_name |
+-----+-----+-----+
| Christian Bale | 1974 | The Dark Knight |
| Leonardo DiCaprio | 1974 | Inception |
| Matthew McConaughey | 1969 | Interstellar |
| Morgan Freeman | 1937 | The Shawshank Redemption |
| Tim Robbins | 1958 | The Shawshank Redemption |
+-----+-----+-----+
5 rows in set (0.319 sec)

mysql> ■
```

Ln 110, Col 1 (258 selected) Spaces: 4 UTF-8 LF {} SQL ⚙ Go Live □

Query 9:

```
SELECT genre,
       AVG(rating) AS avg_rating
  FROM Movie
 GROUP BY genre
ORDER BY avg_rating DESC;
```

```
mysql> SELECT genre,
->           AVG(rating) AS avg_rating
->      FROM Movie
->     GROUP BY genre
->    ORDER BY avg_rating DESC;
+-----+-----+
| genre | avg_rating |
+-----+-----+
| Drama | 9.300000190734863 |
| Action | 9 |
| Science Fiction | 8.700000286102295 |
| Romance | 7.900000095367432 |
+-----+-----+
4 rows in set (0.218 sec)

mysql> ■
```

Ln 116, Col 26 (98 selected) Spaces: 4 UTF-8 LF {} SQL ⚙ Go Live □

Query 10:

```
SELECT DISTINCT p2.name AS actor_name
FROM Person p1
JOIN MoviePerson mp1 ON p1.id = mp1.person_id
JOIN Movie m ON mp1.movie_id = m.id
JOIN MoviePerson mp2 ON m.id = mp2.movie_id
JOIN Person p2 ON mp2.person_id = p2.id
WHERE p1.role = 'Director'
AND p1.name = 'Christopher Nolan'
AND p2.role IN ('Actor', 'Actress');
```

```
mysql> SELECT DISTINCT p2.name AS actor_name
--> FROM Person p1
--> JOIN MoviePerson mp1 ON p1.id = mp1.person_id
--> JOIN Movie m ON mp1.movie_id = m.id
--> JOIN MoviePerson mp2 ON m.id = mp2.movie_id
--> JOIN Person p2 ON mp2.person_id = p2.id
--> WHERE p1.role = 'Director'
--> AND p1.name = 'Christopher Nolan'
--> AND p2.role IN ('Actor', 'Actress');
+-----+
| actor_name |
+-----+
| Leonardo DiCaprio |
| Anne Hathaway |
| Christian Bale |
| Matthew McConaughey |
+-----+
4 rows in set (0.291 sec)

mysql> 
```

Ln 127, Col 39 (320 selected) Spaces: 4 UTF-8 LF {} SQL ⚙ Go Live

THE END