Day 4 Assignment

SQL

POSTGRESQL

1.List all customers and the products they ordered with the order date

Query

SELECT * FROM customers;

SELECT * FROM orders;

SELECT * FROM order_details;

SELECT * FROM products;

SELECT c.company_name AS customer,

o.order_id,

p.product_name,

od.quantity,

o.order_date

FROM orders o

INNER JOIN order_details od ON o.order_id = od.order_id

INNER JOIN customers c ON o.customer_id = c.customer_id

INNER JOIN products p ON od.product_id = p.product_id;

Output:

Data Output   Messages   Notifications

	customer character varying (40)	order_id smallint	product_name character varying (40)	quantity smallint	order_date date
1	Vins et alcools Chevalier	10248	Queso Cabrales	12	1996-07-04
2	Vins et alcools Chevalier	10248	Singaporean Hokkien Fried Mee	10	1996-07-04
3	Vins et alcools Chevalier	10248	Mozzarella di Giovanni	5	1996-07-04
4	Toms Spezialitäten	10249	Tofu	9	1996-07-05
5	Toms Spezialitäten	10249	Manjimup Dried Apples	40	1996-07-05
6	Hanari Carnes	10250	Jack's New England Clam Chow...	10	1996-07-08
7	Hanari Carnes	10250	Manjimup Dried Apples	35	1996-07-08
8	Hanari Carnes	10250	Louisiana Fiery Hot Pepper Sauce	15	1996-07-08
9	Victuailles en stock	10251	Gustaf's Knäckebröd	6	1996-07-08

Total rows: 2155   Query complete 00:00:00.171

2. Show each order with customer, employee, shipper, and product info — even if some parts are missing

Query:

SELECT o.order_id,

c.company_name AS customer,

e.first_name ||''|| e.last_name As employee_name,

s.company_name As shipper,

p.product_name,

od.unit_price

FROM orders o

LEFT JOIN customers c ON o.customer_id = c.customer_id

LEFT JOIN employees e ON o.employee_id = e.employee_id

LEFT JOIN shippers s ON o.ship_via = s.shipper_id

LEFT JOIN order_details od ON o.order_id = od.order_id

LEFT JOIN products p ON od.product_id = p.product_id;

OUTPUT:

	order_id smallint	customer character varying (40)	employee_name text	shipper character varying (40)	product_name character varying (40)	unit_price real
1	10248	Vins et alcools Chevalier	StevenBuchanan	Federal Shipping	Queso Cabrales	14
2	10248	Vins et alcools Chevalier	StevenBuchanan	Federal Shipping	Singaporean Hokkien Fried Mee	9.8
3	10248	Vins et alcools Chevalier	StevenBuchanan	Federal Shipping	Mozzarella di Giovanni	34.8
4	10249	Toms Spezialitäten	MichaelSuyama	Speedy Express	Tofu	18.6
5	10249	Toms Spezialitäten	MichaelSuyama	Speedy Express	Manjimup Dried Apples	42.4
6	10250	Hanari Carnes	MargaretPeacock	United Package	Jack's New England Clam Chow…	7.7
7	10250	Hanari Carnes	MargaretPeacock	United Package	Manjimup Dried Apples	42.4
8	10250	Hanari Carnes	MargaretPeacock	United Package	Louisiana Fiery Hot Pepper Sauce	16.8
9	10251	Victuailles en stock	JanetLeverling	Speedy Express	Gustaf's Knäckebröd	16.8

Total rows: 2155   Query complete 00:00:00.270

3. Show all order details and products (include all products even if they were never ordered)

Query:

SELECT od.order_id,

od.product_id,

od.quantity,

p.product_name

FROM order_details od

RIGHT JOIN products p ON od.product_id = p.product_id;

OUTPUT:

