PRACTICAL : 2

AIM : Perform & learn following concepts:

(1) Logical-And,Or,Not

(2) Between- And Operator & Not between - And

(3) Like Predicate

(4) In Predicate & Not In Predicate.

TASK 1

Prerequisite Steps before Task 1

Step 1 : Create a new Database

```
14
15 •   CREATE DATABASE PRACTICAL1;
```

Output
Action Output ▾

#	Time	Action	Message
✔ 1	18:36:13	CREATE DATABASE PRACTICAL1	1 row(s) affected

Step 2 : Select a Database

```
16 •   USE PRACTICAL1;
```

Output
Action Output ▾

#	Time	Action	Message
✔ 1	18:36:13	CREATE DATABASE PRACTICAL1	1 row(s) affected

Create a table ACCOUNT_24012011161

Column name	Data Type	Size
acc_no	varchar2	5
Name	varchar2	30
City	varchar2	20
Balance	Number	10,2
loan_taken	varchar2	5

Query with Output :

```
30  ⊖ CREATE TABLE ACCOUNT_24012011161 (
31         acc_no VARCHAR(5),
32         Name VARCHAR(30),
33         City VARCHAR(20),
34         Balance DECIMAL(10,2),
35         loan_taken VARCHAR(5)
36    );
37 •  DESCRIBE ACCOUNT_24012011161;
```

Field	Type	Null	Key	Default	Extra
▶ acc_no	varchar(5)	YES		NULL	
Name	varchar(30)	YES		NULL	
City	varchar(20)	YES		NULL	
Balance	decimal(10,2)	YES		NULL	
loan_taken	varchar(5)	YES		NULL	

Insert the following records in ACCOUNT_24012011161 table

acc_no	Name	City	Balance	loan_taken
A001	Patel Jigar	Mehsana	50000	YES
A002	Patel Ramesh	Mehsana	50000	YES
A003	Dave Hardik	Ahmedabad	75000	NO
A004	Soni Hetal	Ahmedabad	100000	NO
A005	Sony Atul	Vadodara	100000	YES

Query with Output :

```
62 •    INSERT INTO ACCOUNT_24012011161 (acc_no,Name,City,Balance,loan_taken) VALUES ("A001","Patel Jigar","Mehsana",50000,"YES");
63 •    INSERT INTO ACCOUNT_24012011161 (acc_no,Name,City,Balance,loan_taken) VALUES ("A002","Patel Ramesh","Mehsana",50000,"YES");
64 •    INSERT INTO ACCOUNT_24012011161 (acc_no,Name,City,Balance,loan_taken) VALUES ("A003","Dave Hardik","Ahmedabad",75000,"NO");
65 •    INSERT INTO ACCOUNT_24012011161 (acc_no,Name,City,Balance,loan_taken) VALUES ("A004","Soni Hetal","Ahmedabad",100000,"NO");
66 •    INSERT INTO ACCOUNT_24012011161 (acc_no,Name,City,Balance,loan_taken) VALUES ("A005","Sony Atul","Vadodara",100000,"YES");
67 •    SELECT * FROM ACCOUNT_24012011161;
```

acc_no	Name	City	Balance	loan_taken
▶ A001	Patel Jigar	Mehsana	50000.00	YES
A002	Patel Ramesh	Mehsana	50000.00	YES
A003	Dave Hardik	Ahmedabad	75000.00	NO
A004	Soni Hetal	Ahmedabad	100000.00	NO
A005	Sony Atul	Vadodara	100000.00	YES

Create a table LOAN_24012011161

Column Name	Data Type	Size
loan_no	varchar2	5
acc_no	varchar2	5
loan_amt	Number	10,2
interest_rate	Number	5,2
loan_date	Date	
remaining_loan	Number	10,2

Query with Output :

```
38 •  CREATE TABLE LOAN_24012011161 (
39         loan_no VARCHAR(5),
40         acc_no VARCHAR(5),
41         loan_amt DECIMAL(10,2),
42         interest_rate DECIMAL(5,2),
43         loan_date DATE,
44         remaining_loan DECIMAL(10,2)
45    );
46 •  DESCRIBE LOAN_24012011161;
```

