Database Objects – Sequences and Synonyms

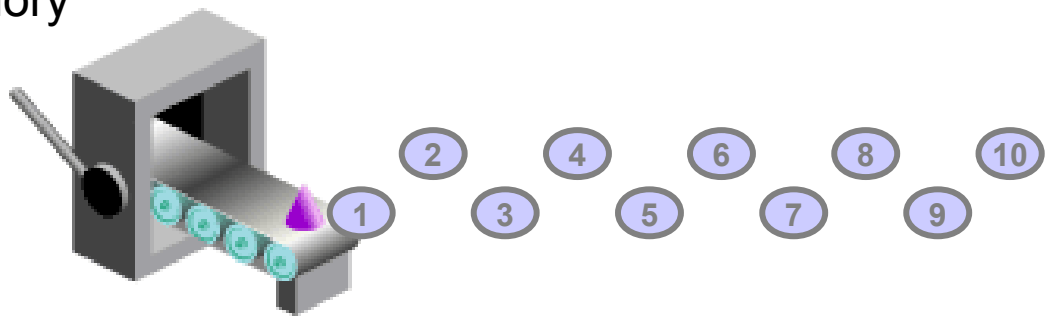
Database Objects

Object	Description
Sequence	Generates numeric values
Synonym	Gives alternative names to objects

Sequences

Sequences are database objects from which users can generate unique integers. The sequence generator generates sequential numbers.

- Can automatically generate unique numbers
- Is a sharable object
- Can be used to create a primary key value
- Replaces application code
- Speeds up the efficiency of accessing sequence values when cached in memory



Creating a Sequence

Syntax:-

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

Example:-

```
CREATE SEQUENCE dept_deptid_seq
                INCREMENT BY 10
                START WITH 120
                MAXVALUE 9999
                NOCACHE
                NOCYCLE;
Sequence created.
```

NEXTVAL and CURRVAL Pseudo columns

- **sequence_name.NEXTVAL** returns the next available sequence value. It returns a unique value every time it is referenced, even for different users.
- **sequence_name.CURRVAL** obtains the current sequence value.
- NEXTVAL must be issued for that sequence before CURRVAL contains a value.

Example:-

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

```
SELECT   dept_deptid_seq.CURRVAL
FROM     dual;
```

Synonyms

A synonym is an alias or an alternate name for any database objects like tables, views sequences etc.

- Synonyms simplify access to objects by creating a synonym
- They create an easier reference to a table that is owned by another user
- Synonyms shorten lengthy object names
- Synonyms may be used to reference the original object in SQL queries

as well as PL/SQL

Syntax:-

```
CREATE [PUBLIC] SYNONYM synonym
FOR    object;
```

Example:-

```
CREATE SYNONYM  d_sum
FOR  dept_sum_vu;
Synonym Created.
```