Data Output | Messages | Notifications

	order_id smallint	product_id smallint	quantity smallint	product_name character varying (40)
1	10248	11	12	Queso Cabrales
2	10248	42	10	Singaporean Hokkien Fried Mee
3	10248	72	5	Mozzarella di Giovanni
4	10249	14	9	Tofu
5	10249	51	40	Manjimup Dried Apples
6	10250	41	10	Jack's New England Clam Chow...
7	10250	51	35	Manjimup Dried Apples
8	10250	65	15	Louisiana Fiery Hot Pepper Sauce
9	10251	22	6	Gustaf's Knäckebröd

Total rows: 2155   Query complete 00:00:00.113

4. List all product categories and their products — including categories that have no products, and products that are not assigned to any category

Query:

SELECT c.category_name,

c.description,

p.product_name

FROM categories c

FULL OUTER JOIN products p ON c.category_id = p.category_id;

OUTPUT:

category_name character varying (15) 🔒	description text	product_name character varying (40) 🔒
1	Beverages	Soft drinks, coffees, teas, beers, and ales	Chai
2	Beverages	Soft drinks, coffees, teas, beers, and ales	Chang
3	Condiments	Sweet and savory sauces, relishes, spreads, and seasonings	Aniseed Syrup
4	Condiments	Sweet and savory sauces, relishes, spreads, and seasonings	Chef Anton's Cajun Seasoning
5	Condiments	Sweet and savory sauces, relishes, spreads, and seasonings	Chef Anton's Gumbo Mix
6	Condiments	Sweet and savory sauces, relishes, spreads, and seasonings	Grandma's Boysenberry Spread
7	Produce	Dried fruit and bean curd	Uncle Bob's Organic Dried Pears
8	Condiments	Sweet and savory sauces, relishes, spreads, and seasonings	Northwoods Cranberry Sauce
9	Meat/Poultry	Prepared meats	Mishi Kobe Niku

Total rows: 77   Query complete 00:00:00.190

5. Show all possible product and category combinations (Cross join).

 Query:

SELECT p.product_name,

c.category_name

FROM products p

CROSS JOIN categories c;

OUTPUT:

	product_id smallint	product_name character varying (40)	category_id smallint	category_name character varying (15)
1	1	Chai	1	Beverages
2	1	Chai	2	Condiments
3	1	Chai	3	Confections
4	1	Chai	4	Dairy Products
5	1	Chai	5	Grains/Cereals
6	1	Chai	6	Meat/Poultry
7	1	Chai	7	Produce
8	1	Chai	8	Seafood
9	2	Chang	1	Beverages

Total rows: 616   Query complete 00:00:00.249

6. Show all employees and their manager(Self join(left join))

Query:

SELECT e.first_name || '' || e.last_name AS employee_name,

 e1.first_name || '' || e1.last_name AS manager_name

FROM employees e

LEFT JOIN employees e1 ON e.reports_to = e1.employee_id;

OUTPUT:

Data Output   Messages   Notifications

	employee_name text	manager_name text
1	Nancy Davolio	Andrew Fuller
2	Andrew Fuller	[null]
3	Janet Leverling	Andrew Fuller
4	Margaret Peacock	Andrew Fuller
5	Steven Buchanan	Andrew Fuller
6	Michael Suyama	Steven Buchanan
7	Robert King	Steven Buchanan
8	Laura Callahan	Andrew Fuller
9	Anne Dodsworth	Steven Buchanan

Total rows: 9   Query complete 00:00:00.196

7. List all customers who have not selected a shipping method.

QUERY:

SELECT c.customer_id,

c.company_name AS customer,

c.city,

o.order_id

FROM customers c

LEFT JOIN orders o ON c.customer_id = o.customer_id

WHERE o.ship_via IS NULL;

OUTPUT:

	customer_id character varying (5) 🔒	customer character varying (40) 🔒	city character varying (15) 🔒	order_id smallint 🔒
1	PARIS	Paris spécialités	Paris	[null]
2	FISSA	FISSA Fabrica Inter. Salchichas S.A.	Madrid	[null]

Total rows: 2   Query complete 00:00:00.116