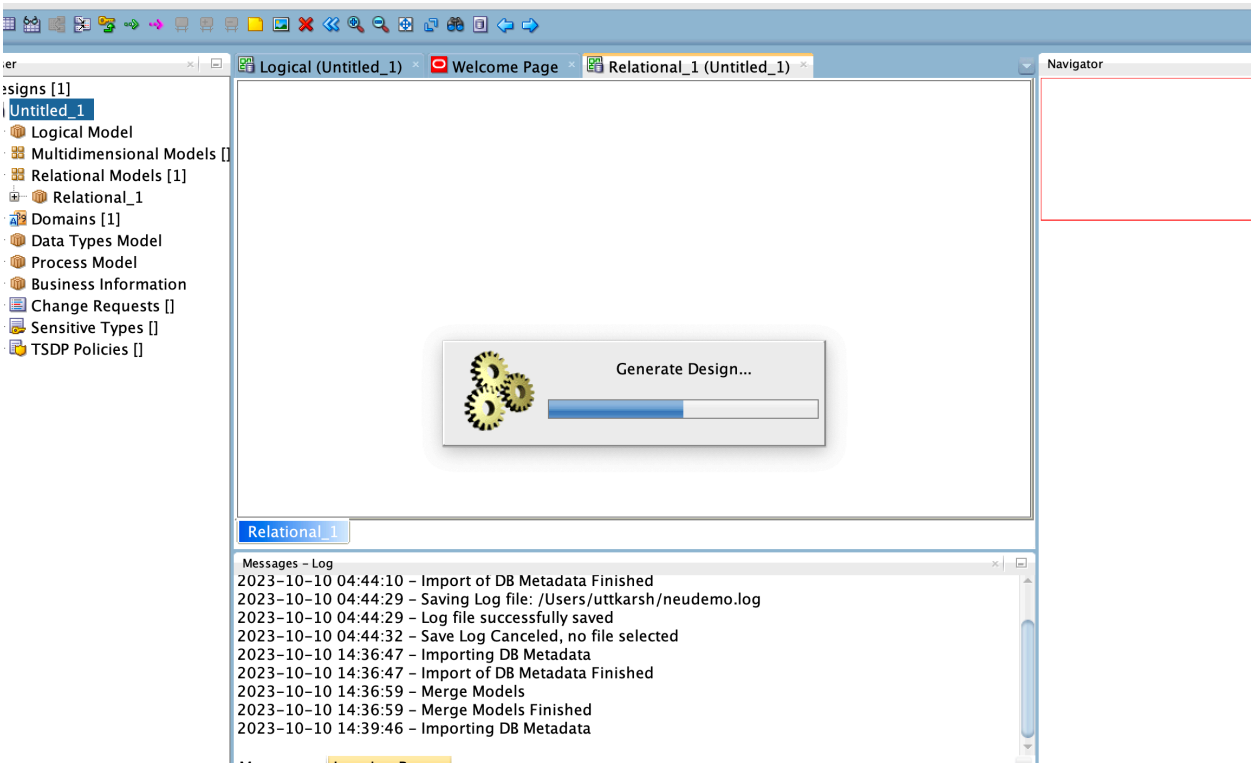
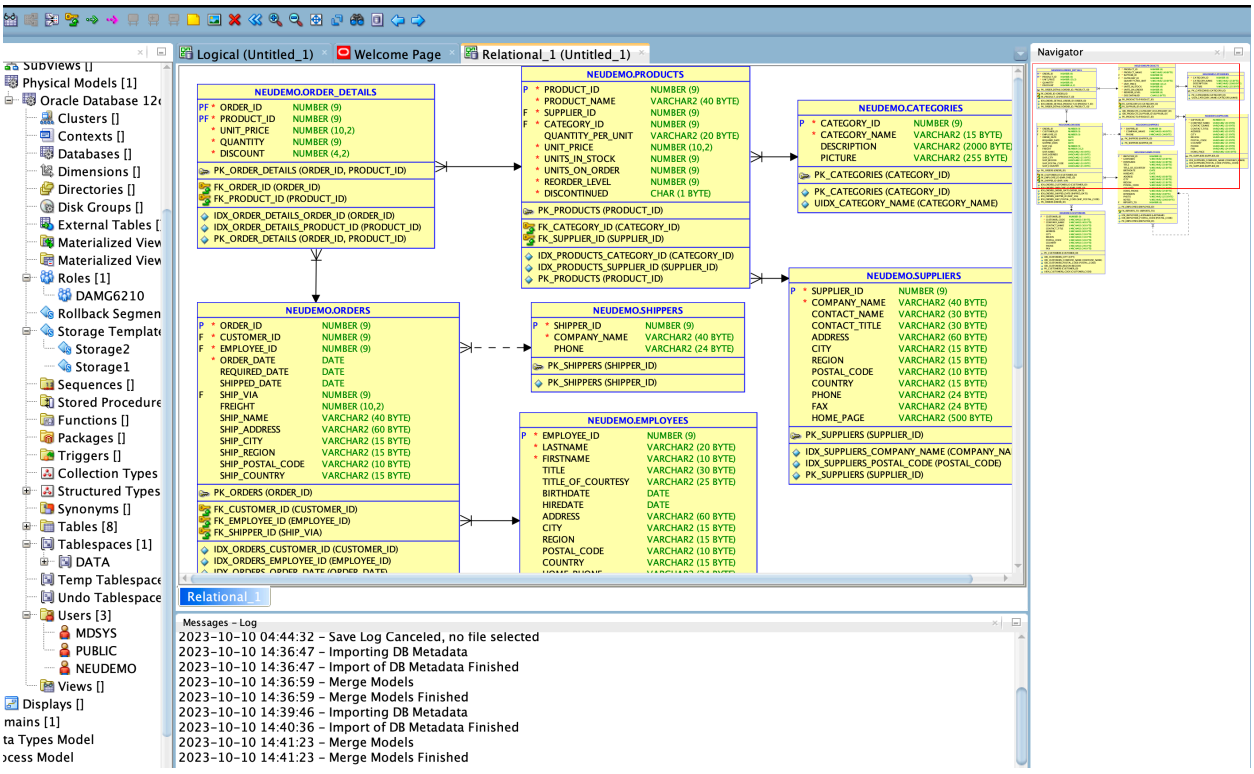
#A. 2 MARKS

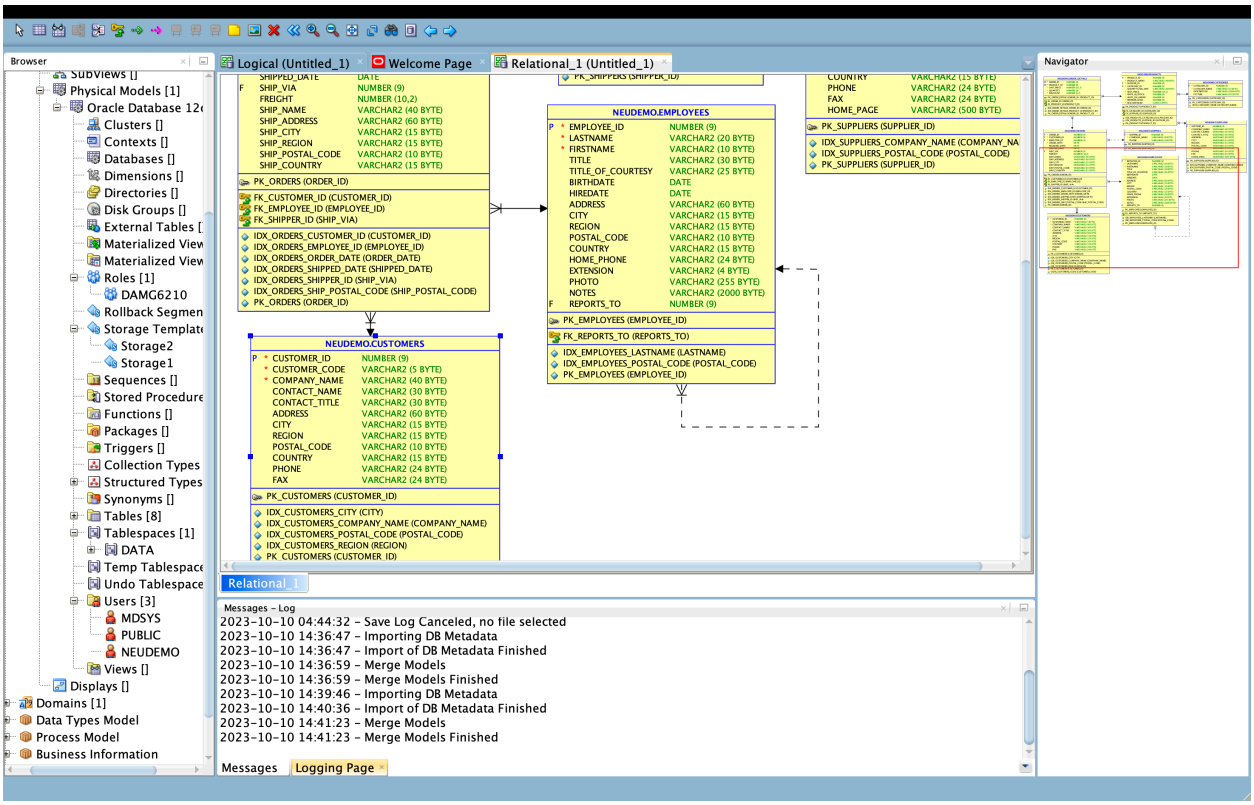
Instructions. Connect to my database using already provided wallet.

```
User name: neudemo

password: MoreSqlByPractice123#

Wallet file: click here to download

Download click here to download

Note: If the download link doesnt work then go to MISC folder and download th
e wallet file named Wallet_fall2023thu.zip
```

To view the list of tables, use this SQL. Using oracle SQL DATA MODELER, create data model for the tables and relationships under this account. Explain the data model and attach the data model to your submission.




