



Visualise a Relational Database

A

Ahmed Saaka

The screenshot shows the MySQL Workbench interface with the 'Local instance MySQL80' connection selected. The 'Schemas' tree on the left shows the 'quickstartdatabase' schema with the 'newhire' table selected. The 'Table: newhire' section on the right displays the table structure and data. The 'Columns' table shows:

Column	Type	Properties
empno	int PK	
ename	varchar(10)	
job	varchar(10)	
manager	int	
hiredate	date	
salary	decimal(7,2)	
comm	decimal(7,2)	
department	int	

The 'Data' tab shows the following data for the 'newhire' table:

empno	ename	job	manager	hiredate	salary	comm	department
1	JOHNSON	ADMIT	6	1990-12-31 00:00:00	18000.00		4
2	HARDING	CLERK	9	1990-01-01 00:00:00	3000.00		2
3	TAPT	SALES I	2	1996-01-02 00:00:00	28000.00	500.00	3
4	HOOVER	SALES I	2	1996-04-03 00:00:00	27000.00		3
5	LINCOLN	TECH	6	1994-04-23 00:00:00	25000.00	1400.00	4
6	GARDNER	MANAGER	9	1993-09-22 00:00:00	31000.00		4
7	POLO	TECH	6	1997-09-22 00:00:00	29000.00		4
8	GRANT	ENGINEER	10	1995-01-01 00:00:00	28000.00		2
9	JACKSON	CLERK	9	1994-01-21 00:00:00	7500.00		2
10	FILLMORE	MANAGER	9	1994-08-09 00:00:00	56000.00		2
11	ADAMS	ENGINEER	10	1996-03-15 00:00:00	34000.00		2

The 'Output' tab shows the history of actions performed on the table:

#	Time	Action	Message	Duration / fetch
1	02:03:00	CREATE TABLE newhire(empno INT PRIMARY KEY, ename VARCHAR(10), job VARCHAR(10), manager INT, hiredate DATE, salary DECIMAL(7,2), comm DECIMAL(7,2), department INT)	0 rows(a) affected	0.172 sec
2	02:03:00	CREATE TABLE newhire(empno INT PRIMARY KEY, ename VARCHAR(10), job VARCHAR(10), manager INT, hiredate DATE, salary DECIMAL(7,2), comm DECIMAL(7,2), department INT)	0 rows(a) affected	0.172 sec / 0.000 sec
3	02:03:00	SELECT * FROM newhire LIMIT 0, 1000		0.000 sec / 0.000 sec
4	02:04:22	INSERT INTO newhire (empno, ename, job, manager, hiredate, salary, comm, department) VALUES (1, JOHN, CLERK, 9, 1990-12-31 00:00:00, 18000.00, 0, 4)	1 row(s) affected. Records: 14. Duplicates: 0. Warnings: 0	0.047 sec
5	02:04:22	newhire	Error Code: 1064. You have an error in your SQL syntax. check the manual that corresponds to your MySQL server version for the right syntax to use near 'newhire' at line 1	0.000 sec
6	02:04:31	INSERT INTO newhire (empno, ename, job, manager, hiredate, salary, comm, department) VALUES (1, JOHN, CLERK, 9, 1990-12-31 00:00:00, 18000.00, 0, 4)	Error Code: 1062. Duplicate entry '1' for key 'newhire.PRIMARY'	0.000 sec
7	02:04:45	SELECT * FROM newhire LIMIT 0, 1000	14 row(s) returned	0.000 sec / 0.000 sec

Introducing Today's Project!

What is Amazon RDS?

Amazon RDS is a relational database service for creating relational databases.

How I used Amazon RDS in this project

I created a relational database with RDS and connected it with Quicksight for visualisation

One thing I didn't expect in this project was...

How the interface of Amazon Quicksight is.

