PostgreSQL Music Store Database Project

Data Analysis and Insights

By Akshat Bijronia

Introduction

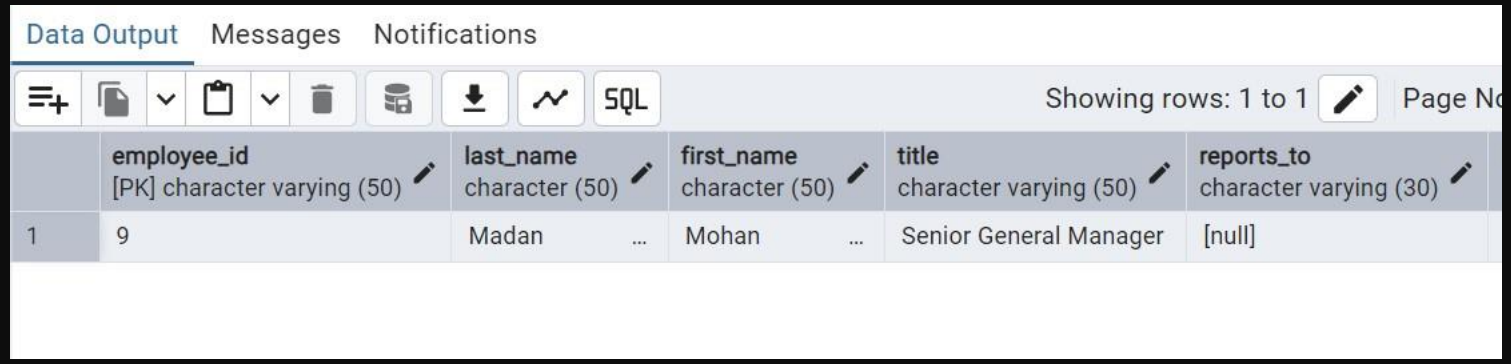
- **Overview:**
- The project involves analyzing a music store database using PostgreSQL.
- Objective: To derive insights about employees, invoices, customers, and sales data.
- Key Questions Answered:
    1. Senior-most employee.
    2. Countries with the most invoices.
    3. Top 3 invoice values.
    4. City with the best customers.
    5. Best customer overall.

Database Structure

- **Key Tables:**
  - **Employee:** Employee details such as title, first name, last name, and job levels.
  - **Invoice:** Invoice details including billing country, city, and total.
  - **Customer:** Customer details such as first name, last name, and customer ID.
- **Relationships:**
  - Customer is linked to Invoice through customer_id.

Query:

```
SELECT title, last_name, first_name
FROM employee
ORDER BY levels DESC
LIMIT 1;
```



	employee_id [PK] character varying (50)	last_name character (50)	first_name character (50)	title character varying (50)	reports_to character varying (30)
1	9	Madan ...	Mohan ...	Senior General Manager	[null]

Question 1: Who is the senior-most employee based on job title?

Query:

```
SELECT COUNT(*) AS c, billing_country
FROM invoice
GROUP BY billing_country
ORDER BY c DESC;
```

Data Output | Messages | Notifications

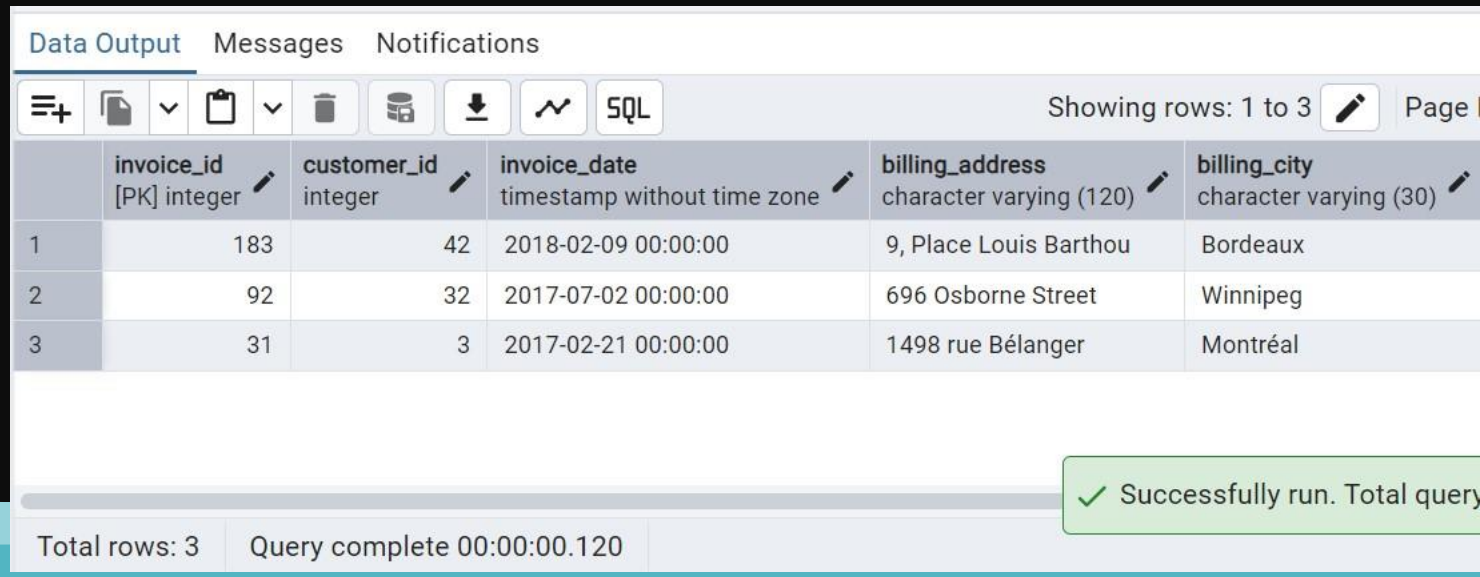
	c bigint	billing_country character varying (30)
1	131	USA
2	76	Canada
3	61	Brazil
4	50	France
5	41	Germany
6	30	Czech Republic