Logical (Untitled_1)
Welcome Page
Relational_1 (Untitled_1)
Navigator
NEUDEMO.ORDER_DETAILS
NEUDEMO.PRODUCTS
NEUDEMO.CATEGORIES
NEUDEMO.ORDERS
NEUDEMO.SHIPPERS
NEUDEMO.SUPPLIERS
NEUDEMO.EMPLOYEES
Relational_1
Messages – Log
2023-10-10 04:44:32 – Save Log Canceled, no file selected
2023-10-10 14:36:47 – Importing DB Metadata
2023-10-10 14:36:47 – Import of DB Metadata Finished
2023-10-10 14:36:59 – Merge Models
2023-10-10 14:36:59 – Merge Models Finished
2023-10-10 14:39:46 – Importing DB Metadata
2023-10-10 14:40:36 – Import of DB Metadata Finished
2023-10-10 14:41:23 – Merge Models
2023-10-10 14:41:23 – Merge Models Finished


Browser
Logical (Untitled_1)
Welcome Page
Relational_1 (Untitled_1)
Navigator
NEUDEMO.EMPLOYEES
NEUDEMO.CUSTOMERS
Relational_1
Messages – Log
2023-10-10 04:44:32 – Save Log Canceled, no file selected
2023-10-10 14:36:47 – Importing DB Metadata
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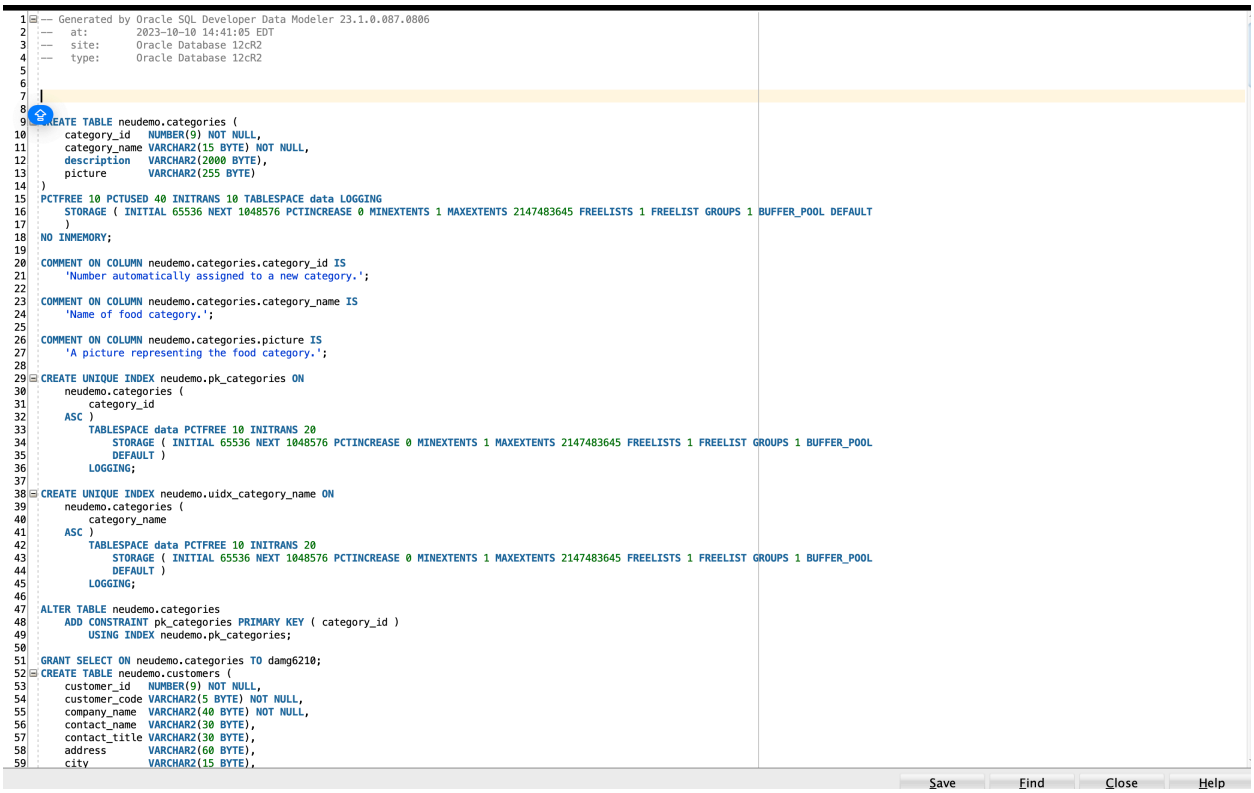
2023-10-10 14:39:46 – Importing DB Metadata
2023-10-10 14:40:36 – Import of DB Metadata Finished
2023-10-10 14:41:23 – Merge Models
2023-10-10 14:41:23 – Merge Models Finished
Messages
Logging Page

Explanation for data model:

The data model consists of several related tables, each representing a specific entity in the database. Here's an overview of the main tables and their relationships:

- Categories: This table stores information about product categories. It includes columns for category_id, category_name, description, and picture. The category_id serves as the primary key.
- Customers: This table contains data related to customers. It includes columns like customer_id, customer_code, company_name, and various contact information. The customer_id is the primary key.
- Employees: This table represents information about employees. It includes details like employee_id, lastname, firstname, contact information, and supervisor information. The employee_id is the primary key, and there is a self-referencing foreign key (reports_to) to establish supervisor-subordinate relationships.
- Order Details: This table is used to store details of products in orders. It includes information such as order_id, product_id, unit_price, quantity, and discount. The primary key is a composite key consisting of order_id and product_id. There are also check constraints to ensure valid data.
- Orders: This table stores data about customer orders. It includes columns like order_id, customer_id, employee_id, and various date-related fields. The order_id is the primary key, and there are foreign key constraints to link to customers and employees.
- Products: This table contains information about products. It includes data like product_id, product_name, supplier_id, category_id, and pricing details. The product_id serves as the primary key, and there are foreign keys to suppliers and categories.
- Shippers: This table stores information about shipping companies. It includes shipper_id, company_name, and contact information. The shipper_id is the primary key.
- Suppliers: This table represents data about product suppliers. It includes information such as supplier_id, company_name, contact details, and a home page link. The supplier_id is the primary key.



```
-- Generated by Oracle SQL Developer Data Modeler 23.1.0.087.0806
--   at:        2023-10-10 14:41:05 EDT
--   site:      Oracle Database 12cR2
--   type:      Oracle Database 12cR2


CREATE TABLE neudemo.categories (
    category_id   NUMBER(9) NOT NULL,
    category_name VARCHAR2(15 BYTE) NOT NULL,
    description   VARCHAR2(2000 BYTE),
    picture       VARCHAR2(255 BYTE)
)
PCTFREE 10 PCTUSED 40 INITRANS 10 TABLESPACE data LOGGING
    STORAGE ( INITIAL 65536 NEXT 1048576 PCTINCREASE 0 MINEXTENTS 1 MAXEXTENTS 2147483645 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT
    )
NO INMEMORY;

COMMENT ON COLUMN neudemo.categories.category_id IS
    'Number automatically assigned to a new category.';

COMMENT ON COLUMN neudemo.categories.category_name IS
    'Name of food category.';

COMMENT ON COLUMN neudemo.categories.picture IS
    'A picture representing the food category.';

CREATE UNIQUE INDEX neudemo.pk_categories ON
    neudemo.categories (
        category_id
    ASC )
        TABLESPACE data PCTFREE 10 INITRANS 20
            STORAGE ( INITIAL 65536 NEXT 1048576 PCTINCREASE 0 MINEXTENTS 1 MAXEXTENTS 2147483645 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL
            DEFAULT )
        LOGGING;

CREATE UNIQUE INDEX neudemo.uidx_category_name ON
    neudemo.categories (
        category_name
    ASC )
        TABLESPACE data PCTFREE 10 INITRANS 20
            STORAGE ( INITIAL 65536 NEXT 1048576 PCTINCREASE 0 MINEXTENTS 1 MAXEXTENTS 2147483645 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL
            DEFAULT )
        LOGGING;

ALTER TABLE neudemo.categories
    ADD CONSTRAINT pk_categories PRIMARY KEY ( category_id )
        USING INDEX neudemo.pk_categories;

GRANT SELECT ON neudemo.categories TO damg6210;
CREATE TABLE neudemo.customers (
    customer_id   NUMBER(9) NOT NULL,
    customer_code VARCHAR2(5 BYTE) NOT NULL,
    company_name  VARCHAR2(40 BYTE) NOT NULL,
    contact_name  VARCHAR2(30 BYTE),
    contact_title VARCHAR2(30 BYTE),
    address       VARCHAR2(60 BYTE),
    city          VARCHAR2(15 BYTE),
```

Save Find Close Help

DDL SCRIPT

select * from user_tables;

Select * from employees;

Select * from order_details;

Select * from orders;

select * from suppliers;