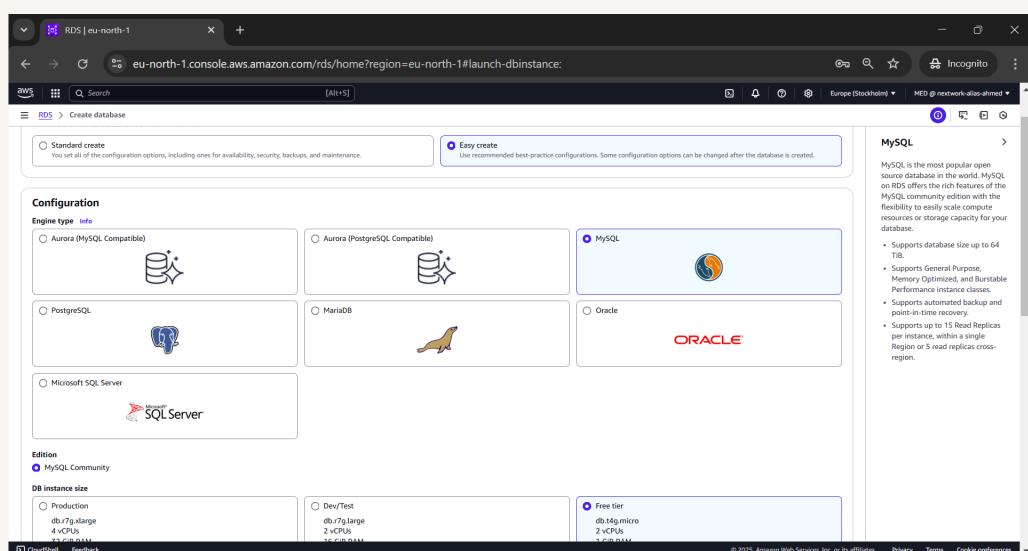
This project took me...

About 1 hour and 20 minutes

In the first part of my project...

Creating a Relational Database

I created my relational database by using RDS .This is a relational database service in AWS.



Understanding Relational Databases

A relational database is a type of database designed in tabular form with rows and columns.

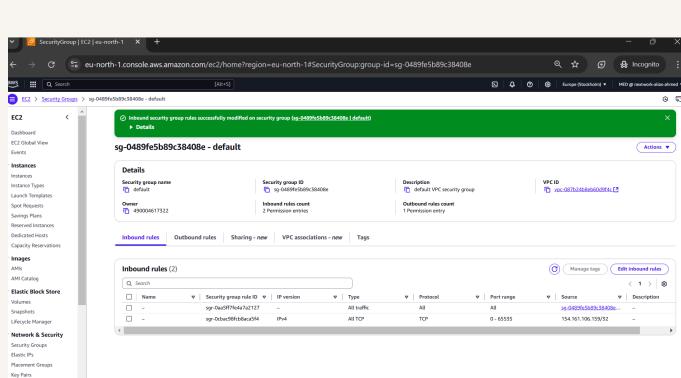
MySQL vs SQL

The difference between MySQL and SQL is, MySQL is a relational database management service(RDBMS) and SQL is a database query language for structured databases.

