Oracle Database 12c introduced a new feature called “multitenant.” The multitenant feature provides the ability for a single instance to manage multiple databases. The multitenant architecture enables an Oracle database to function as a multitenant container database (CDB).

The multitenant architecture comprises the following:

* “**Multitenant”** Database Instance: This is a term used to distinguish between a database instance that supports multitenant database and one that does not.
* Container Database (CDB): This is the database that is created when that database supports Oracle’s multitenant option. It’s also called the ROOT container and is the CDB$ROOT within the data dictionary views of the CDB.
* Root Container Database: This is created automatically when you create a multitenant database. The root container contains the data dictionary for the CDB.
* Pluggable Database (PDB): These are the databases that are stored within the CDB. A PDB is a portable collection of schemas, schema objects, and nonschema objects that appears to an Oracle Net client as a non-CDB.

A Container Database (CDB) comprises zero, one, or many customer-created pluggable databases. All Oracle databases before Oracle Database 12c were non-CDBs.

Oracle Multitenant offers the ability to have up to 252 PDBs per multitenant container database. The multitenant architecture with one user-created pluggable database (single tenant) is available in all editions without the multitenant option.

Data Base Instance :-

A database instance describes a complete database environment and all of its components. This system includes multiple parts, including the relational database management system (RDBMS) software, table structure, stored procedures, and other functionality.

Database administrators might create multiple instances of the same database for different purposes. For example, an organization with an employees database might have **three instances:**

**Production instances:** Administrators use these instances to contain live data.

**Pre-production instances:** Developers use pre-production instances to test new functionality before releasing features into production.

**Development instances:** Database developers use development instances to create new functionality before testing it in pre-production.

Basic Commands:

show con\_name

select name,open\_mode

from v$pdbs;

alter session set container=orclpdb

show con\_name

alter pluggable database orclpdb close;

select name,open\_mode

from v$pdbs;

alter pluggable database orclpdb open;

select name,open\_mode

from v$pdbs;

alter pluggable database all open;

--alter session set container =cdb$root

--show con\_name

--alter pluggable database all open;