SELECT * FROM products;

select * from customers;

SELECT COUNT(*) AS NumberOfShippers

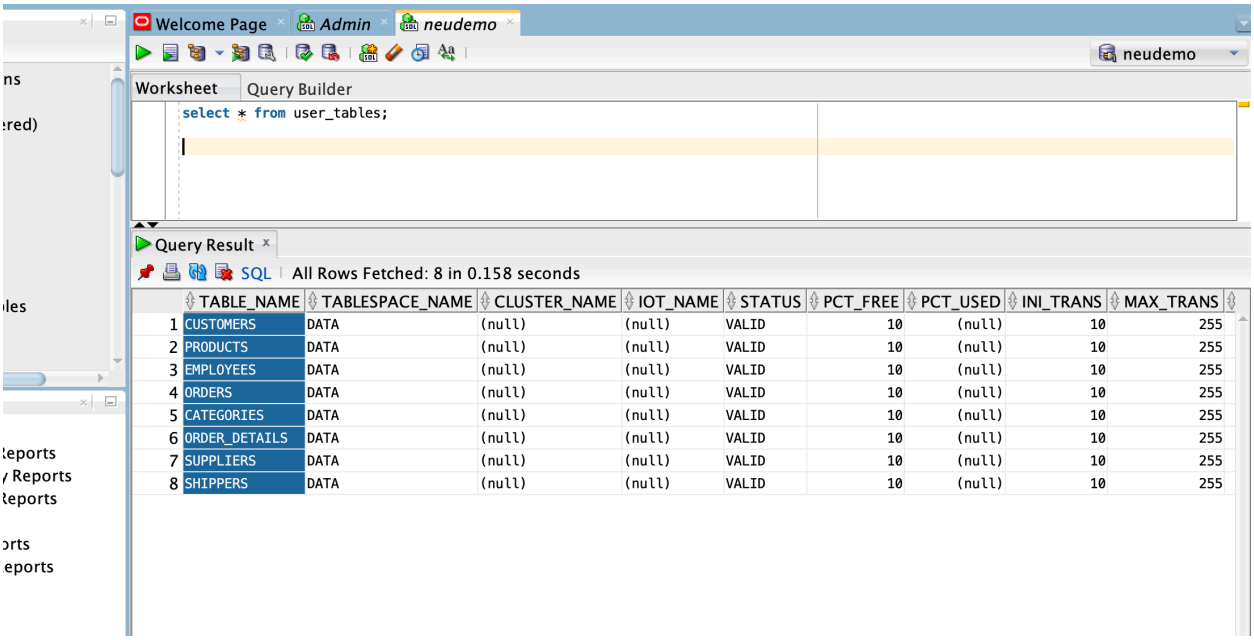
FROM SHIPPERS;

```
SELECT FIRSTNAME, LASTNAME, HIREDATE
FROM EMPLOYEES
WHERE Title = 'Sales Representative'
AND Country = 'USA';

SELECT o.Order_ID
FROM ORDERS o
JOIN EMPLOYEES e ON o.Employee_ID = e.Employee_ID
WHERE e.FirstName = 'Steven' AND e.LastName = 'Buchanan';

SELECT Supplier_ID, Contact_Name, Contact_Title
FROM SUPPLIERS
WHERE Contact_Title <> 'Marketing Manager';

SELECT Product_ID, Product_Name
FROM PRODUCTS
WHERE Product_Name LIKE '%Queso%';

SELECT Order_ID, Customer_ID, Ship_Country
FROM ORDERS
WHERE Ship_Country IN ('France', 'Belgium', 'Brazil', 'Mexico', 'Argentina', 'Venezuela');

SELECT FirstName, LastName, Title, BirthDate
FROM Employees
ORDER BY BirthDate;

SELECT FirstName, LastName, Title, TRUNC(BirthDate) AS BirthDate
FROM Employees
ORDER BY TRUNC(BirthDate) ASC;
```

```
SELECT COUNT(*) AS TotalCustomers
FROM CUSTOMERS;

SELECT p.Product_ID, p.Product_Name, s.Company_Name AS SupplierName
FROM PRODUCTS p
JOIN SUPPLIERS s ON p.Supplier_ID = s.Supplier_ID
ORDER BY p.Product_ID;

SELECT c.Category_Name, COUNT(p.Product_ID) AS TotalProducts
FROM CATEGORIES c
LEFT JOIN PRODUCTS p ON c.Category_ID = p.Category_ID
GROUP BY c.Category_Name
ORDER BY c.Category_Name;

SELECT Country, City, COUNT(Customer_ID) AS TotalCustomers
FROM CUSTOMERS
GROUP BY Country, City
ORDER BY Country, City;

SELECT e.Employee_ID, e.LastName, od.Order_ID, p.Product_Name, od.Quantity
FROM Employees e
JOIN Orders o ON e.Employee_ID = o.Employee_ID
JOIN Order_Details od ON o.Order_ID = od.Order_ID
JOIN Products p ON od.Product_ID = p.Product_ID
ORDER BY od.Order_ID, p.Product_ID;

SELECT c.Customer_ID, c.contact_Name
FROM CUSTOMERS c
LEFT JOIN ORDERS o ON c.Customer_ID = o.Customer_ID
```

