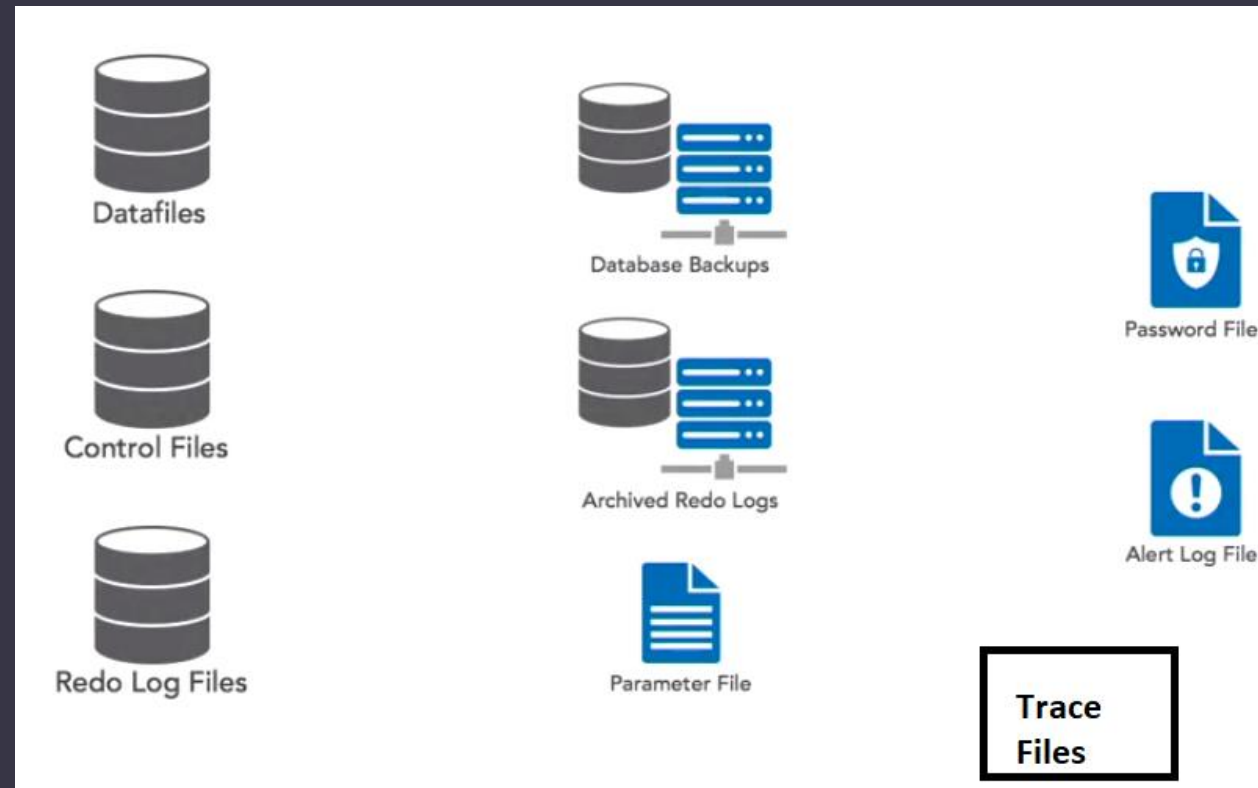# Database VS Database Instance

Oracle DB consists of 2 major components
- The Database storage
- The Oracle Instance

