PRACTICAL – 4

AIM: To execute value-matching and pattern-matching conditions on the bank's schema to retrieve specific data based on given requirements.

- **Constraints**

  • Not Null Constraints: Ensure critical fields are not null.
  • Unique Constraints: Ensure data integrity by limiting column values.
  • Check Constraints: Ensure columns have unique values where required.

- **DESCRIPTION (Theory):**

➢ **TASKS:**

1) Display all employees whose name start with 'A' and the third character is 'a'.
Test case: Verify the details of Aman and Adama is displayed.

CODE:-

```
SELECT *
FROM Employee
WHERE emp_name LIKE 'A_a%';
```

OUTPUT:

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	PHONE
104	Aman	3000	-	15	-
105	Aman	5000	50000	10	-
106	Anamika	2975	-	30	-
105	Aman	5000	50000	10	-

4 rows returned in 0.00 seconds CSV Export

2) Display the name, number and salary of those employees whose name is 5 characters long and the first three characters are 'Ani'.
Test case: Verify the details of Anita is displayed.

CODE:-

```
SELECT emp_name, phone, emp_sal
FROM Employee
WHERE emp_name LIKE 'Ani__';
```

OUTPUT:-

EMP_NAME	PHONE	EMP_SAL
Anita	-	1100

1 rows returned in 0.00 seconds CSV Export

3) Display all information of employees whose second character of name is either ‘M’ or ‘N’.
Test case: Verify the details of Aman, Anamika and Anita is displayed.

CODE:-

```
SELECT *
FROM Employee
WHERE emp_name LIKE '_m%' OR emp_name LIKE '_n%';
```

OUTPUT:-

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	PHONE
101	Smith	800	500	20	-
102	Snehal	1600	0	25	-
103	Anita	1100	500	20	-
104	Aman	3000	-	15	-
105	Aman	5000	50000	10	-
106	Anamika	2975	-	30	-
105	Aman	5000	50000	10	-

7 rows returned in 0.00 seconds CSV Export

4) Find the list of all customer names whose branch is in ‘Andheri’ or ‘Dadar’ or ‘Virar’.
Test case: Verify customer names such as Anil, Sunil and keyur is displayed.

CODE:-

```
Create Table tab3 as Select * from Employee, Job, deposit;
Select * from tab3;
SELECT emp_name
FROM tab3
WHERE bname IN ('andheri', 'dadar', 'virar');
```

OUTPUT:-

EMP_NAME
Smith
Smith
Smith
Smith
Smith
Smith
Smith
Smith
Smith
Smith
More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.02 seconds CSV Export

5) Display the job name whose first three characters in the job ID field are ‘FI_’.
Test case: Verify FI_MGR and FI_ACC is displayed.

CODE:-

```
SELECT job_title
FROM Job
WHERE Job_id LIKE 'FI_%';
```

OUTPUT:-

JOB_TITLE
Finance manager
Account
Account

3 rows returned in 0.02 seconds CSV Export

6) Display the title/name of the job whose last three characters are '_MGR' and whose maximum salary is greater than Rs 12000.

Test case: Verify Marketing manager is displayed.

CODE:-

```
SELECT job_title
FROM Job
WHERE job_id LIKE '%_MGR' AND max_sal > 12000;
```

OUTPUT:-

JOB_TITLE
Marketing manager

1 rows returned in 0.00 seconds

7) Display the non-null values of employees also employee name's second character should be 'n' and the string should be 5 characters long.

Test case: Verify 'Anita' details is displayed.

CODE:-

```
SELECT *
FROM Employee
WHERE emp_name IS NOT NULL
 AND emp_name LIKE '_n___';
```

OUTPUT:-

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	PHONE
103	Anita	1100	500	20	-

1 rows returned in 0.00 seconds CSV Export

8) Display the null values of the employee and also employee name's third character should be 'a'.

Test case: Verify 'Aman' details is displayed.

CODE:-

```
SELECT *
FROM Employee
WHERE emp_name IS NULL
 OR emp_name LIKE '__a%';
```

OUTPUT:-

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	PHONE
104	Aman	3000	-	15	-
105	Aman	5000	50000	10	-
106	Anamika	2975	-	30	-
105	Aman	5000	50000	10	-

4 rows returned in 0.02 seconds CSV Export

9) What will be output if you are giving the LIKE predicate as '%_%' ESCAPE '\'
Test Case: Verify that the retrieved job IDs contain an underscore character.

CODE:-

```
SELECT job_id
FROM Job
WHERE job_id LIKE '%\_%' ESCAPE '\';
```

OUTPUT:-

JOB_ID
IT_PROG
MK_MGR
FI_MGR
FI_ACC
FI_ACC
COMP_OP
COMP_OP

7 rows returned in 0.00 seconds

CONCLUSION:

This practical taught me about the LIKE % and , string's length operator, which searches for specific character patterns within a schema, the IN() function, and the IS NULL and IS NOT NULL Boolean functions. It also covered the IN() function for records containing specific attribute values, and the IS NULL and IS NOT NULL Boolean functions for checking null values and Check tuple is null or not.