

Ex no:	8- Creating of Other Database Objects
Date	12-03-24

Aim:

To manage data within a database, utilizing various database objects to facilitate data storage, retrieval, manipulation, security.

Description:

Database objects plays a crucial role in structuring and optimizing the performance of a database system these objects include tables, views, index, sequences, and synonyms.

1. Table- Basic unit of storage; composed of rows and columns.
2. View- Logically represents subsets of data from one or more tables.
3. Sequence- Generates primary key values.
4. Index- Improves the performance of some queries.
5. Synonym- Alternative name for an object

View

You embed a subquery within the CREATE VIEW statement.

```
CREATE [OR REPLACE] [FORCE|NOFORCE] VIEW view[(alias[, alias]...)]  
AS subquery  
[WITH CHECK OPTION [CONSTRAINT constraint]]  
[WITH READ ONLY [CONSTRAINT constraint]];
```

Removing a View

```
DROP VIEW view_name;
```

Inline Views

An inline view is a subquery with an alias (or correlation name) that you can use within a SQL statement.

Top-N Analysis

The high-level structure of a Top-N analysis query is:

```
SELECT ROWNUM as RANK, last_name, salary FROM (SELECT last_name,salary FROM  
employees  
ORDER BY salary DESC) WHERE ROWNUM <= 3;
```

Sequence

Define a sequence to generate sequential numbers automatically:

```
CREATE SEQUENCE sequence  
  
    [INCREMENT BY n]  
  
    [START WITH n]  
  
    [{MAXVALUE n | NOMAXVALUE}]  
  
    [{MINVALUE n | NOMINVALUE}]  
  
    [{CYCLE | NOCYCLE}]  
  
    [{CACHE n | NOCACHE}];
```

Insert:

```
INSERT INTO departments(department_id, department_name, location_id)  
  
VALUES (dept_deptid_seq.NEXTVAL,'Support', 2500);
```

Removing a Sequence

```
DROP SEQUENCE dept_deptid_seq;
```

Index

Automatically: A unique index is created automatically when you define a PRIMARY KEY or UNIQUE constraint in a table definition.

Manually: Users can create nonunique indexes on columns to speed up access to the rows.

```
CREATE INDEX index ON table (column[, column]...);
```

Removing an Index

```
DROP INDEX index;
```

Synonyms

```
CREATE SYNONYM d_sum FOR dept_sum_vu;
```

Removing a synonym

```
DROP SYNONYM sy_name;
```

