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TE3-25

DBMS PRACTICAL 5

CODE:

Inner join Queries:

1. Find account numbers having branch city as Brooklyn:

SELECT account_number FROM Account_Relation a

INNER JOIN Branch_Relation b

ON b.branch_name = a.branch_name and b.branch_city = 'Brooklyn';

Output:

The screenshot shows the Oracle Live SQL web interface. The left sidebar contains navigation links: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled 'SQL Worksheet' and contains the following SQL query:

```
1 SELECT account_number FROM Account_Relation a
2 INNER JOIN Branch_Relation b
3 ON b.branch_name = a.branch_name and b.branch_city = 'Brooklyn';
```

Below the query editor, the results are displayed in a table with the column 'ACCOUNT_NUMBER'. The table contains three rows: A-101, A-201, and A-217. Below the table, there is a 'Download CSV' link and the text '3 rows selected.'.

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2. Select name of customer having loan amt more than 1000:

SELECT customer_name FROM Borrower_Relation b

INNER JOIN Loan_Relation l

ON b.loan_number = l.loan_number and l.amount > 1000;

Output:

The screenshot displays the Oracle Live SQL web interface. The top navigation bar includes 'Live SQL', 'Feedback', 'Help', and a user profile. The left sidebar contains navigation links: 'Home', 'SQL Worksheet', 'My Session', 'Schema', 'Quick SQL', 'My Scripts', 'My Tutorials', and 'Code Library'. The main area is titled 'SQL Worksheet' and contains the following SQL query:

```
1 SELECT customer_name FROM Borrower_Relation b
2 INNER JOIN Loan_Relation l
3 ON b.loan_number = l.loan_number and l.amount > 1000;
```

Below the query editor, the results are displayed in a table with one column, 'CUSTOMER_NAME'. The table contains four rows of data:

CUSTOMER_NAME
Adams
Hayes
Johnson
Williams

Below the table, there is a 'Download CSV' link and a message '4 rows selected.'.

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3. Select all customer information having loan from branch Perryridge:

```
SELECT c.* FROM Customer_Relation c
INNER JOIN Borrower_Relation b
ON c.customer_name = b.customer_name
INNER JOIN Loan_Relation l
ON l.loan_number = b.loan_number and l.branch_name =
'Perryridge';
```

Output:

The screenshot shows the Oracle Live SQL web interface. The left sidebar contains navigation links: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled 'SQL Worksheet' and contains the following SQL query:

```
1 SELECT c.* FROM Customer_Relation c
2 INNER JOIN Borrower_Relation b
3 ON c.customer_name = b.customer_name
4 INNER JOIN Loan_Relation l
5 ON l.loan_number = b.loan_number and l.branch_name = 'Perryridge';
```

Below the query editor, the results are displayed in a table with the following data:

CUSTOMER_NAME	CUSTOMER_STREET	CUSTOMER_CITY
Adams	Spring	Pittsfield
Hayes	Main	Harrison

Below the table, it says 'Download CSV' and '2 rows selected.' The footer of the page includes the Oracle logo, 'Integrated Cloud Applications & Platform Services', and copyright information: '© 2020 Oracle Corporation - Privacy - Terms of Use'. It also mentions 'Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter', 'Live SQL 20.4.1, running Oracle Database 19c Enterprise Edition - 19.8.0.0.0', and 'Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine'.

4. Find all account details with related customer name for the customers living in the city Harrison:

```
SELECT c.customer_name,a.* FROM Customer_Relation c
INNER JOIN Depositor_Relation d
ON c.customer_name = d.customer_name
INNER JOIN Account_Relation a
ON a.account_number = d.account_number
WHERE c.customer_city = 'Harrison';
```

Output:

The screenshot shows the Live SQL web interface. The SQL query is entered in the worksheet area and has been executed. The output is displayed as a table with 4 columns: CUSTOMER_NAME, ACCOUNT_NUMBER, BALANCE, and BRANCH_NAME. Two rows of data are shown, corresponding to the customers Hayes and Jones. Below the table, there is a 'Download CSV' link and a message indicating that 2 rows were selected.

```
2 INNER JOIN Depositor_Relation d
3 ON c.customer_name = d.customer_name
4 INNER JOIN Account_Relation a
5 ON a.account_number = d.account_number
6 WHERE c.customer_city = 'Harrison';
```

CUSTOMER_NAME	ACCOUNT_NUMBER	BALANCE	BRANCH_NAME
Hayes	A-102	400	Perryridge
Jones	A-217	750	Brighton

[Download CSV](#)
2 rows selected.

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5. Find all accounts information with the branches having assets less than 50 lacs:

```
SELECT a.* FROM Account_Relation a
```

```
INNER JOIN Branch_Relation b
```

```
ON a.branch_name = b.branch_name and b.assets < 5000000;
```

Output:

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following query:

```
1 SELECT a.* FROM Account_Relation a
2 INNER JOIN Branch_Relation b
3 ON a.branch_name = b.branch_name and b.assets < 5000000;
```

The query results are displayed in a table with the following data:

ACCOUNT_NUMBER	BALANCE	BRANCH_NAME
A-102	400	Perryridge
A-215	700	Mianus
A-222	700	Redwood

Download CSV
3 rows selected.

