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Programme: B.Tech CSE (Spec. AI&ML) (Batch 5)

Course: Advanced Database Management Systems

LAB 6

Title: To understand the concepts of Views.

Objective: Students will be able to implement the concept of views.

1. Create a table of table name: EMPLOYEES and add 6 rows

Column Name	Data Type	Width	Attributes
Employee_id	character	10	PK
First_Name	character	30	NN
Last_Name	character	30	NN
DOB	date	-	-
Salary	number	25	NN
Department_id	character	10	-

Ans.1

```
CREATE TABLE EMPLOYEES(  
    Employee_id VARCHAR(10) PRIMARY KEY,  
    First_Name VARCHAR(30) NOT NULL,  
    Last_Name VARCHAR(30) NOT NULL,  
    DOB DATE,  
    Salary INTEGER NOT NULL,  
    Department_id VARCHAR(10) NOT NULL  
);
```

```
INSERT INTO EMPLOYEES (Employee_id, First_Name, Last_Name, DOB, Salary, Department_id)  
VALUES ('0x23487', 'Ravi', 'Kumar', to_date('05-12-1998', 'dd-mm-yyyy'), 50000, '0x34543');
```

```
INSERT INTO EMPLOYEES (Employee_id, First_Name, Last_Name, DOB, Salary, Department_id)  
VALUES ('1x33558', 'Mohan', 'Sharma', to_date('23-08-1997', 'dd-mm-yyyy'), 80000,  
    '1x34543');
```

```
INSERT INTO EMPLOYEES (Employee_id, First_Name, Last_Name, DOB, Salary, Department_id)  
VALUES ('1x83497', 'Rohit', 'Verma', to_date('24-02-1995', 'dd-mm-yyyy'), 120000,  
    '0x34543');
```

```
INSERT INTO EMPLOYEES (Employee_id, First_Name, Last_Name, DOB, Salary, Department_id)  
VALUES ('0x89437', 'Jim', 'Halpert', to_date('21-03-1998', 'dd-mm-yyyy'), 30000, '1x34543');
```

```
INSERT INTO EMPLOYEES (Employee_id, First_Name, Last_Name, DOB, Salary, Department_id)
VALUES ('0x22423', 'Shyam', 'Sharma', to_date('24-02-1989', 'dd-mm-yyyy'), 60000,
        '0x34543');
```

```
INSERT INTO EMPLOYEES (Employee_id, First_Name, Last_Name, DOB, Salary, Department_id)
VALUES ('0x83489', 'Pallavi', 'Kumari', to_date('09-08-1998', 'dd-mm-yyyy'), 55000,
        '1x34543');
```

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1SELECT * FROM EMPLOYEES;

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DOB	SALARY	DEPARTMENT_ID
1x33558	Mohan	Sharma	23-AUG-97	80000	1x34543
1x83497	Rohit	Verma	24-FEB-95	120000	0x34543
0x89437	Jim	Halpert	21-MAR-98	30000	1x34543
0x22423	Shyam	Sharma	24-FEB-89	60000	0x34543
0x83489	Pallavi	Kumari	09-AUG-98	55000	1x34543
0x23487	Ravi	Kumar	05-DEC-98	50000	0x34543

Download CSV6 rows selected.

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2. Execute the following view related queries:

2.1. Create View of name emp_view and the column would be Employee_id, Last_Name, salary and department_id only.

Ans.2.1:

```
CREATE VIEW emp_view AS  
SELECT Employee_id, Last_Name, Salary, Department_id FROM EMPLOYEES;
```

The screenshot shows the Live SQL interface. The left sidebar contains navigation options: 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 code:

```
1 CREATE VIEW emp_view AS  
2 SELECT Employee_id, Last_Name, Salary, Department_id FROM EMPLOYEES;  
3
```

Below the code editor, the message 'View created.' is displayed. The bottom of the interface shows 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 20.3.1, running Oracle Database 19c Enterprise Edition - 19.8.0.0.0 Built with ♥ using Oracle APEX'.

