SQL | SEQUENCES

Sequence is a set of integers 1, 2, 3, … that are generated and supported by some database systems to produce unique values on demand.

A sequence is a user defined schema bound object that generates a sequence of numeric values.

Sequences are frequently used in many databases because many applications require each row in a table to contain a unique value and sequences provides an easy way to generate them.

The sequence of numeric values is generated in an ascending or descending order at defined intervals and can be configured to restart when exceeds max\_value.

Syntax:

CREATE SEQUENCE sequence\_name

START WITH initial\_value

INCREMENT BY increment\_value

MINVALUE minimum value

MAXVALUE maximum value

CYCLE|NOCYCLE ;

sequence\_name: Name of the sequence.

initial\_value: starting value from where the sequence starts.

Initial\_value should be greater than or equal

to minimum value and less than equal to maximum value.

increment\_value: Value by which sequence will increment itself.

Increment\_value can be positive or negative.

minimum\_value: Minimum value of the sequence.

maximum\_value: Maximum value of the sequence.

cycle: When sequence reaches its set\_limit

it starts from beginning.

nocycle: An exception will be thrown

if sequence exceeds its max\_value.

Example

Following is the sequence query creating sequence in ascending order.

Example 1:

CREATE SEQUENCE sequence\_1

start with 1

increment by 1

minvalue 0

maxvalue 100

cycle;

Above query will create a sequence named sequence\_1.Sequence will start from 1 and will be incremented by 1 having maximum value 100. Sequence will repeat itself from start value after exceeding 100.

Example 2:

Following is the sequence query creating sequence in descending order.

CREATE SEQUENCE sequence\_2

start with 100

increment by -1

minvalue 1

maxvalue 100

cycle;

Above query will create a sequence named sequence\_2.Sequence will start from 100 and should be less than or equal to maximum value and will be incremented by -1 having minimum value 1.

Example to use sequence : create a table named students with columns as id and name.

CREATE TABLE students

(

ID number(10),

NAME char(20)

);

Now insert values into table

INSERT into students VALUES(sequence\_1.nextval,'Ramesh');

INSERT into students VALUES(sequence\_1.nextval,'Suresh');

where sequence\_1.nextval will insert id’s in id column in a sequence as defined in sequence\_1.

Output:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

| ID | NAME |

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| 1 | Ramesh |

| 2 | Suresh |

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