Total rows: 24 | Query complete 00:00:00.176

Question 2: Which countries have the most Invoices?

Query:

```
SELECT total
FROM invoice
ORDER BY total DESC;
```



Question 3: What are top 3 values of total invoice?

Query:

```
SELECT billing_city, SUM(total) AS InvoiceTotal
FROM invoice
GROUP BY billing_city
ORDER BY InvoiceTotal DESC
LIMIT 1;
```

Data Output | Messages | Notifications

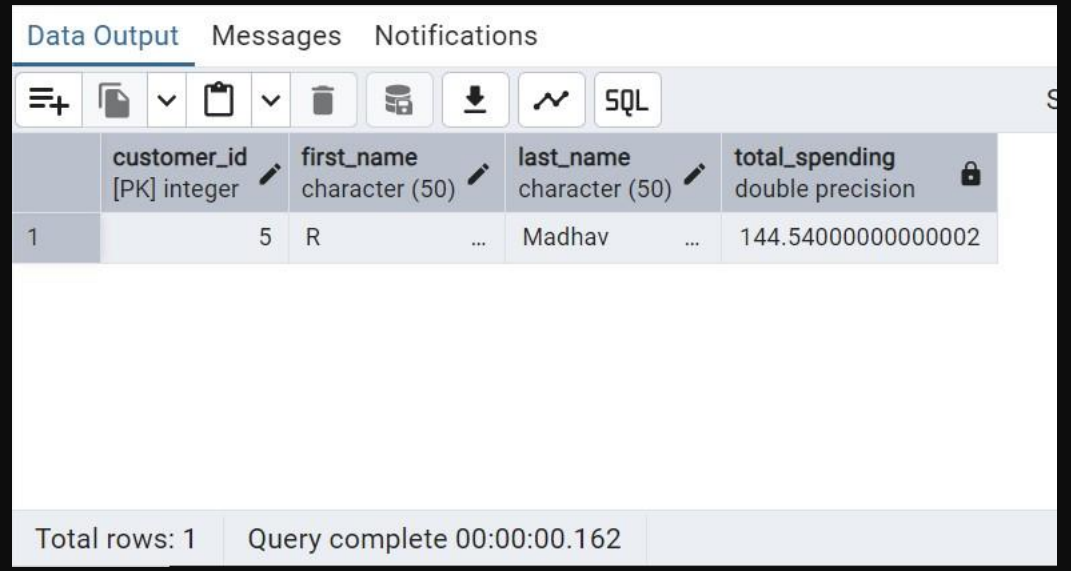
	invoice_total double precision	billing_city character varying (30)
1	273.24000000000007	Prague
2	169.29	Mountain View
3	166.32	London
4	158.4	Berlin
5	151.47	Paris
6	129.69	São Paulo

Total rows: 53 | Query complete 00:00:00.116

Question 4: Which city has the best customers? We would like to throw a promotional Music Festival in the city we made the most money. Write a query that returns one city that has the highest sum of invoice totals.
Return both the city name & sum of all invoice totals

Query:

```
SELECT customer.customer_id, first_name, last_name, SUM(tota
FROM customer
JOIN invoice ON customer.customer_id = invoice.customer_id
GROUP BY customer.customer_id
ORDER BY total_spending DESC
LIMIT 1;
```



Question 5: Who is the best customer? The customer who has spent the most money will be declared the best customer. Write a query that returns the person who has spent the most money.

Conclusion

- **Insights:**
  - Identified key employees, customers, and revenue-generating locations.
  - Highlighted patterns in invoices and sales data.
- **Applications:**
  - Enhance customer relationships.
  - Focus marketing efforts on high-revenue areas.
  - Reward top-performing customers and employees.