Field	Type	Null	Key	Default	Extra
loan_no	varchar(5)	YES		NULL	
acc_no	varchar(5)	YES		NULL	
loan_amt	decimal(10,2)	YES		NULL	
interest_rate	decimal(5,2)	YES		NULL	
loan_date	date	YES		NULL	
remaining_loan	decimal(10,2)	YES		NULL	

Insert the following records in LOAN_24012011161 table

Loan_no	Acc_no	Loan_amt	Interest_rate	Loan_date	Remaining_loan
L001	A001	100000	7	1-jan-04	75000
L002	A002	300000	9	18-may-04	150000
L003	A005	500000	11	15-june-04	300000

Query with Output :

```
71 •  INSERT INTO LOAN_24012011161 (loan_no,acc_no,loan_amt,interest_rate,loan_date,remaining_loan)
72      VALUES ("L001","A001","100000",7,'2004-01-01',"75000");
73 •  INSERT INTO LOAN_24012011161 (loan_no,acc_no,loan_amt,interest_rate,loan_date,remaining_loan)
74      VALUES ("L002","A002","300000",9,'2004-05-18',"150000");
75 •  INSERT INTO LOAN_24012011161 (loan_no,acc_no,loan_amt,interest_rate,loan_date,remaining_loan)
76      VALUES ("L003","A003","500000",11,'2004-06-15',"300000");
77 •  SELECT * FROM LOAN_24012011161;
```

loan_no	acc_no	loan_amt	interest_rate	loan_date	remaining_loan
L001	A001	100000.00	7.00	2004-01-01	75000.00
L002	A002	300000.00	9.00	2004-05-18	150000.00
L003	A003	500000.00	11.00	2004-06-15	300000.00

Create a table INSTALLMENT_24012011161

Column Name	Data Type	Size
loan_no	varchar2	5
inst_no	varchar2	5
inst_Date	Date	
Amount	Number	10,2

Query with Output :

```
47 • ⊖ CREATE TABLE INSTALLMENT_24012011161 (
48         loan_no VARCHAR(5),
49         inst_no VARCHAR(5),
50         inst_Date DATE,
51         Amount DECIMAL(10,2)
52   );
53 • DESCRIBE INSTALLMENT_24012011161;
```

Field	Type	Null	Key	Default	Extra
loan_no	varchar(5)	YES		NULL	
inst_no	varchar(5)	YES		NULL	
inst_Date	date	YES		NULL	
Amount	decimal(10,2)	YES		NULL	

Insert the following records in INSTALLMENT_24012011161 table

Loan_no	Inst_no	Inst_Date	Amount
L001	I001	2-Feb-04	15000
L002	I002	18-June-04	20000
L003	I003	15-July-04	20000

Query with Output :

```
79 • INSERT INTO INSTALLMENT_24012011161 (loan_no,inst_no,inst_Date,Amount)
80   VALUES ("L001","I001",'2004-02-02',15000);
81 • INSERT INTO INSTALLMENT_24012011161 (loan_no,inst_no,inst_Date,Amount)
82   VALUES ("L002","I002",'2004-06-18',20000);
83 • INSERT INTO INSTALLMENT_24012011161 (loan_no,inst_no,inst_Date,Amount)
84   VALUES ("L003","I003",'2004-07-15',20000);
85 • SELECT * FROM INSTALLMENT_24012011161;
```
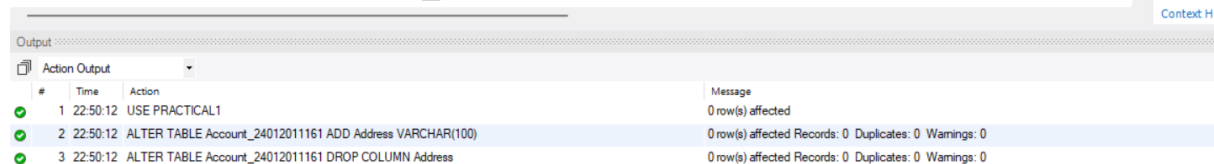
Field	Type	Null	Key	Default	Extra
loan_no	varchar(5)	YES		NULL	
inst_no	varchar(5)	YES		NULL	
inst_Date	date	YES		NULL	
Amount	decimal(10,2)	YES		NULL	

2CEIT303 : Database Management SystemPractical : 1

Answer following Queries based on above 3 tables.