Database: Organized collection of information.
It contains collection of database files stored in disk storage. (physical)
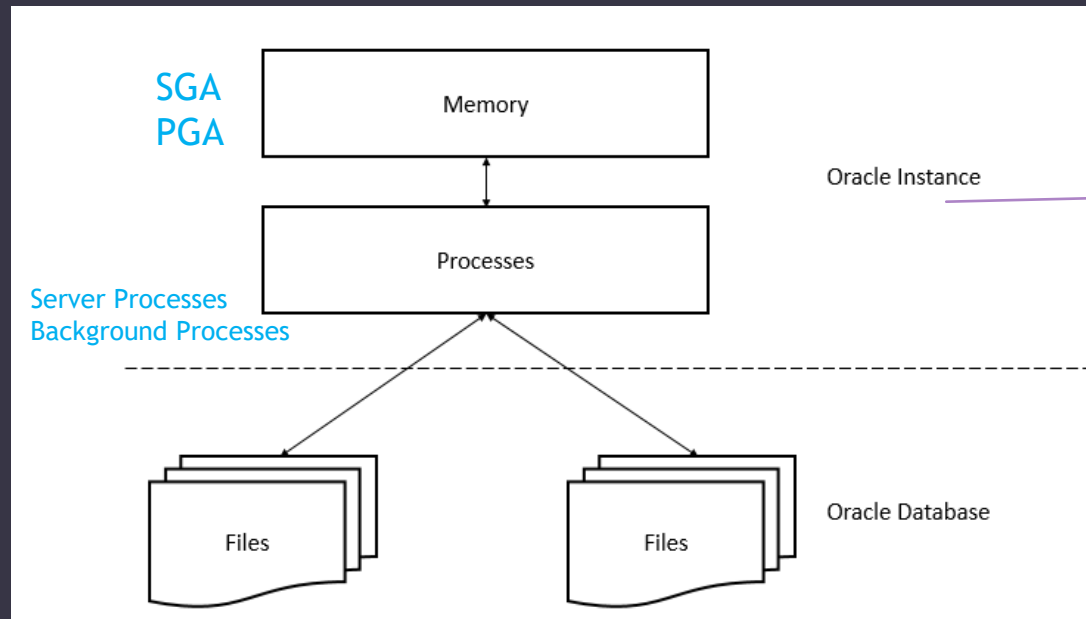
Types of Database files:

Database VS Database Instance

What is Database Instance?
A database <u>instance</u> is a set of <u>memory structures</u> and <u>processes</u> that manage database files

Note: A database instance exists only in memory

SGA
PGA

Server Processes
Background Processes

- The Oracle program, or binary, loaded into the server RAM
- created by Oracle every time you start up your database
- reading from memory is a lot faster compared to reading from disk

✓ Every running Oracle database is associated with at least one Oracle database instance.
✓ Because an instance exists in memory and a database exists on disk,
   an instance can exist without a database and a database can exist without an instance.
✓ *Losing instance no issue, losing data files for example = losing the database*
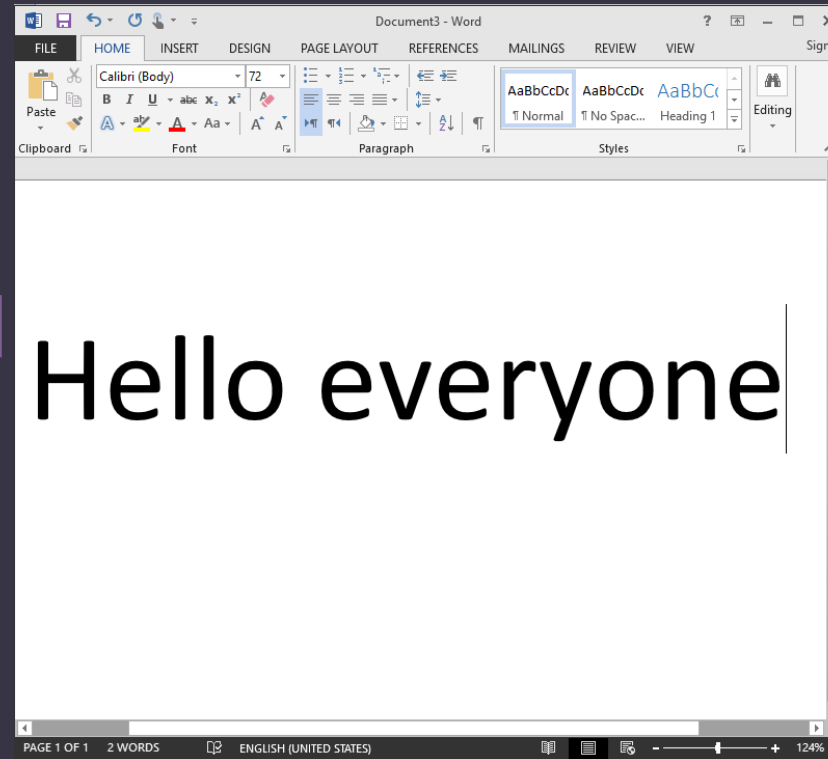
Oracle DBA Course

2

Database VS Database Instance

Another simple way to understand DB and instance :)