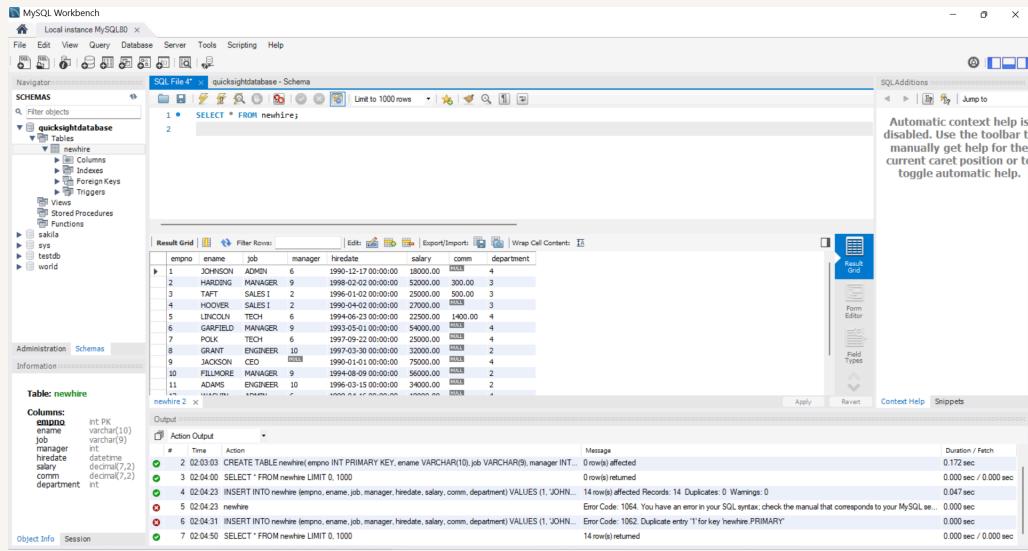
Populating my RDS instance

The first thing I did was make my RDS instance public because i will need to make it accessible to MYSQL workbench

I had to update the default security group for my RDS schema because i had to allow some traffic into and out of the database instance.



Using MySQL Workbench



To populate my database I the insert into command followed by the table's name, column and the required values.

Connecting QuickSight and RDS

To connect my RDS instance to QuickSight I first connected my RDS to MySQL I created a Quicksight Account and connected the database using the database instance ID , the database name, the username and the password.

This solution is risky because anyone can have access to the database i have created.

A better strategy

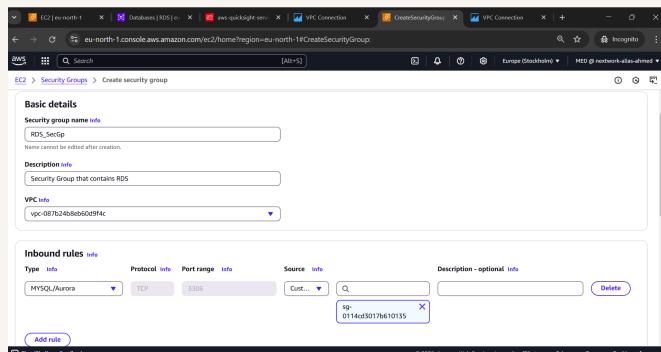
First, I made a new security group so that i can attach it to my Quicksight to secure it.

Next, I connected my new security group to QuickSight by creating a security group . I went back to the quicksight page,selected profile,manage Quicksight,manage VPC connection and then i filled the required details and connected the security group

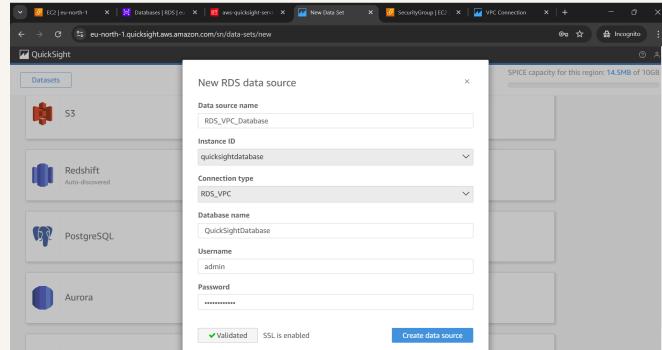
Now to secure my RDS instance

To make my RDS instance secure I created a security group and attached it to the RDS instance.

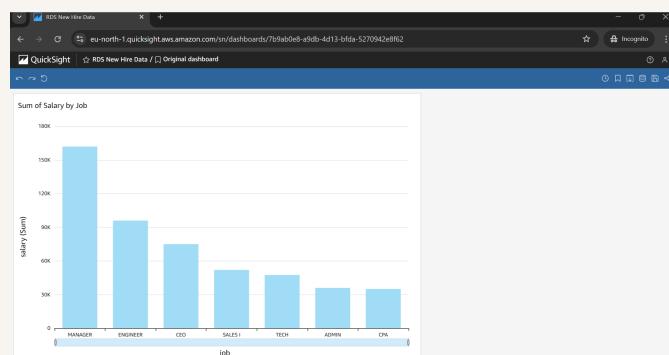
I made sure that my RDS instance could be accessed from QuickSight by making the security group of the Quicksight the source to my RDS instance security group.



Adding RDS as a data source for QuickSight



This data source is different from my initial data source because my RDS is now populated





nextwork.org

The place to learn & showcase your skills

Check out nextwork.org for more projects

