Database Instance
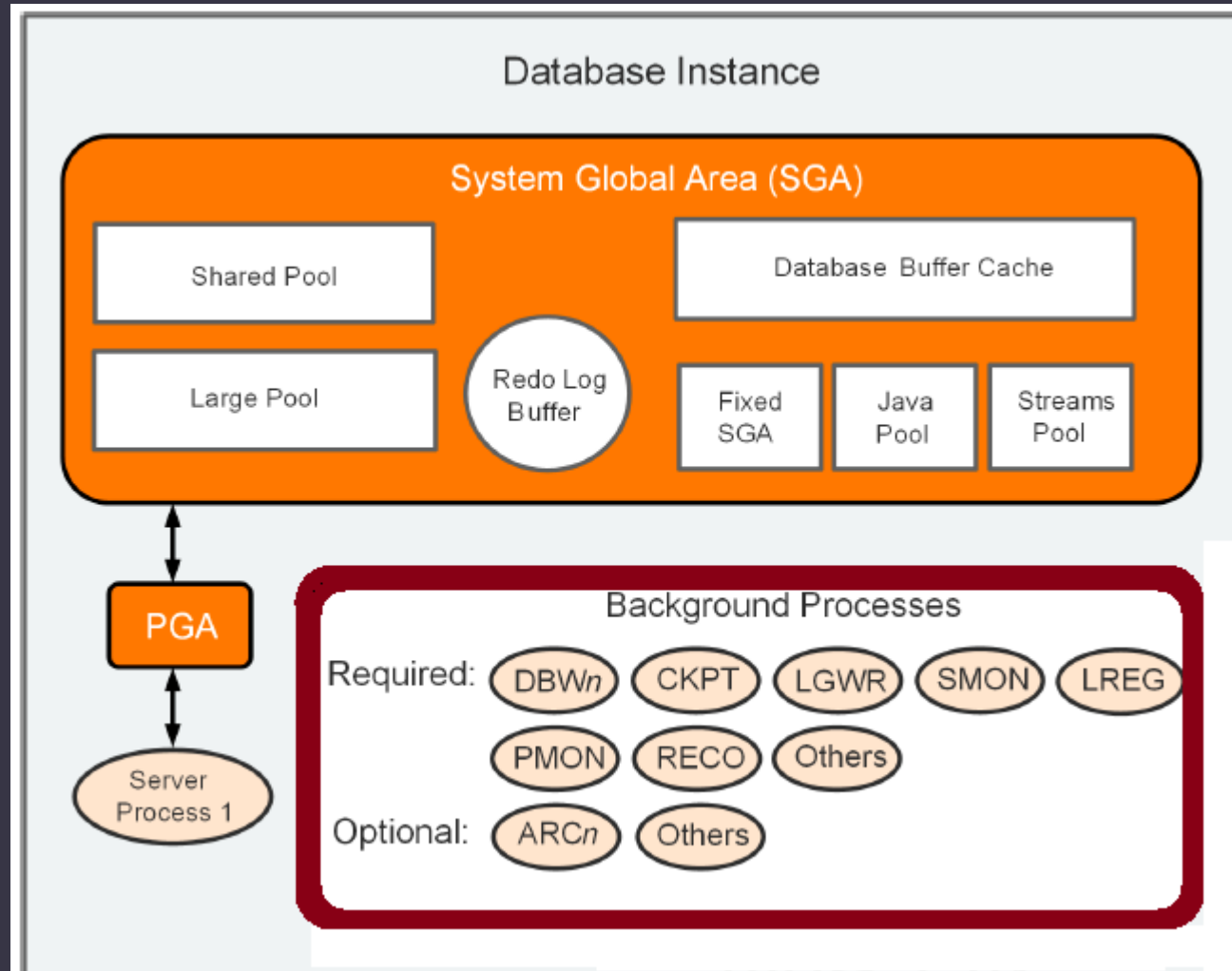## sever processes + PGA

What we will learn in this lecture?

- What is the sever processes?
- Tasks of sever processes?
- What is the PGA?
- Oracle dedicated server process
- *Oracle Shared Server Processes*

Database Instance in-depth

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

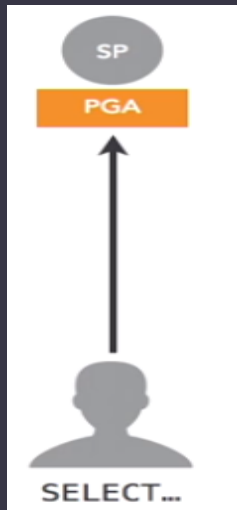

Memory
- ✓ System Global Area (SGA)
- ✓ Program Global Area (PGA)

Processes
- ✓ Background processes
- ✓ Server processes

Server processes + PGA

➢ Oracle starts up server processes to handle the requests of client processes (User sessions) connected to the Oracle database

➢ Perform the work for the client program
  Example: Parsing and running SQL statements , retrieving results to the client program *and this mean reading database data from the database storage and loading that data into the Oracle instance buffer cache.*

➢ Act on behalf of client sessions

➢ Each server process has its own cache dedicated for each connecting client. This cache is also known as the PGA

So here in this example, I have one user session doing select statement ,so this mean Oracle will create SP and this SP has its own PGA

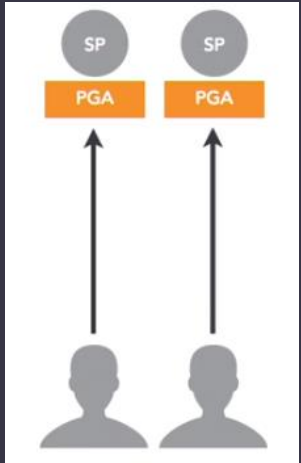More users= more dedicated server processes

PGA: non-shared memory region reserved only for the specific user session connected to that specific server process.
it contains data and control information used by the server processes when sorting data, joining large tables together as part of a SQL statement, and so on

Server processes

Oracle dedicated server process

one-to-one relation
between connecting user sessions
and server processes

Oracle Shared Server Processes
client user processes connect to a dispatcher.
The dispatcher can support multiple
client connections concurrently

Shared server architecture eliminates the need
for a dedicated server process for each connection

Your database is always enabled to allow dedicated server processes, but you must specifically configure
and enable **shared server** by setting one or more initialization parameters

Thank You

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