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Outer Join Queries:

Join Customer_Relation and Depositor_Relation using all 3 outer join:

1. Left Outer Join

```
SELECT * FROM Customer_Relation c  
LEFT OUTER JOIN Depositor_Relation d  
ON c.customer_name = d.customer_name;
```

Output:

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following query:

```
1 SELECT * FROM Customer_Relation c  
2 LEFT OUTER JOIN Depositor_Relation d  
3 ON c.customer_name = d.customer_name;
```

The output table displays the results of the query, showing customer information and account numbers. The table has five columns: CUSTOMER_NAME, CUSTOMER_STREET, CUSTOMER_CITY, CUSTOMER_NAME, and ACCOUNT_NUMBER. The data is as follows:

CUSTOMER_NAME	CUSTOMER_STREET	CUSTOMER_CITY	CUSTOMER_NAME	ACCOUNT_NUMBER
Hayes	Main	Harrison	Hayes	A-182
Johnson	Alma	Palo Alto	Johnson	A-181
Johnson	Alma	Palo Alto	Johnson	A-201
Jones	Main	Harrison	Jones	A-217
Lindsay	Park	Pittsfield	Lindsay	A-222
Smith	North	Rye	Smith	A-215
Turner	Putnam	Stamford	Turner	A-385
Adams	Spring	Pittsfield	-	-
Brooks	Senator	Brooklyn	-	-
Green	Walnut	Stamford	-	-
Glenn	Sand Hill	Woodside	-	-
Curry	North	Rye	-	-

At the bottom of the interface, there is a footer section with the following text:

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2. Right Outer Join

```
SELECT * FROM Customer_Relation c
RIGHT OUTER JOIN Depositor_Relation d
ON c.customer_name = d.customer_name;
```

Output:

The screenshot shows the Oracle Live SQL interface. The left sidebar contains navigation links: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled 'SQL Worksheet' and contains a SQL query:

```
1 SELECT * FROM Customer_Relation c
2 RIGHT OUTER JOIN Depositor_Relation d
3 ON c.customer_name = d.customer_name;
```

Below the query, the output is displayed as a table with 5 columns: CUSTOMER_NAME, CUSTOMER_STREET, CUSTOMER_CITY, CUSTOMER_NAME, and ACCOUNT_NUMBER. The table contains 7 rows of data:

CUSTOMER_NAME	CUSTOMER_STREET	CUSTOMER_CITY	CUSTOMER_NAME	ACCOUNT_NUMBER
Hayes	Main	Harrison	Hayes	A-102
Johnson	Alma	Palo Alto	Johnson	A-101
Johnson	Alma	Palo Alto	Johnson	A-201
Jones	Main	Harrison	Jones	A-217
Lindsay	Park	Pittsfield	Lindsay	A-222
Smith	North	Rye	Smith	A-215
Turner	Putnam	Stamford	Turner	A-305

Below the table, it says 'Download CSV' and '7 rows selected.' The footer of the interface includes the Oracle logo, 'Integrated Cloud Applications & Platform Services', and copyright information: '© 2020 Oracle Corporation - Privacy - Terms of Use'. It also mentions 'Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter' and 'Live SQL 20.4.1, running Oracle Database 19c Enterprise Edition - 19.8.0.0.0'. A note at the bottom states 'Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine'.

3. Full Outer Join:

```
SELECT * FROM Customer_Relation c
FULL OUTER JOIN Depositor_Relation d
ON c.customer_name = d.customer_name;
```

Output:

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following query:

```
1 SELECT * FROM Customer_Relation c
2 FULL OUTER JOIN Depositor_Relation d
3 ON c.customer_name = d.customer_name;
```

The output is a table with 5 columns: CUSTOMER_NAME, CUSTOMER_STREET, CUSTOMER_CITY, CUSTOMER_NAME, and ACCOUNT_NUMBER. It displays 13 rows of data, including customers with no matching depositors and vice versa.

CUSTOMER_NAME	CUSTOMER_STREET	CUSTOMER_CITY	CUSTOMER_NAME	ACCOUNT_NUMBER
Adams	Spring	Pittsfield	-	-
Brooks	Senator	Brooklyn	-	-
Curry	North	Rye	-	-
Glenn	Sand Hill	Woodside	-	-
Green	Walnut	Stanford	-	-
Hayes	Main	Harrison	Hayes	A-102
Johnson	Alma	Palo Alto	Johnson	A-101
Johnson	Alma	Palo Alto	Johnson	A-201
Jones	Main	Harrison	Jones	A-217
Lindsay	Park	Pittsfield	Lindsay	A-222
Smith	North	Rye	Smith	A-215
Turner	Putnam	Stanford	Turner	A-305
Williams	Nassau	Princeton	-	-

Download CSV
13 rows selected.

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