

INTRODUCTION TO ORACLE:

ORACLE IS A RELATIONAL DATABASE AN RDBMS PRODUCT FROM ORACLE CORPORATION IN 1979.WHICH IS USED TO STORE DATA (OR) INFORMATION PERMANANTLY i.e., IN HARD DISK ALONG WITH SECURITY.

ORACLE IS A PLATFORM INDEPENDENT AN RDBMS PRODUCT.IT MEANS THAT IT CAN DEPLOYEE (INSTALL) IN ANY OS LIKE WINDOWS, LINUX, UNIX, SOLARIES, MAC.... etc.

PLATFORM:

- IT A COMBINATION OF OPERATING SYSTEM AND MICRO PROCESSOR.THESE ARE AGAIN CLASSIFIED INTO TWO TYPES.

1) PLATFORM INDEPENDENT:

- IT SUPPORTS ANY OS WITH THE COMBINATION OF ANY MICRO PROCESSOR.

EX: ORACLE, MYSQL, JAVA, .NET.... etc.

2) PLATFORM DEPENDENT:

- IT SUPPORTS ONLY ONE OS WITH COMBINATION OF ANY MICRO PROCESSOR.

EX: C - LANGUAGE.

Versions of ORACLE:

Year	Version	Features
1979	Oracle 1.0	Not Public released
1980	Oracle 2.0	First Public released, Basic SQL functionalities.
1982	Oracle 3.0	First Portable DB.

1984	Oracle 4.0	Introduced read consistency.
1986	Oracle 5.0	Introduced client-server

		architecture.
1988	Oracle 6.0	Introduced PL/SQL
1992	Oracle 7.0	Integrity Constraints introduced, Varchar data type changed into Varchar2, Stored procedures, functions and triggers
1997	Oracle 8.0	Object Oriented Features, Table partitioning, Instead Triggers
1998	Oracle 8i(Internet)	Rollup, cube methods, Columns increased per table up to 1000
2001	Oracle 9i	Renaming Column, Ansi Joins

2004	Oracle 10g(grid technologies)	Introduced Admin side operations, flashback query, Indicate of clauses, regular expressions
2007	Oracle 11g	Read only tables, virtual tables, integer data type, using sequence, enables and disables triggers.
2013	Oracle12c (cloud technology)	Truncate table cascade, multiple indexes,invisiable column, sequence session, new auto increment by

		using Identity.
2018	Oracle18c	Polymorphic Table Functions,

		Active Directory Integration
2019	Oracle19c	Active Data Guard DML Redirection, Automatic Index Creation, SQL Queries on Object Stores.

WORKING WITH ORACLE:

WHEN WE INSTALL ORACLE SOFTWARE INTERNALLY TWO COMPONENTS ARE INSTALLED.THOSE ARE,

- 1. ORACLE CLIENT**
- 2. ORACLE SERVER**

1. ORACLE CLIENT:

BY USING ORACLE CLIENT TOOL USER CAN PERFORM THE FOLLOWING THREE OPERATIONS ARE

- ☛ USER CAN CONNECT TO ORACLE SERVER**
- ☛ USER CAN SEND REQUEST TO ORACLE SERVER**
- ☛ USER CAN RECEIVE RESPONSE FROM ORACLE SERVER.**

**Ex: SQLPLUS, TOAD, SQL DEVELOPER, SQL NAVIGATOR.....
etc.**

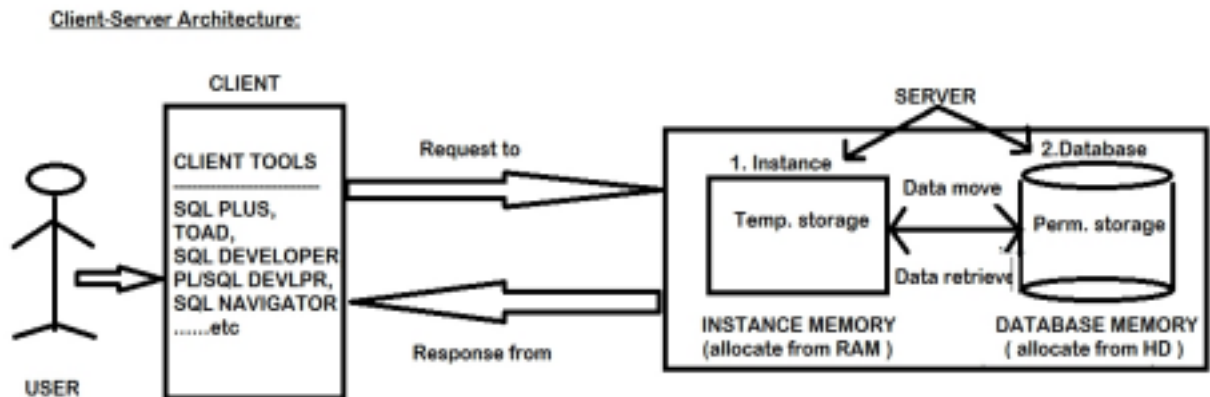
2. ORACLE SERVER:

