MATERIALIZED VIEWS:

- ➢ **ORACLE 8I INTRODUCED MATERIALIZED VIEWS. GENERALLY, VIEWS DOESN'T STORE ANY DATA WHERE AS MATERIALIZED VIEWS ARE STORING DATA.**
- ➢ **THESE VIEWS ARE USED IN DATA WAREHOUSING AND HANDLING BY DBA. MATERIALIZED VIEWS ALSO CREATED FROM BASE TABLES.**

DIFFERENCES BETWEEN VIEW AND MATERIALIZED VIEW:

VIEW	MATERIALIZED VIEW
VIEW DOES NOT STORE ANY DATA.	MATERIALIZED VIEW STORE DATA.
WHEN WE DROPPING BASE TABLE THEN VIEW CANNOT BE ACCESSIBLE	WHEN WE DROPPING BASE TABLE THEN MATERIALIZED VIEW CAN BE ACCESSIBLE.
IT IS DEPENDENT OBJECT	IT IS INDEPENDENT OBJECT
WE CAN PERFORM DML OPERATIONS ON VIEW	WE CANNOT PERFORM DML OPERATIONS ON MATERIALIZED VIEW

SYNTAX:

CREATE MATERIALIZED VIEW <VIEW NAME> AS SELECT * FROM

<TABLE NAME>;

EX:

SQL> CREATE TABLE TEST1 (SNO INT, NAME VARCHAR2 (20));

SQL> CREATE VIEW V1 AS SELECT * FROM TEST1;

VIEW CREATED.

SQL> CREATE MATERIALIZED VIEW MV1 AS SELECT * FROM TEST1;

MATERIALIZED VIEW CREATED.

TESTING:

SQL> INSERT INTO TEST1 VALUES (101,'SMITH');

> **HERE, BASE TABLE (TEST1) AND VIEW (V1) TABLE DATA IS UPDATED BUT MATERIALIZED VIEW (MV1) TABLE DATA IS NOT UPDATED. IF WE WANT TO UPDATE DATA IN MATERIALIZED VIEW THEN WE REFRESH MATERIALIZED VIEW BY USING THE FOLLOWING SYNTAX,**

SYNTAX:

EXEC DBMS_MVIEW.REFRESH ('MATERIALIZED VIEW NAME');

EX: EXEC DBMS_MVIEW.REFRESH ('MV1');

ON DEMAND / ON COMMIT:

IN ORACLE WE ARE REFRESHING MATERIALIZED VIEW IN TWO WAYS THOSE ARE,

I) ON DEMAND:

IT IS A DEFAULT REFERESHING METHOD.IN THIS METHOD WE ARE REFRESHING MATERIALIZED VIEW BY USING "DBMS_MVIEW" PROCEDURE.

SYNTAX:

EXECUTE DBMS_MVIEW.REFRESH ('MVIEW NAME');

EX:

EXECUTE DBMS_MVIEW.REFRESH ('MV1');

II) ON COMMIT:

WE CAN REFRESHING A MATERIALIZED VIEW WITHOUT USING "DBMS_MVIEW" BUT USING "ON COMMIT" METHOD.

SYNTAX:

CREATE MATERIALIZED VIEW <VIEW NAME>

REFRESH ON COMMIT

AS SELECT * FROM <TN>;

EX:

CREATE TABLE TEST2 (EID INT, SAL NUMBER (10));

EX:

CREATE MATERIALIZED VIEW MV2 REFRESH ON COMMIT

AS SELECT * FROM TEST2;

ERROR:

TABLE 'TEST2' DOES NOT CONTAIN A PRIMARY KEY CONSTRAINT.

EX:

CREATE TABLE TEST2 (EID INT PRIMARY KEY, SAL NUMBER (10));

EX:

CREATE MATERIALIZED VIEW MV2 REFRESH ON COMMIT

AS SELECT * FROM TEST2;

MATERIALIZED VIEW CREATED.

NOTE: WHEN WE CREATE MATERIALIZED VIEW ALONG WITH REFRESH ON COMMIT METHOD ON BASE TABLE THEN BASE TABLE SHOULD HAVE PRIMARY KEY CONSTRAINT OTHERWISE ORACLE RETURNS AN ERROR.

TESTING:

SQL> INSERT INTO TEST2 VALUES (101,25000);

SQL> COMMIT;

SQL> SELECT * FROM MV2;

NOTE: IF WE WANT TO VIEW MATERIALIZED VIEWS

THEN WE ARE USING THE FOLLOWING DATA DICTIONARY IS

"USER_MVIEWS".

EX:

SQL> DESC USER_MVIEWS;

SQL> SELECT MVIEW_NAME FROM USER_MVIEWS;

SYNTAX TO DROP MATERIALIZED VIEW:

SQL> DROP MATERIALIZED VIEW <MVIEW NAME>;

SQL> DROP MATERIALIZED VIEW MV1;

MATERIALIZED VIEW DROPPED.