SQL Day 21 (Sequence and Index)

Sequence

What is Sequence?

Ans: Sequence is a database Object that creates integer value.

You can create sequence and then use them to generate number.

Advantages of Sequence

1) Generate unique number automatically
2) It is sharable object
3) It is used to create a primary key value.

How to create a sequence?

Syntax:

```
create Sequence sequence_name
start with N
increment by N
maxvalue N
Minvalue N
cycle | Nocycle
Nocahe | cache N
```

Examples

Example 1 Create sequence s1;	Example 5 Create sequence s1 minvalue 500	Example 9 Create sequence s1 cycle
Example 2 Create sequence s1 start with 100;	Example 6 Create sequence s1 maxvalue 500	Create sequence s1 maxvalue 100 cycle
Example 3 Create sequence s1 increment by 1	Example 7 Create sequence s1 nocycle	Example 11 Create sequence s1 start with 101 increment by 1 maxvalue 5000 minvalue 100 cycle cache 100
Example 4 Create sequence s1 increment by 1 start with 100;	Example 8 Create sequence s1 cache 100	

Note: Example 9 is invalid because when we are using cycle then you need to specify maxvalue.

Start value always greater than min value.

Important points about sequence

1) While Creating sequence Order of parameter is not important
2) All parameter are optional
3) If we are not specifying start with parameter then bydefault it will start from 1
4) If we are not specifying increment by parameter then by default it will increment by 1
5) By default nocycle is enabled.
6) By default nocache is enabled
6) If we are specifying cycle then we need to specify maxvalue parameter
7) If we are Specifying start with and minvalue then start with parameter value must be greater than min value parameter.

How to use Sequence?

To access sequence value, we use following keywords

To access next value of Sequence we use **NEXTVAL** keyword

To access current value of sequence we use **CURRVAL** keyword

Example:

Insert new department name “Support” in Department table

SQL query is

```
INSERT INTO department values(dept_id_pk_seq.nextval, 'Support')
```

How to Alter sequence?

Syntax

```
Alter Sequence sequence_name
start with N
increment by N
maxvalue N
Minvalue N
cycle | Nocycle
Nocahe | cache N
```

How to drop sequence?

Syntax:

Drop sequence sequence_name

Example: drop sequence named **dept_id_pk_seq**

Drop Sequence dept_id_pk_seq

Creating index

What is Index?

It is a schema object

It is used by Oracle server **to speed up** the retrieval of rows from table

How many ways index get created?

Index get created in two ways

a) Automatically
b) Manually

Automatically: A **unique index** is created automatically when you define a PRIMAY KEY or Unique Constraint in the table definition

Manually: User can create nonunique indexes on column to speed up access of rows

How to Create Index Manually?

Syntax:

Create INDEX index_name

ON table_name(column1_name,column2_name)

Example: Improve the speed of query access to the Last_name column in the Employees table:

SQL Query

```
Create INDEX emp_lname_idx
on Employee(last_name)
```

How to Drop Index?

Syntax:

```
Drop index index_name
```

Example:

```
Drop index emp_lname_idx;
```

Creating user

How to Create a User?

To create user below syntax is used

Create user user_name identified by password;

Example:

Create user Martin identified by Martin;

How to drop user?

To drop use below syntax is used?

Drop user user_name;

Example

Drop user Martin;