WHERE o.Order_ID IS NULL

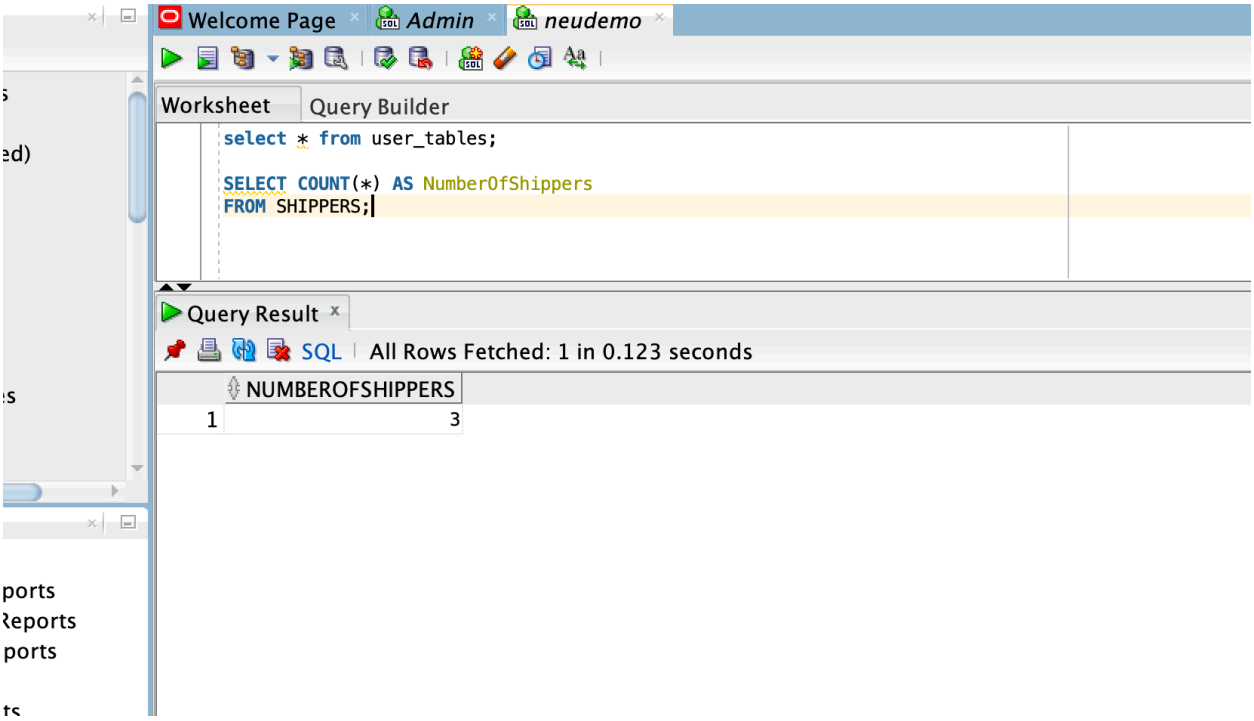
```
select * from user_tables
```



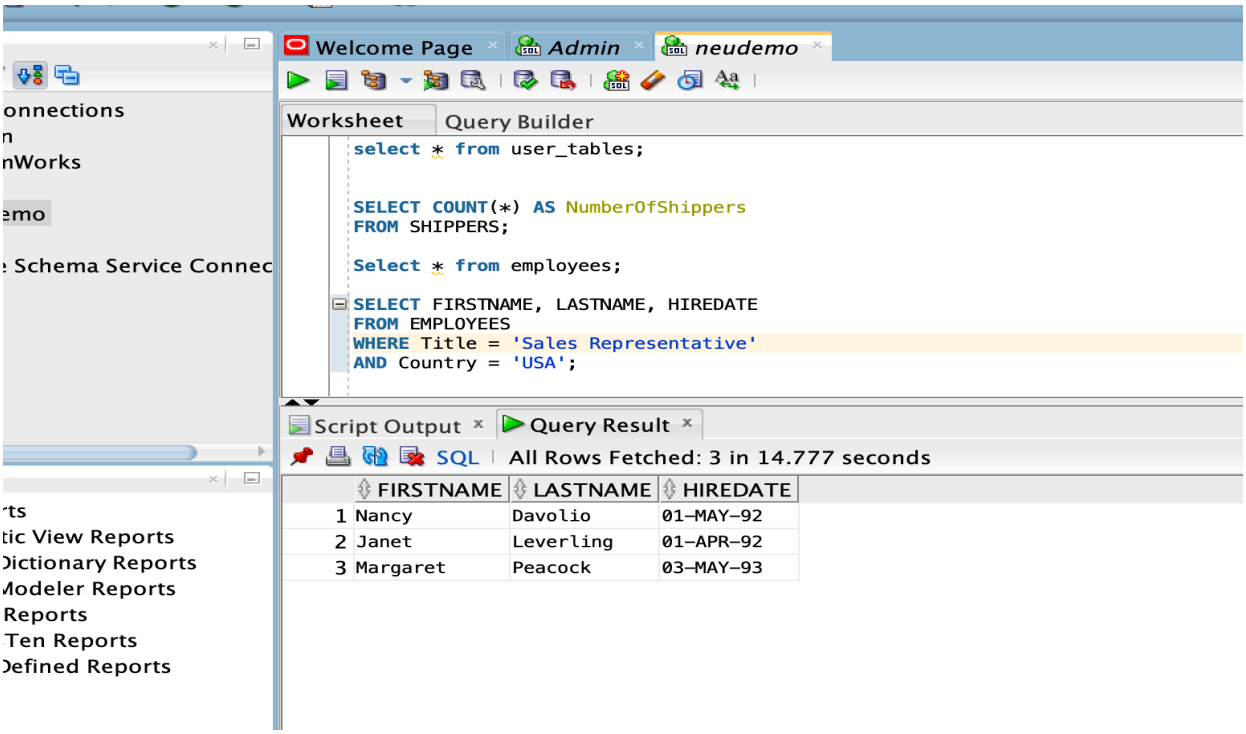
	TABLE_NAME	TABLESPACE_NAME	CLUSTER_NAME	IOT_NAME	STATUS	PCT_FREE	PCT_USED	INI_TRANS	MAX_TRANS
1	CUSTOMERS	DATA	(null)	(null)	VALID	10	(null)	10	255
2	PRODUCTS	DATA	(null)	(null)	VALID	10	(null)	10	255
3	EMPLOYEES	DATA	(null)	(null)	VALID	10	(null)	10	255
4	ORDERS	DATA	(null)	(null)	VALID	10	(null)	10	255
5	CATEGORIES	DATA	(null)	(null)	VALID	10	(null)	10	255
6	ORDER_DETAILS	DATA	(null)	(null)	VALID	10	(null)	10	255
7	SUPPLIERS	DATA	(null)	(null)	VALID	10	(null)	10	255
8	SHIPPERS	DATA	(null)	(null)	VALID	10	(null)	10	255

#B. Answer below questions using the tables available in this user account schema. (7M each)

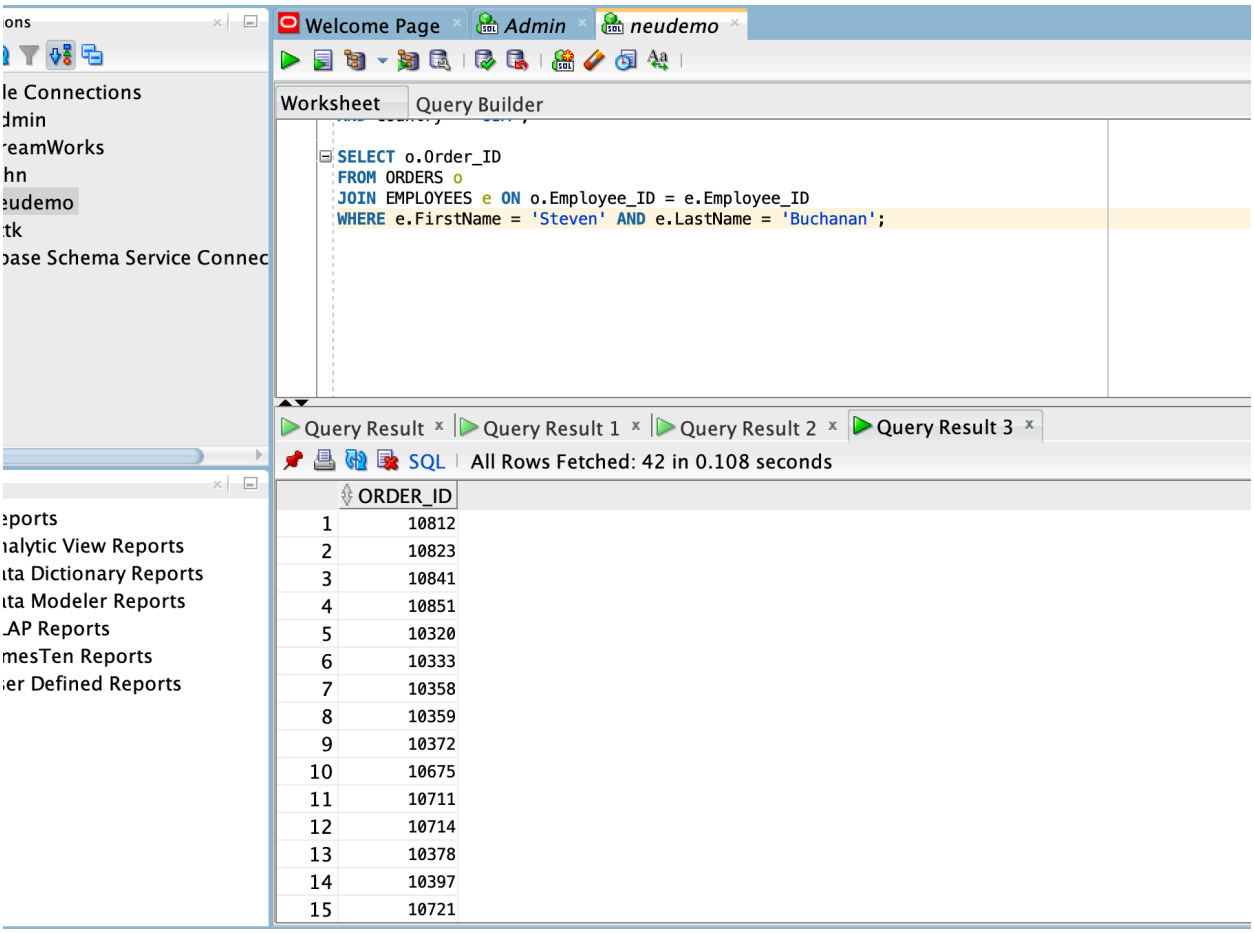
1)How many shippers are available



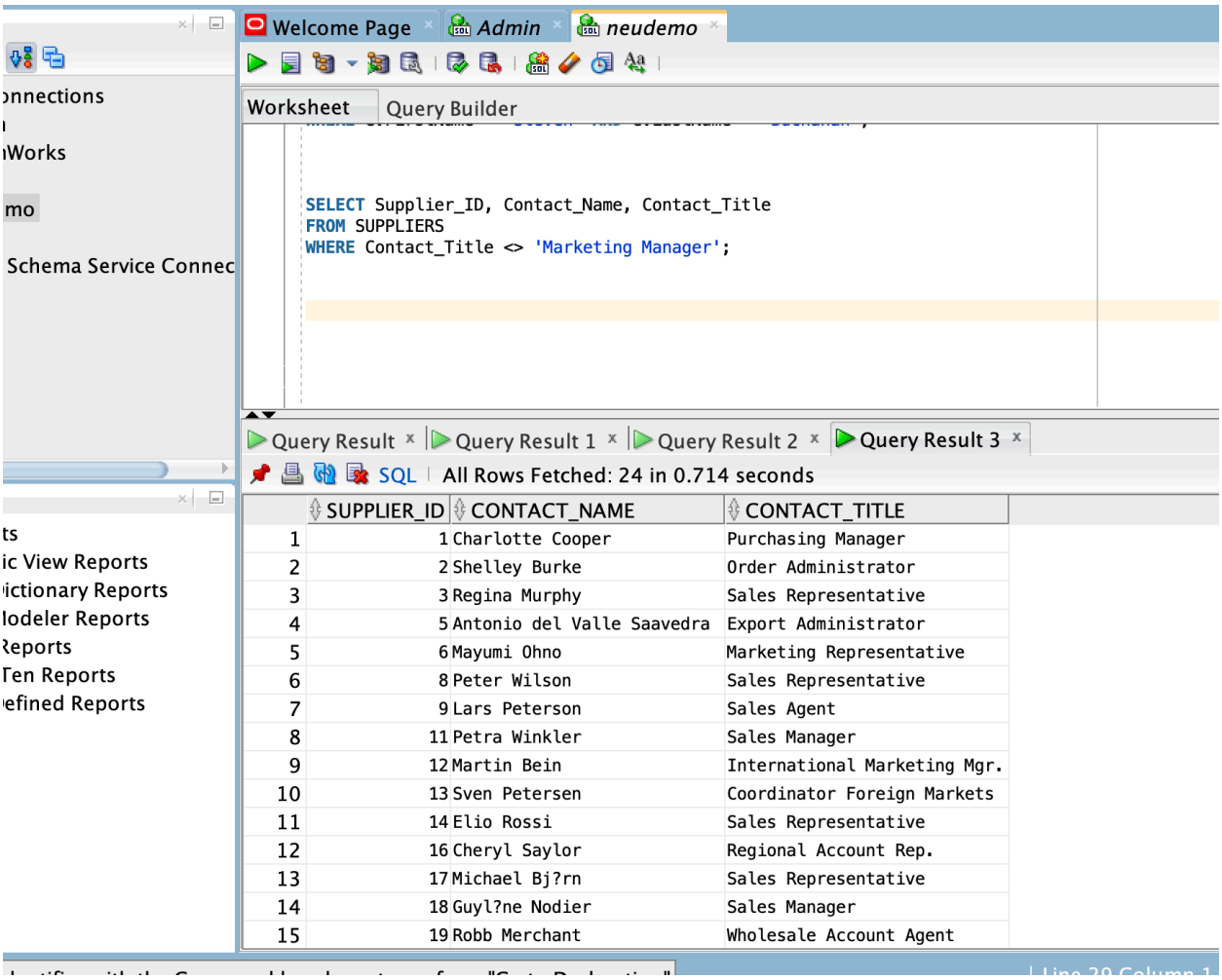
2)Display FirstName, LastName, and HireDate of all the employees with the Title of Sales Representative in **USA**



