**NEW FEATURES FROM ORACLE 12c**

**Oracle Database 12c with** “***multitenant***” architecture database management gets very easy. It provides pluggable database environment. It can consist many databases in one environment. All databases getting together share same background processes and memory. This architecture makes database management easier and at the same time it provides an environment for cloud architecture.

From **Oracle Database 12c a lot of useful features came out for DBAs** and **developers**.

**Some of new features for DataBase developers:-**

**Sequence as Default Value**

Before Oracle 12c we have to assign the variable or column sequence using sequence . nextval, but now we can use sequence as default value. when new row is added sequence automatically increments and writes the column. It can be shown an example below:

Create sequence custid

start with 101011;

Create table customer

(

cid number **default custid.nextval** primary key,

cname varchar2(20),

);

Sample insertions: -

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Insert into customer(cname) values(‘jack’);

Insert into customer(cname) values(‘kajal’);

Insert into customer(cname) values(‘anand’);

Sample data in the table:-

cid cname

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101011 jack

101012 kajal

101013 anand

**Invisible Column**

Another new feature is **we can define a column as invisible column.** when we define column as invisible it is not being fetched when we use generic query like **"select \* from"** . It can be queried by only direct usage like "select invcolumn from ..". This feature is useful especially when we don’t need that column instead of drop it or some security reasons for example password column etc.

Create table user\_accounts

(

Username varchar2(10),

Pwd varchar2(10)

);

Insert into user\_accounts values(‘dinesh’,’abc123’);

Insert into user\_accounts values(‘krish’,’k123’);

Insert into user\_accounts values(‘raj’,’r456’);

ALTER TABLE user\_accounts MODIFY (pwd **invisible**);

Select \* from user\_accounts; (don’t get invisible column values)

Select pwd from user\_accounts; ( display invisible column values)

**Multiple Indexes On the Same Column**

Multiple indexes on the same column cannot be created in prior version. With oracle 12c this is possible but multiple indexes must be different types like BitMap, B-Tree etc.

**Varchar2 Length to 32,767 Bytes**

The maximum size of the **VARCHAR2, NVARCHAR2,** and **RAW** data types has been increased from **4,000** to **32,767** bytes.

**Top-N Feature**

With Oracle 12c new keywords came out for Top-N queries.  It can be shown an example below:

By using the clause **FETCH FIRST N ROWS ONLY.**

**“N”** represents number of records.

**Ex:**

**Display top 5 least salaried emp details?**

**Select \* from emp Order by sal**

**FETCH FIRST 5 ROWS ONLY;**

**Identity Columns**

With Oracle 12c we can define a column as identity column. When new row is added sequence automatically increments and writes the column. It can be shown an example below:

**create table mytable (**

**id number generated as identity,**

**...**

**);**

**With Clause**

We can use pl/sql in select query using new with clause. It can be shown an example below:

**WITH**

**FUNCTION f\_incr(n IN NUMBER) RETURN NUMBER IS**

**BEGIN**

**RETURN n+1;**

**END;**

**SELECT f\_incr(1)**

**FROM dual;**