1. Drop address column from Account table (if not created, create it first).

```
11 •  ALTER TABLE Account_24012011161 ADD Address VARCHAR(100);
12 •  ALTER TABLE Account_24012011161 DROP COLUMN Address;
```

Output

Action Output

#	Time	Action	Message
✓	1 22:50:12	USE PRACTICAL1	0 row(s) affected
✓	2 22:50:12	ALTER TABLE Account_24012011161 ADD Address VARCHAR(100)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0
✓	3 22:50:12	ALTER TABLE Account_24012011161 DROP COLUMN Address	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0

2. Rename Name to New_name in Account table.

```
13 •  ALTER TABLE Account_24012011161 RENAME COLUMN Name TO New_name;
```

Output

Action Output

#	Time	Action	Message
✓	1 22:51:32	ALTER TABLE Account_24012011161 RENAME COLUMN Name TO New_name	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0

3. Retrieve specific information for the account holder who are not in 'Ahmedabad' or 'Vadodara'.

```
17 •  SELECT *
18     FROM Account_24012011161
19     WHERE City NOT IN ('Ahmedabad', 'Vadodara');
```
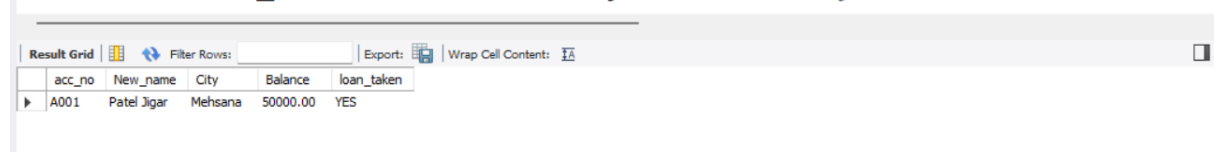
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

acc_no	New_name	City	Balance	loan_taken
A001	Patel Jigar	Mehsana	50000.00	YES
A002	Patel Ramesh	Mehsana	50000.00	YES

4. Display only those data whose account number is 'A001' and city is 'Mehsana'.

```
20 •  SELECT *
21     FROM Account_24012011161
22     WHERE Acc_No = 'A001' AND City = 'Mehsana';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

acc_no	New_name	City	Balance	loan_taken
A001	Patel Jigar	Mehsana	50000.00	YES

5. Display only those data whose account number is 'A001' or city is

'Mehsana'.

```
20 • SELECT *
21   FROM Account_24012011161
22   WHERE Acc_No = 'A001' OR City = 'Mehsana';
```

acc_no	New_name	City	Balance	loan_taken
A001	Patel Jigar	Mehsana	50000.00	YES
A002	Patel Ramesh	Mehsana	50000.00	YES

6. Retrieve those records of Account holders whose balance between 75000 and 100000.

```
23 • SELECT *
24   FROM Account_24012011161
25   WHERE Balance BETWEEN 75000 AND 100000;
```

acc_no	New_name	City	Balance	loan_taken
A003	Dave Hardik	Ahmedabad	75000.00	NO
A004	Soni Hetal	Ahmedabad	100000.00	NO
A005	Sony Atul	Vadodara	100000.00	YES

7. Retrieve those records of Account holders whose balance not between 50000 and 75000.

```
26 • SELECT *
27   FROM Account_24012011161
28   WHERE Balance NOT BETWEEN 50000 AND 75000;
```

acc_no	New_name	City	Balance	loan_taken
A004	Soni Hetal	Ahmedabad	100000.00	NO
A005	Sony Atul	Vadodara	100000.00	YES

8. Display only those records whose amount is 5000, 15000, 30000 from installment table.

```
30 • SELECT *
31   FROM Installment_24012011161
32   WHERE Amount IN (5000, 15000, 30000);
```

loan_no	inst_no	inst_Date	Amount
L001	I001	2004-02-02	15000.00

9. Display only those records whose amount is not in 5000, 15000, 30000 from installment table.