ORACLE SERVER MANAGE TWO MORE SUB COMPONENTS INTERNALLY THOSE ARE,

- ☛ INSTANCE**
- ☛ DATABASE**

INSTANCE WILL ACT AS TEMPORARY MEMORY WHICH

WILL ALLOCATE FROM RAM AND STORED DATA / INFORMATION TEMPORARY WHERE AS DATABASE IS A PERMANENT MEMORY WHICH WILL ALLOCATE FROM HARDDISK AND STORED DATA PERMANENTLY.



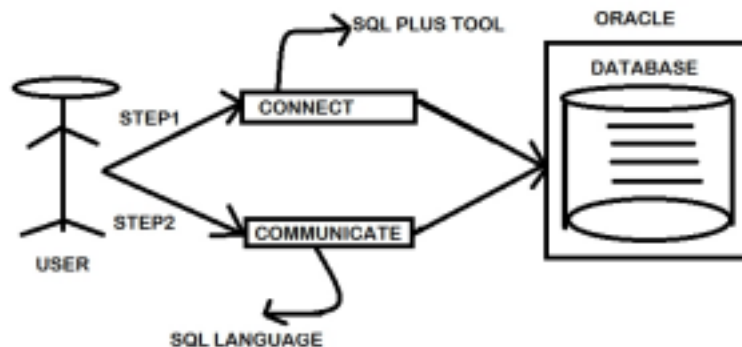
NOTE: WHEN WE WANT TO WORK ON ORACLE DATABASE THEN WE FOLLOW THE FOLLOWING TWO STEPS PROCEDURE

1) CONNECT TO ORACLE:

IF USER WANTS TO CONNECT TO ORACLE THEN WE REQUIRED A DATABASE TOOL IS CALLED AS "SQLPLUS" WHICH WAS INBUILT IN ORACLE SOFTWARE.

2) COMMUNICATE WITH DATABASE:

IF USER WANTS TO COMMUNICATE WITH DATABASE THEN WE NEED A DATABASE COMMUNICATION LANGUAGE IS CALLED AS "SQL".



HOW TO CONNECT TO ORACLE:

BEFORE CONNECT TO ORACLE DATABASE WE NEED TO KNOW THE TYPES OF EDITIONS IN ORACLE SOFTWARE. EVERY ORACLE SOFTWARE IS HAVING TWO TYPES OF EDITIONS THOSE ARE

- 1) ORACLE EXPRESS EDITION (PARTIAL SUPPORTING FEATURES)**
- 2) ORACLE ENTERPRISE EDITION (FULLY SUPPORTING FEATURES)**

THE ABOVE TWO EDITIONS ARE HAVING DEFAULT USERNAME IS "SYSTEM" AND PASSWORD IS CREATED AT INSTALLATION OF ORACLE SOFTWARE.

STEPS TO CONNECT TO ORACLE:

- > GO TO ALL PROGRAMS**
- > GO TO ORACLE19c_HOME1 FOLDER**
- > CLICK ON SQL PLUSE ICON**

> ENTER USERNAME: SYSTEM

> ENTER PASSWORD: MANAGER (AT INSTALLATION TIME PASSWORD)

TO CREATE A NEW USERNAME & PASSWORD IN ORACLE DB:

SYNTAX: CREATE USER <USERNAME> IDENTIFIED BY

<PASSWORD>;

EX: CREATE USER SUDHAKAR IDENTIFIED BY SUDHAKAR;

NOTE: USER IS CREATED BUT THIS USER IS DUMMY USER BECAUSE IS NOT HAVING PERMISSION TO CONNECT AND CREATE NEW TABLE IN DB.SO PERMISSIONS MUST BE GIVEN TO USER(SUDHAKAR) BY USING "GRANT" COMMAND BY DBA(SYSTEM).