Microsoft word and Microsoft document

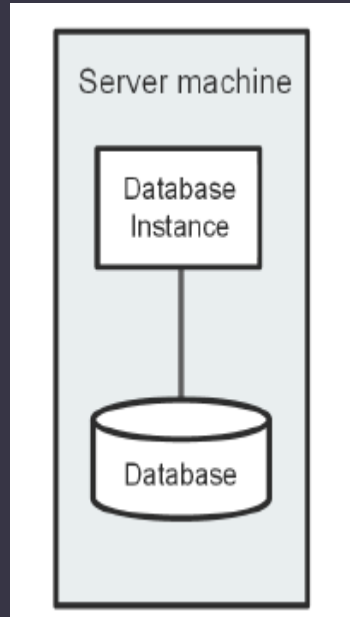Microsoft word
(imagine it the instance)
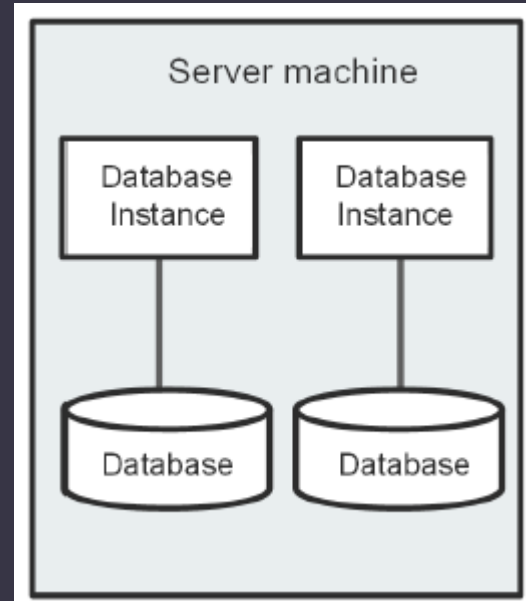
Microsoft document (imagine it the DB)
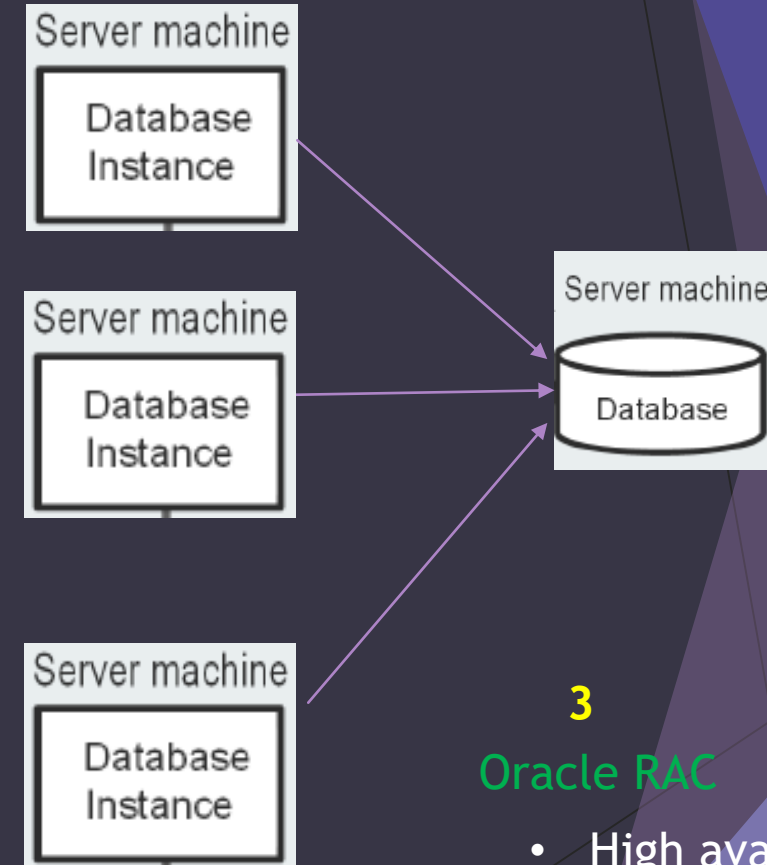
Oracle DB Server architecture

1

Single-instance DB

2

Multi Single-instance DBs
On same server

3

Oracle RAC

- High availability
- Scalability
- High performance

Thank You

Prepared By :Khaled AlKhudari   *Oracle DBA Course*