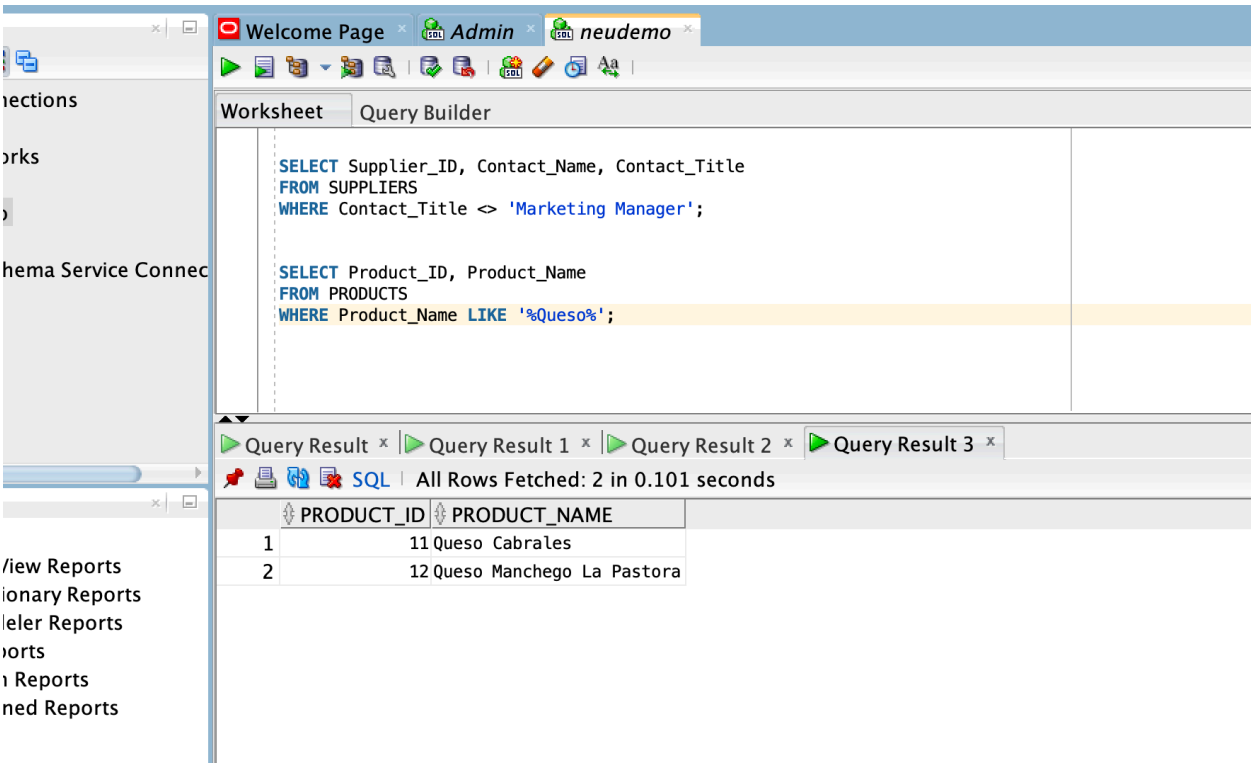
3)Show all the orders placed by employee Steven Buchanan

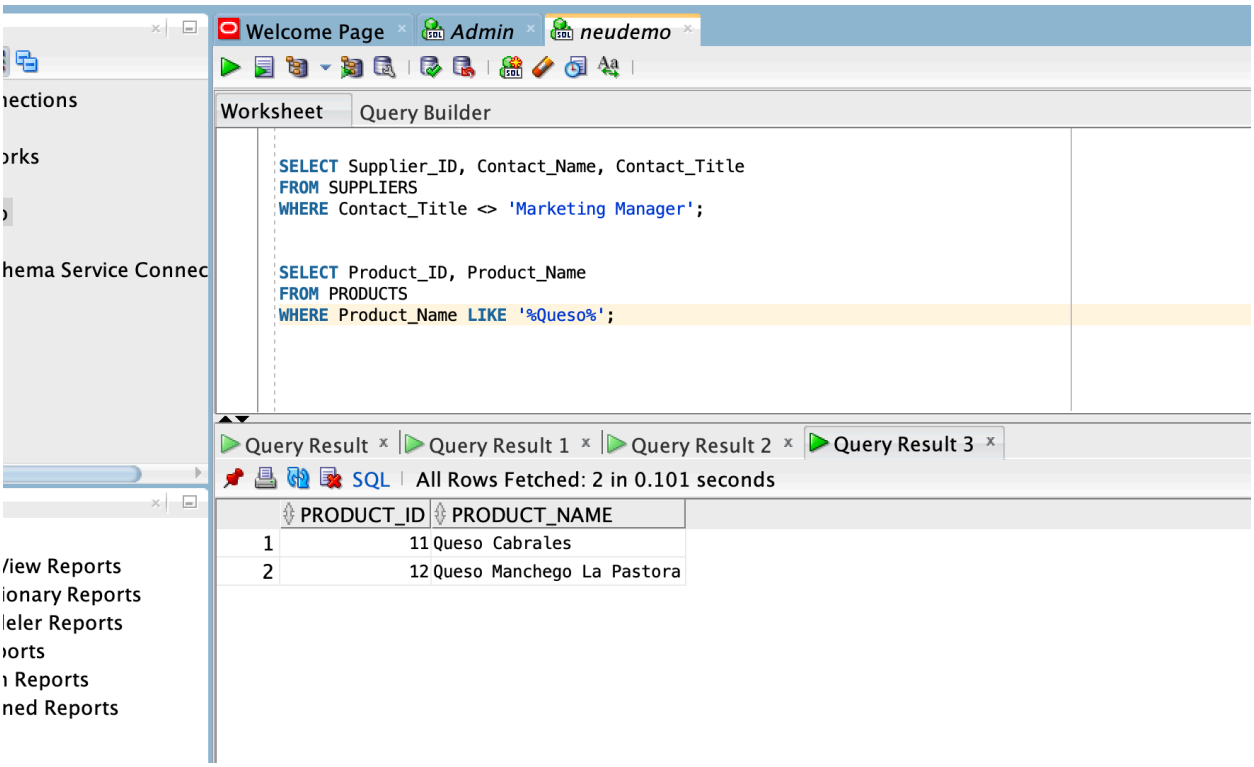


4)show the SupplierID, ContactName, and ContactTitle for those Suppliers whose ContactTitle is not Marketing Manager