NOTE: EVERY USER IN ORACLE SERVER IS CALLED AS "SCHEMA". GRANTING PERMISSIONS TO USER:

STEP1: USERNAME: SYSTEM

PASSWORD: MANAGER

CONNECTED.

STEP2:

GRANT CONNECT, CREATE TABLE TO SUDHAKAR;

Here,

CONNECT ----- TO CONNECT TO ORACLE DB

CREATE TABLE ----- TO CREATE NEW TABLES IN DB.

NOTE: WHEN WE CONNECT TO ORACLE DB SOME TIMES, WE WILL FACE A PROBLEM IS,

ERROR: ORA-28000: THE ACCOUNT IS LOCKED.

TO OVERCOME THE ABOVE ERROR THEN WE FOLLOW THE FOLLOWING STEPS ARE SOLUTION:

STEP1: CONNECT TO ORACLE WITH SYSTEM DATABASE

ADMIN: SYNTAX:

ENTER USERNAME: SYSTEM

ENTER PASSWORD: MANAGER

CONNECTED.

STEP2: TO UNLOCK USER:

SYNTAX:

SQL> ALTER USER <USER NAME> ACCOUNT UNLOCK /

LOCK; EX:

SQL> ALTER USER SUDHAKAR ACCOUNT UNLOCK;

**STEP3: NOW CONNECT TO ORACLE WITH EITHER SYSTEM
(OR) SUDHAKAR USER:**

ENTER USERNAME: SUDHAKAR

ENTER PASSWORD: SUDHAKAR

CONNECTED.

HOW TO CHANGE A PASSWORD:

SQL> PASSWORD

Changing password for SUDHAKAR

Old password: SUDHAKAR

New password:123

Retype new password:123

Password changed

SQL> CONN

Enter user-name: SUDHAKAR / SUDHAKAR

ERROR: ORA-01017: invalid username/password; logon denied

Warning: You are no longer connected to ORACLE.

SQL> CONN

Enter user-name: SUDHAKAR / 123

Connected.

HOW TO CREATE A NEW PASSWORD IF WE FORGOT A PASSWORD:

SYNTAX:

**ALTER USER <USER NAME> IDENTIFIED BY
<NEW PASSWORD>;**

EX:

Enter user-name: SYSTEM / MANAGER

Connected.

SQL> ALTER USER SUDHAKAR IDENTIFIED BY SUDHAKAR;

User altered.

SQL> CONN

Enter user-name: SUDHAKAR / 123

ERROR:

ORA-01017: invalid username/password; logon denied

Warning: You are no longer connected to ORACLE.

SQL> CONN

Enter user-name: SUDHAKAR / SUDHAKAR

CONNECTED.

**NOTE: WHEN WE WANT TO CONNECT TO ORACLE DB
SERVER SOME TIMES, WE FACED ANOTHER PROBLEM IS
CALLED AS
"TNS PROTOCOL ADAPTER ERROR".**

Enter user-name: SUDHAKAR / SUDHAKAR

ERROR:

ORA-12560: TNS: protocol adapter error

Enter user-name: SYSTEM / MANAGER

ERROR:

ORA-12560: TNS: protocol adapter error

NOTE: TO OVERCOME THE ABOVE PROBLEM THEN WE FOLLOW THE FOLLOWING STEPS ARE,

STEP1: GO TO SERVICES

STEP2: GO TO ORACLESERVICEorcl AND CLICK ON

IT STEP3: SELECT STARTUP TYPE IS AUTOMATIC

STEP4: CLICK ON START BUTTON

STEP5: CLICK ON OK

Enter user-name: SYSTEM / MANAGER

**Connected to: Oracle Database 19c Enterprise Edition
Release 19.0.0.0.0 - Production**

Version 19.3.0.0.0

SQL> conn

Enter user-name: SUDHAKAR / SUDHAKAR

Connected.