Dual Table:

Dual is a system defined table.

i.e Dual table is also called as a pre-defined table which exists by default in oracle database.

Dual table is having one row and one column.

Dual table available to all the users of the database.

Dual is used to test the functions, pseudo columns and to perform simple arithmetic expressions.

Data Dictionary:

A Data Dictionary is the central source of info. of

every RDBMS.

A Data Dictionary is a collection of pre-defined set of tables.

These pre-defined tables are also called as Dictionary Tables or System Tables.

There are thousands of system tables in Oracle db.

All the system tables are created by the DBA, by executing some pre-defined scripts provided by Oracle

Corporation.

All the system tables belong to "SYS" and "SYSTEM" schemas.

The Owner of "SYS" and "SYSTEM" schemas is DBA.

All the users of the database are having only read (SELECT) permission on most of the system tables.

Oracle, on its own, writes the data to these system tables, using "RECURSIVE SQL".

RECURSIVE SQL:

The SQL prepared and executed by oracle db server on its own is called as RECURSIVE SQL.

The data of these system tables is called as "Meta Data".

META DATA:

The data about the user and user's data is called as meta-data.

The Meta data exists in the data dictionary tables of Oracle DB.

Oracle dB server write meta data to data dictionary tables on its own using recursive SQL.

The owner of meta data is Sys and system users.

These two users (Sys & System) belong to DBA.

DBA -- Database Administrator.

DBA is the super user of any database.

DBA is responsible for the creation of database, configuring the database server, creation of users, defining user roles, giving permissions to the user and creating network connections etc.

Type of Database Objects in Oracle DB:

<u>SQL OBJECTS</u>:

TABLE

VIEW

MATERIALIZED VIEW

SYNONYM

SEQUENCE

INDEX

CLUSTER

ROLE

DIRECTORY

TYPE

USER

TABLESPACE

PL/SQL OBJECTS:

PROCEDURE

FUNCTION

PACKAGE

TRIGGER

DBLINK

To get the Info about TABLE, VIEW, SYNONYM and CLUSTER

use the following command:

SELECT * FROM TAB;

To get the Info about

TABLE, VIEW, SYNONYM and SEQUENCE use the following command:

select * from cat;

To get the Info about all the available dictionary tables to a user, use the following command:

SELECT * FROM DICTIONARY;

SELECT * FROM DICT;

Type of Dictionary Tables:

There are 2 types of Dictionary Views (Tables) in Oracle DB.

One is Dynamic Views, that are created when Oracle Instance starts and populated with the meta data.

These view names start with V$.

The other type the data dictionary views are called as Static Views. These views generally store the data in the Oracle database.

These view names generally start with USER_, ALL_ and DBA_.

USER_:

These views gives info of your own schema objects.

ALL_:

These views gives info of your own schema objects, and also the objects on which you are having permissions.

DBA_:

These views give info of all the objects those are related to dba.

These dictionary tables are not accessible by the normal users.

The following are few most frequently used Data Dictionary view.

User_TABLES   ALL_TABLES   DBA_TABLES

USER_VIEWS   ALL_VIEWS   DBA_VIEWS

USER_SYNONYMS ALL_SYNONYMS, DBA_SYNONYMS

USER_INDEXES   ALL_INDEXES   DBA_INDEXES

USER_SEQUENCES ALL_SEQUENCES DBA_SEQUENCES

USER_CLUSTERS   ALL_CLUSTERS   DBA_CLUSTERS

USER_SOURCE   ALL_SOURCE   DBA_SOURCE

USER_TRIGGERS ALL_TRIGGERS   DBA_TRIGGERS

USER_TABLESPACES ALL_TABLESPACES

USER_SEGMENTS   ALL_SEGMENTS   DBA_SEGMENTS

USER_PROCEDURES ALL_PROCEDURES

USER_TYPES

USER_CONSTRAINTS

USER_TAB_COLUMNS

USER_CONS_COLUMNS

USER_TAB_COMMENTS

USER_OBJECTS

USER_IND_COLUMNS

USER_PRIV_COLUMNS

USER_PASSWORD_LIMITS

USER_RESOURCE_LIMITS

USER_RECYCLEBIN

USER_TAB_MODIFICATIONS

USER_OBJECT_SIZE

Type of Data Dictionary tables in Oracle Database:

1. Static Data Dictionary Tables

2. Dynamic Data Dictionary Tables.