```
30 •  SELECT *
31    FROM Installment_24012011161
32    WHERE Amount IN (5000, 15000, 30000);
```

loan_no	inst_no	inst_Date	Amount
L001	I001	2004-02-02	15000.00

10. Display those records of account holders whose name starts with 'D'.

```
33 •  SELECT *
34    FROM Account_24012011161
35    WHERE New_name LIKE 'D%';
```

acc_no	New_name	City	Balance	loan_taken
A003	Dave Hardik	Ahmedabad	75000.00	NO

11. Display System date.

```
1 •  SELECT CURRENT_DATE;
```

CURRENT_DATE
2025-08-24

Result 11

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	21:28:17	SELECT CURRENT_DATE LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

12. Find the date,15 days after today's date.

```
1 •  SELECT CURRENT_DATE + INTERVAL 15 DAY;
```

CURRENT_DATE + INTERVAL 15 DAY
2025-09-08

Result 17

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	21:29:46	SELECT CURRENT_DATE + INTERVAL 15 DAY LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

13. Find the date,20 days before today's date.

```
1• SELECT CURRENT_DATE - INTERVAL 20 DAY;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 𝐈𝐀

CURRENT_DATE - INTERVAL 20 DAY
2025-08-04

Result 18 ×   Read Only   Context Help   Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓	1 21:30:21	SELECT CURRENT_DATE - INTERVAL 20 DAY LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

14. Perform the following operation using DUAL table.

5*5, 34+34, 1000/300, length of 'uvpce', display only month of system date

```
1• SELECT 5*5 AS Multiplication, 34+34 AS Addition, 1000/300 AS Division, LENGTH('uvpce') AS String_Length,
2   MONTH(CURRENT_DATE) AS Month_Only;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 𝐈𝐀

Multiplication	Addition	Division	String_Length	Month_Only
25	68	3.3333	5	8

Result 19 ×   Read Only   Context Help   Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓	1 21:33:05	SELECT 5*5 AS Multiplication, 34+34 AS Addition, 1000/300 AS Division, LENGTH('uvpce') AS String_Length, MONTH(CURRENT_DATE) AS Month_...	1 row(s) returned	0.000 sec / 0.000 sec

Create TABLE "TRANSACTION_24012011161" as given below.

Acc_no	Tr_date	Amt	Type_of_tr	Mode_of_pay
A001	3-may-21	10000	D	Cash
A002	5-july-21	5000	W	Cheque
A003	12-Aug-21	25000	D	Cheque
A004	15-may-21	30000	D	Cheque
A005	22-oct-21	15000	W	Cash

Query with Output :

```
36•⊖ CREATE TABLE TRANSACTION_24012011161 (
37        Acc_no VARCHAR(5),
38        Tr_date DATE,
39        Amt DECIMAL(10,2),
40        Type_of_tr CHAR(1),
41        Mode_of_pay VARCHAR(20)
42    );
43•  DESCRIBE TRANSACTION_24012011161;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 𝐈𝐀

Field	Type	Null	Key	Default	Extra
Acc_no	varchar(5)	YES		NULL	
Tr_date	date	YES		NULL	
Amt	decimal(10,2)	YES		NULL	
Type_of_tr	char(1)	YES		NULL	
Mode_of_pay	varchar(20)	YES		NULL	

```
44 •  INSERT INTO TRANSACTION_24012011161 (Acc_no, Tr_date, Amt, Type_of_tr, Mode_of_pay)
45     VALUES ('A001', '2021-05-03', 10000, 'D', 'Cash');
46 •  INSERT INTO TRANSACTION_24012011161 (Acc_no, Tr_date, Amt, Type_of_tr, Mode_of_pay)
47     VALUES ('A002', '2021-07-05', 5000, 'W', 'Cheque');
48 •  INSERT INTO TRANSACTION_24012011161 (Acc_no, Tr_date, Amt, Type_of_tr, Mode_of_pay)
49     VALUES ('A003', '2021-08-12', 25000, 'D', 'Cheque');
50 •  INSERT INTO TRANSACTION_24012011161 (Acc_no, Tr_date, Amt, Type_of_tr, Mode_of_pay)
51     VALUES ('A004', '2021-05-15', 30000, 'D', 'Cheque');
52 •  INSERT INTO TRANSACTION_24012011161 (Acc_no, Tr_date, Amt, Type_of_tr, Mode_of_pay)
53     VALUES ('A005', '2021-10-22', 15000, 'W', 'Cash');
54 •  SELECT * FROM TRANSACTION_24012011161;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Acc_no	Tr_date	Amt	Type_of_tr	Mode_of_pay
A001	2021-05-03	10000.00	D	Cash
A002	2021-07-05	5000.00	W	Cheque
A003	2021-08-12	25000.00	D	Cheque
A004	2021-05-15	30000.00	D	Cheque
A005	2021-10-22	15000.00	W	Cash

Perform given queries:

1. Find the total transaction amount of account holder from transaction table.