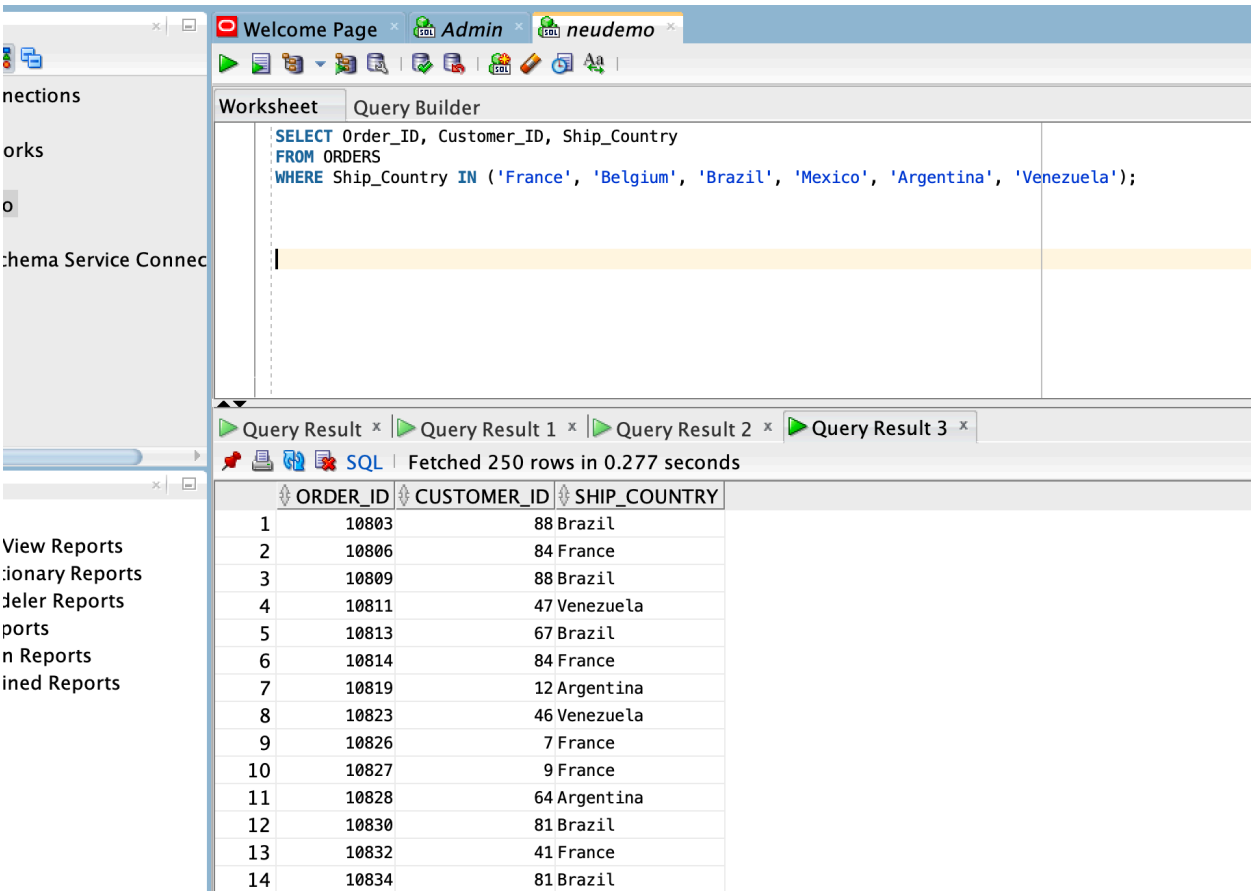


5)Display ProductID and ProductName for those products where the ProductName includes the string 'queso'.


Welcome Page
Admin
neudemo
Worksheet
Query Builder
SELECT Supplier_ID, Contact_Name, Contact_Title
FROM SUPPLIERS
WHERE Contact_Title <> 'Marketing Manager';
SELECT Product_ID, Product_Name
FROM PRODUCTS
WHERE Product_Name LIKE '%Queso%';
Query Result
Query Result 1
Query Result 2
Query Result 3
SQL
All Rows Fetched: 2 in 0.101 seconds
PRODUCT_ID
PRODUCT_NAME
1 11 Queso Cabrales
2 12 Queso Manchego La Pastora

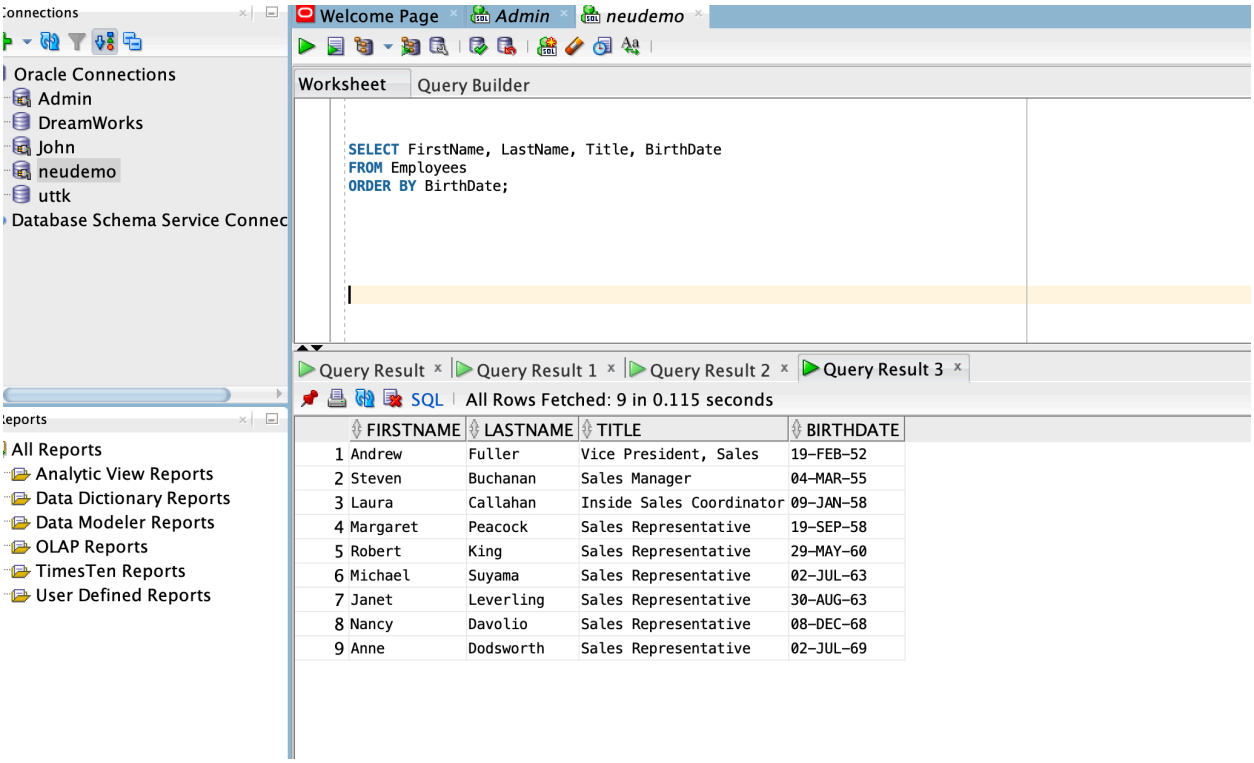

Welcome Page
Admin
neudemo
Worksheet
Query Builder
SELECT Supplier_ID, Contact_Name, Contact_Title
FROM SUPPLIERS
WHERE Contact_Title <> 'Marketing Manager';
SELECT Product_ID, Product_Name
FROM PRODUCTS
WHERE Product_Name LIKE '%Queso%';
Query Result
Query Result 1
Query Result 2
Query Result 3
SQL
All Rows Fetched: 2 in 0.101 seconds
PRODUCT_ID
PRODUCT_NAME
1 11 Queso Cabrales
2 12 Queso Manchego La Pastora

6)List all OrderID,CustomerID, and ShipCountry for the orders shipped to France, Belgium and Latin American country
Hint: Brazil Mexico Argentina Venezuela are latin american countries



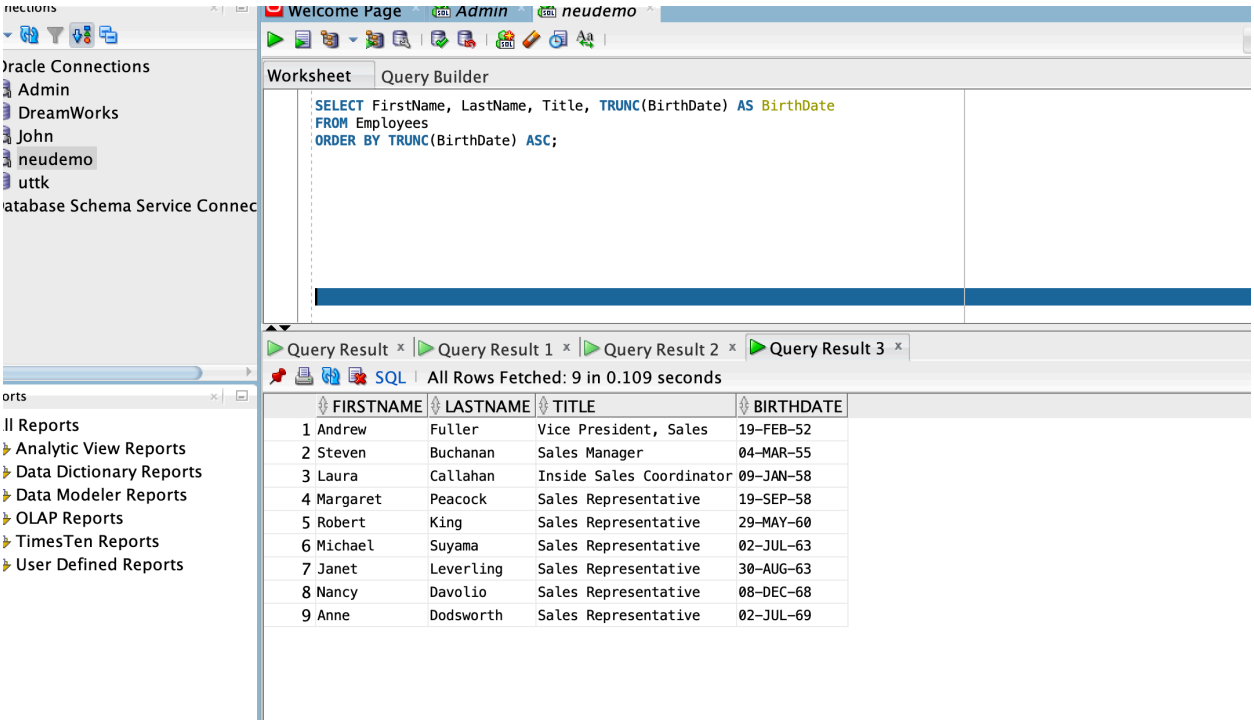
	ORDER_ID	CUSTOMER_ID	SHIP_COUNTRY
1	10803	88	Brazil
2	10806	84	France
3	10809	88	Brazil
4	10811	47	Venezuela
5	10813	67	Brazil
6	10814	84	France
7	10819	12	Argentina
8	10823	46	Venezuela
9	10826	7	France
10	10827	9	France
11	10828	64	Argentina
12	10830	81	Brazil
13	10832	41	France
14	10834	81	Brazil

7)Display all the employees in the Employees table, show the FirstName, LastName, Title, and BirthDate. Order the results by BirthDate, so we have the oldest employees first.