The screenshot shows the Live SQL interface with the same sidebar. The main area is titled 'SQL Worksheet' and contains the following SQL code:

```
1 SELECT * FROM emp_view;  
2
```

Below the code editor, the query results are displayed in a table format:

EMPLOYEE_ID	LAST_NAME	SALARY	DEPARTMENT_ID
1x33558	Sharma	80000	1x34543
1x83497	Verma	120000	0x34543
0x89437	Halpert	30000	1x34543
0x22423	Sharma	60000	0x34543
0x83489	Kumari	55000	1x34543
0x23487	Kumar	50000	0x34543

Below the table, the message 'Download CSV' and '6 rows selected.' are displayed. The bottom of the interface shows 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 20.3.1, running Oracle Database 19c Enterprise Edition - 19.8.0.0.0 Built with ♥ using Oracle APEX'.

2.2. Insert values into view(remove the NOT NULL constraint and then insert values):

Ans.2.2:

```
ALTER TABLE employees  
MODIFY first_name varchar(30) NULL;
```

```
INSERT INTO emp_view (employee_id, last_name, salary, department_id)  
VALUES ('0x32423', 'Kiran', 33000, '0x34543');
```

The screenshot displays the Oracle Live SQL web interface. On the left is a dark sidebar with navigation links: Home, SQL Worksheet (highlighted), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled 'SQL Worksheet' and contains a text editor with the following SQL code:

```
1 INSERT INTO emp_view (employee_id, last_name, salary, department_id)
2 VALUES ('0x32423', 'Kiran', 33000, '0x34543');
3
```

Below the editor, the execution result is shown: '1 row(s) inserted.' The interface includes a top header with 'Live SQL', 'Feedback', 'Help', and a user profile. The footer contains Oracle branding, copyright information (© 2020 Oracle Corporation), and links to the Oracle Learning Library, Ask Tom, Dev Gym, and Database Doc.

2.3. Modify, delete and drop operations are performed on view.:

Ans.2.3:

```
DELETE FROM emp_view  
WHERE salary < 50000;
```

The screenshot shows the Oracle Live SQL interface. On the left is a dark sidebar with 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 code editor with the following SQL statement:

```
1 DELETE FROM emp_view  
2 WHERE salary < 50000;  
3
```

Below the code editor, the output shows '2 row(s) deleted.' The top of the interface includes a 'Live SQL' header with a feedback link, a help icon, and a user profile. The bottom of the interface features the Oracle logo, 'Integrated Cloud Applications & Platform Services' text, and copyright information: '© 2020 Oracle Corporation - Privacy - Terms of Use', 'Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter', 'Live SQL 20.3.1, running Oracle Database 19c Enterprise Edition - 19.8.0.0.0', and 'Built with ♥ using Oracle APEX'.

```
DROP VIEW emp_view;
```

The screenshot shows the Oracle Live SQL interface. On the left is a dark sidebar with 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 code editor with the following SQL statement:

```
1 DROP VIEW emp_view;  
2
```

Below the code editor, the output shows 'View dropped.' The top of the interface includes a 'Live SQL' header with a feedback link, a help icon, and a user profile. The bottom of the interface features the Oracle logo, 'Integrated Cloud Applications & Platform Services' text, and copyright information: '© 2020 Oracle Corporation - Privacy - Terms of Use', 'Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter', 'Live SQL 20.3.1, running Oracle Database 19c Enterprise Edition - 19.8.0.0.0', and 'Built with ♥ using Oracle APEX'.

2.4. Creates a view named salary_view. The view shows the employees in department 20 and their annual salary

Ans.2.4:

```
CREATE VIEW salary_view AS  
SELECT * FROM employees  
WHERE department_id = '1x34543';
```

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```
1 CREATE VIEW salary_view AS  
2 SELECT * FROM employees  
3 WHERE department_id = '1x34543';  
4
```

View created.

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SQL Worksheet

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```
1 SELECT * FROM salary_view;  
2
```

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DOB	SALARY	DEPARTMENT_ID
1x33558	Mohan	Sharma	23-AUG-97	80000	1x34543
0x83489	Pallavi	Kumari	09-AUG-98	55000	1x34543

Download CSV
2 rows selected.

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