```
55 •  SELECT SUM(Amt) AS Total_Transaction_Amount
56     FROM TRANSACTION_24012011161;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Total_Transaction_Amount
85000.00

2. Find minimum amount of transaction table.

```
57 •  SELECT MIN(Amt) AS Minimum_Transaction_Amount
58     FROM TRANSACTION_24012011161;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Minimum_Transaction_Amount
5000.00

3. Find maximum amount of transaction table.

```
59 •  SELECT MAX(Amt) AS Maximum_Transaction_Amount
60     FROM TRANSACTION_24012011161;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Maximum_Transaction_Amount
30000.00

4. Count the total account holders from transaction table.

```
61 •  SELECT COUNT(DISTINCT Acc_no) AS Total_Account_Holders
62     FROM TRANSACTION_24012011161;
```

Total_Account_Holders
5

5. Count only those records whose made of payment is 'Cheque'.

```
63 •  SELECT COUNT(*)
64     FROM TRANSACTION_24012011161
65     WHERE Mode_of_pay = 'Cheque';
```

COUNT(*)
3

6. Count only those records whose Type_of_tr is not 'D'.

```
66 •  SELECT COUNT(*) AS Non_Deposit_Transactions
67     FROM TRANSACTION_24012011161
68     WHERE Type_of_tr <> 'D';
```

Non_Deposit_Transactions
2

7. Count only those records whose transaction made in the month of 'may'.

```
69 •  SELECT COUNT(*) AS May_Transactions
70     FROM TRANSACTION_24012011161
71     WHERE MONTH(Tr_date) = 5;
72
```

May_Transactions
2

8. Find the average value of transaction.

```
72 •  SELECT AVG(Amt) AS Average_Transaction
73     FROM TRANSACTION_24012011161;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ⅂A

Average_Transaction
17000.000000

9. Display the result of 4 rest to 4 (use power function).

```
1 · SELECT POWER(4,4) AS Result;
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ⅂A

Result
256

Result 31 ×   Read Only   Context Help   Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	21:50:30	SELECT POWER(4,4) AS Result LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

10. Find the square root of 25 (use sqrt function).

```
1 · SELECT SQRT(25) AS SquareRoot;
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ⅂A

SquareRoot
5

Result 32 ×   Read Only   Context Help   Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	21:51:06	SELECT SQRT(25) AS SquareRoot LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

11. Write the query for the following inbuilt Function.

LOWER, INITCAP, UPPER, SUBSTR, LENGTH, LTRIM, RTRIM, LPAD, RPAD.

```
74 •  SELECT
75        LOWER('HELLO WORLD') AS Lower_Case,
76        UPPER('hello world') AS Upper_Case,
77        SUBSTR('Transaction', 1, 5) AS Substring_Example,
78        LENGTH('Transaction') AS Length_Example,
79        LTRIM('   SQL') AS Left_Trim,
80        RTRIM('SQL    ') AS Right_Trim,
81        LPAD('123', 5, '0') AS Left_Pad,
82        RPAD('123', 5, '0') AS Right_Pad;
83
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ⅂A

Lower_Case	Upper_Case	Substring_Example	Length_Example	Left_Trim	Right_Trim	Left_Pad	Right_Pad
hello world	HELLO WORLD	Trans	11	SQL	SQL	00123	12300