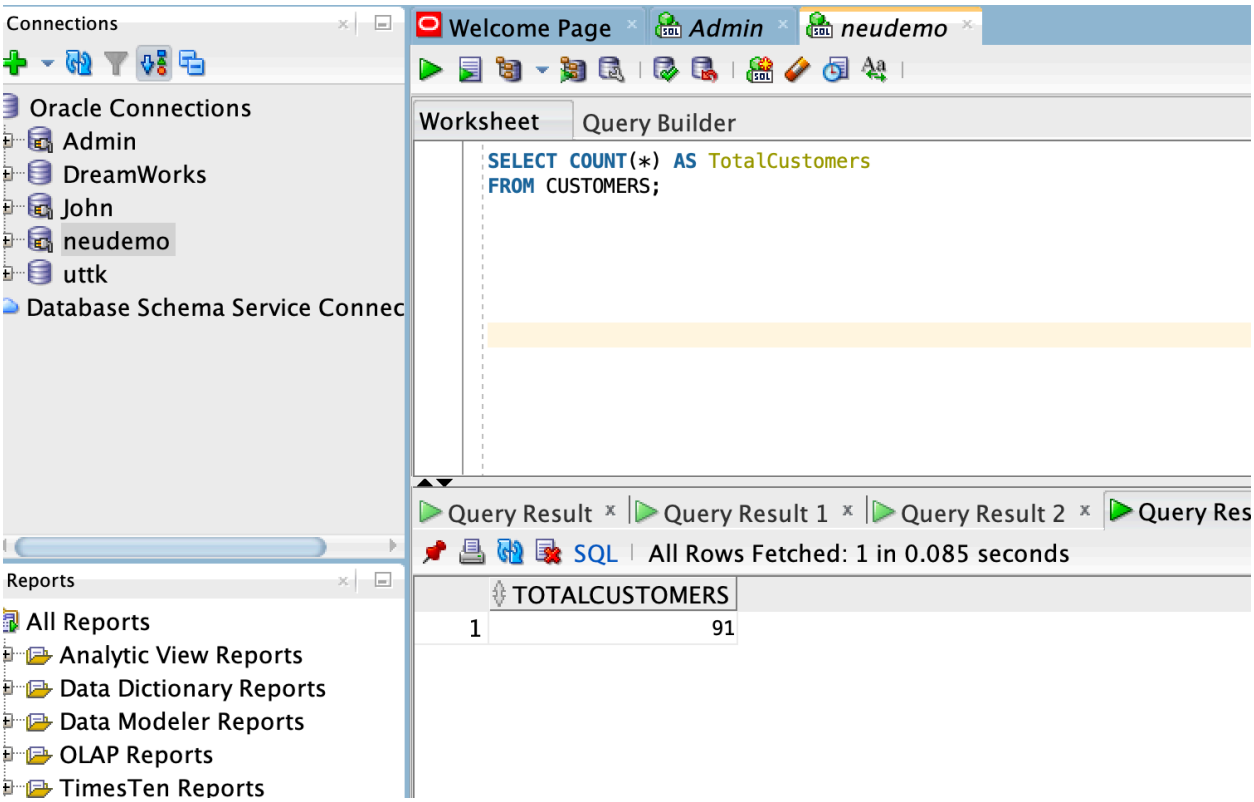


8)Display all the employees in the Employees table, show the FirstName, LastName, Title, and BirthDate. Order the results by BirthDate, so we have the Employees in order of BirthDate.

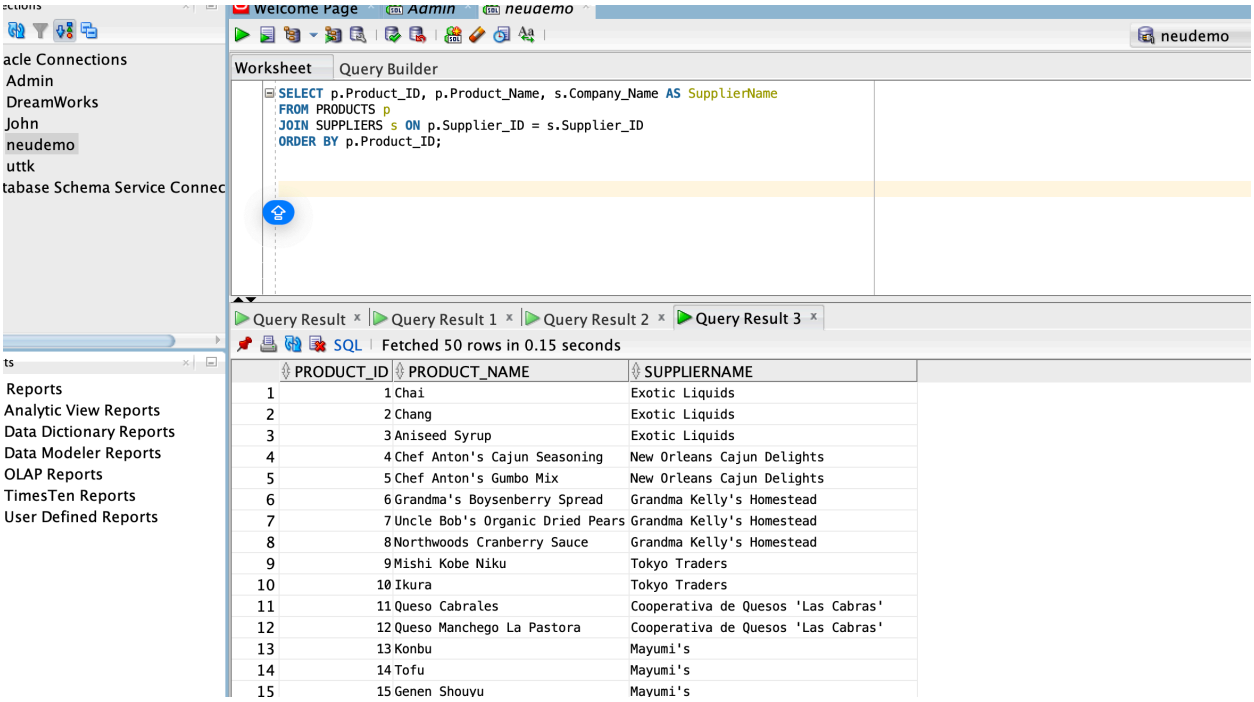
Note: You should ignore time during sorting



9)How many customers are there?

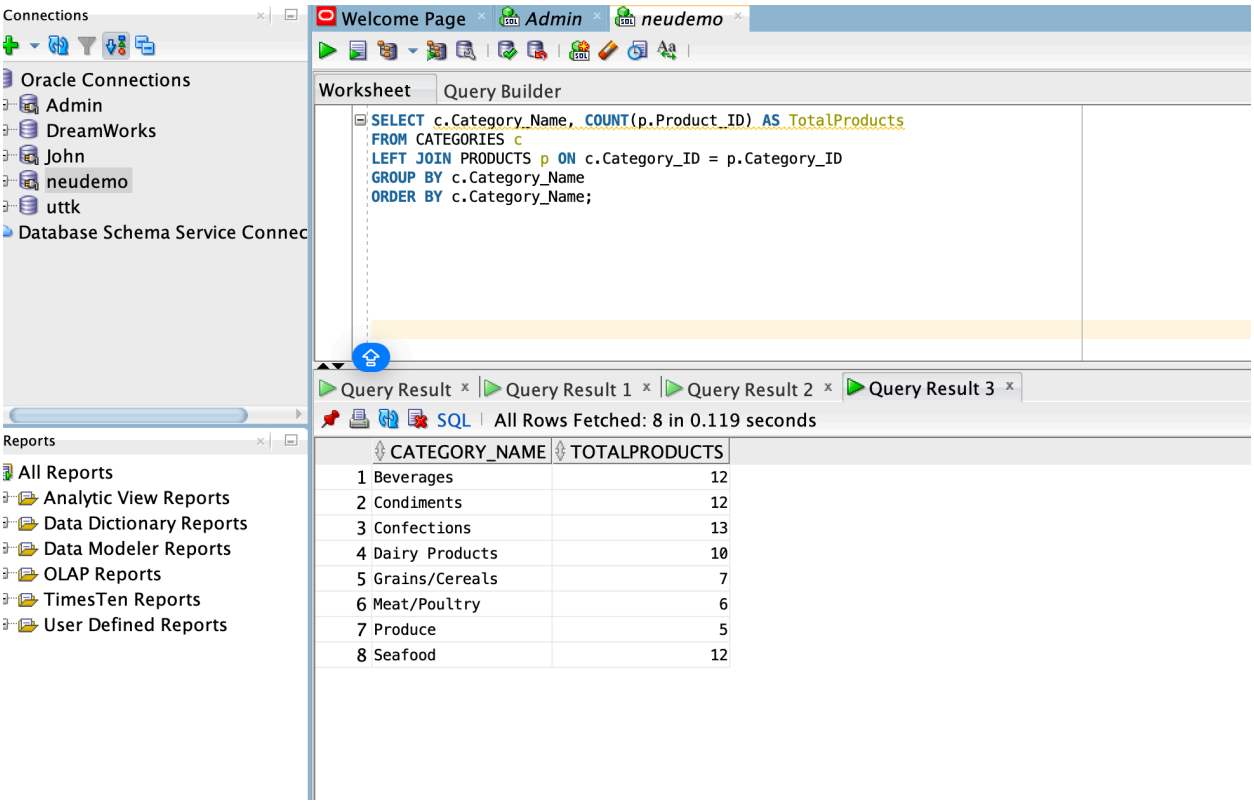


10)Display for each product, the associated Supplier.
Show the ProductID, ProductName, and the CompanyName of the Supplier.
Finally Sort data by ProductID.



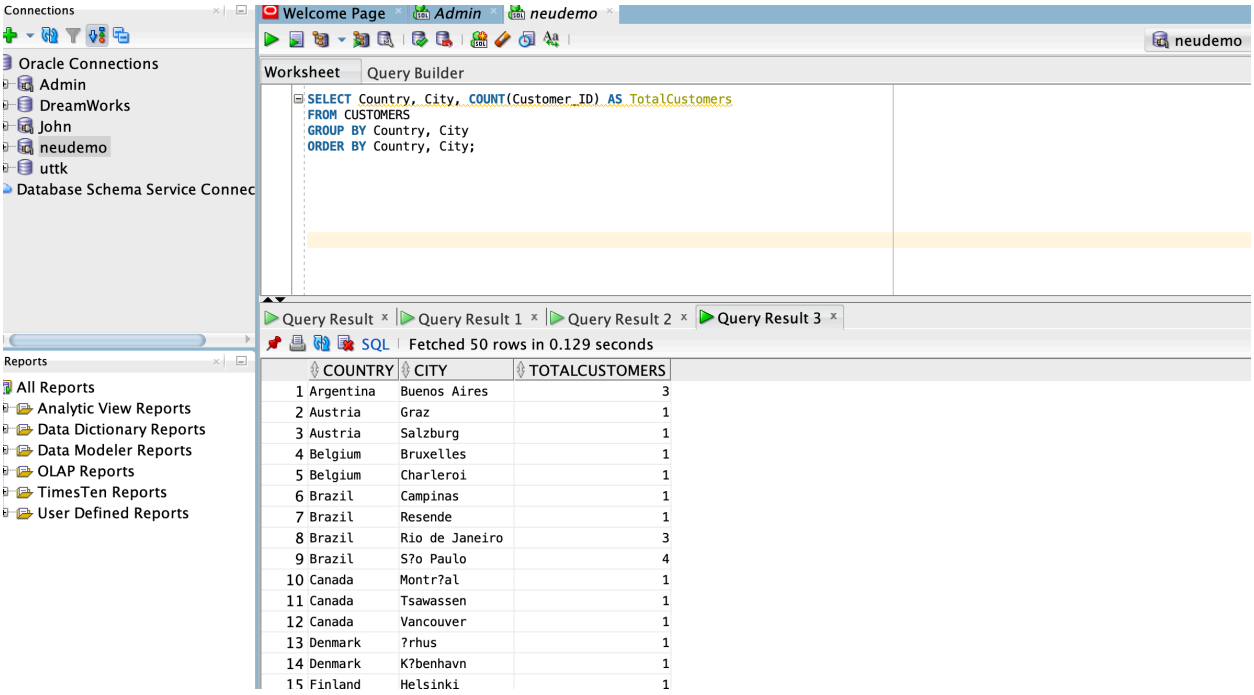
	PRODUCT_ID	PRODUCT_NAME	SUPPLIERNAME
1	1	Chai	Exotic Liquids
2	2	Chang	Exotic Liquids
3	3	Aniseed Syrup	Exotic Liquids
4	4	Chef Anton's Cajun Seasoning	New Orleans Cajun Delights
5	5	Chef Anton's Gumbo Mix	New Orleans Cajun Delights
6	6	Grandma's Boysenberry Spread	Grandma Kelly's Homestead
7	7	Uncle Bob's Organic Dried Pears	Grandma Kelly's Homestead
8	8	Northwoods Cranberry Sauce	Grandma Kelly's Homestead
9	9	Mishi Kobe Niku	Tokyo Traders
10	10	Ikura	Tokyo Traders
11	11	Queso Cabrales	Cooperativa de Quesos 'Las Cabras'
12	12	Queso Manchego La Pastora	Cooperativa de Quesos 'Las Cabras'
13	13	Konbu	Mayumi's
14	14	Tofu	Mayumi's
15	15	Genen Shouyu	Mayumi's

11)Show total products in each category



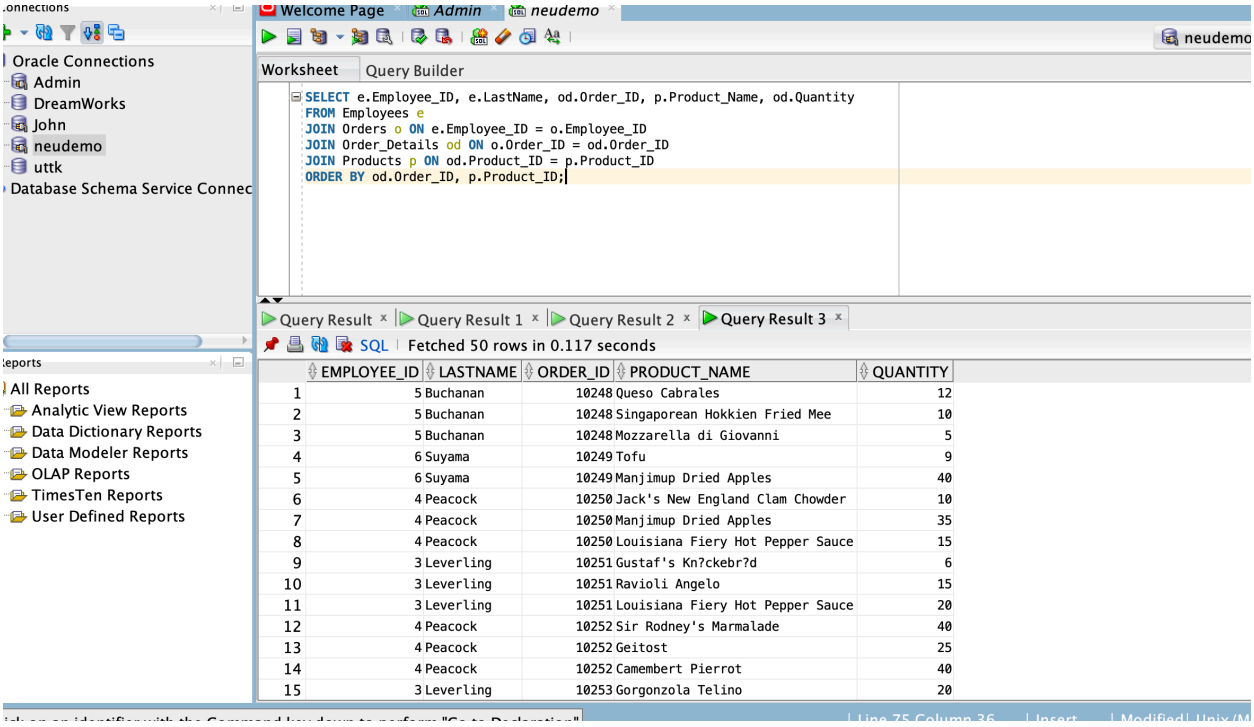
	CATEGORY_NAME	TOTALPRODUCTS
1	Beverages	12
2	Condiments	12
3	Confections	13
4	Dairy Products	10
5	Grains/Cereals	7
6	Meat/Poultry	6
7	Produce	5
8	Seafood	12

12)Display total number of customers per Country and City.



	COUNTRY	CITY	TOTALCUSTOMERS
1	Argentina	Buenos Aires	3
2	Austria	Graz	1
3	Austria	Salzburg	1
4	Belgium	Bruxelles	1
5	Belgium	Charleroi	1
6	Brazil	Campinas	1
7	Brazil	Resende	1
8	Brazil	Rio de Janeiro	3
9	Brazil	S?o Paulo	4
10	Canada	Montr?al	1
11	Canada	Tsawassen	1
12	Canada	Vancouver	1
13	Denmark	?rhus	1
14	Denmark	K?benhavn	1
15	Finland	Helsinki	1

13)Display Employee ID, lastname, order id, product name, quantity for all orders sorted by OrderID and Product ID.



	EMPLOYEE_ID	LASTNAME	ORDER_ID	PRODUCT_NAME	QUANTITY
1	5	Buchanan	10248	Queso Cabrales	12
2	5	Buchanan	10248	Singaporean Hokkien Fried Mee	10
3	5	Buchanan	10248	Mozzarella di Giovanni	5
4	6	Suyama	10249	Tofu	9
5	6	Suyama	10249	Manjimup Dried Apples	40
6	4	Peacock	10250	Jack's New England Clam Chowder	10
7	4	Peacock	10250	Manjimup Dried Apples	35
8	4	Peacock	10250	Louisiana Fiery Hot Pepper Sauce	15
9	3	Leverling	10251	Gustaf's Kn?ckebr?d	6
10	3	Leverling	10251	Ravioli Angelo	15
11	3	Leverling	10251	Louisiana Fiery Hot Pepper Sauce	20
12	4	Peacock	10252	Sir Rodney's Marmalade	40
13	4	Peacock	10252	Geitost	25
14	4	Peacock	10252	Camembert Pierrot	40
15	3	Leverling	10253	Gorgonzola Telino	20

14)List all the customers who never placed any orders