Oracle – PL/SQL

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Objectives

- Oracle SQL & PL/SQL concepts and examples
- Learning from the perspective of technical interviews
- Practice as much as possible
- ♦ Train heavily on interview questions

Timeline & Agenda

- ♦ Not yet decided, but I prefer to finish in 2-3 weeks
- Discuss concepts and practice around most interview questions
- ♦ Let's try to make this an interactive session
- One-on-one practice for interviews, if required
- Slightly unconventional learning sessions

Setup

- ♦ Oracle 21c + SQL Developer on Windows 10
- ♦ 6 GB memory, 4 cores, 50-75 GB disk space
- ♦ VirtualBox
- ♦ https://oracle-training.lakshmananumolu.com/en/main/

Table: Countries

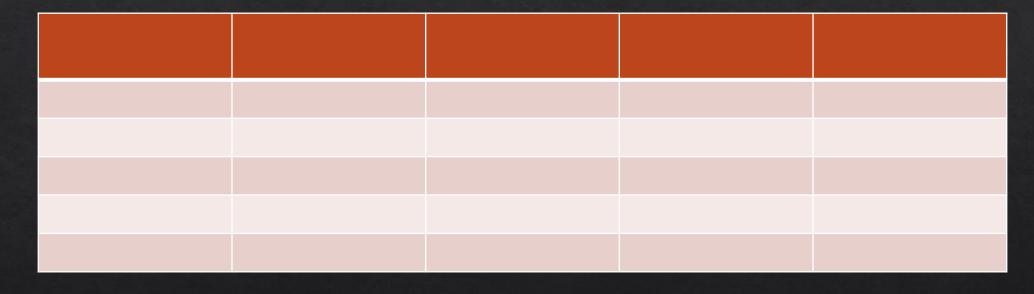


Table: Countries ID **NAME** NUM_STATES **POPULATION** AUDIT DATA NUMBER can be a VARCHAR2(32) **NUMBER** FOREIGN_KEY Primary key

columns

Table types

- Default tables Heap organized
 - Uses heap memory to store data
- Index organized
 - Uses index to insert data
- > External tables
 - > Used to load data from external files (non-DB files)
- Partitioned tables
- > Temporary tables

Datatypes

- > CHAR
- > VARCHAR2
- > CLOB
- > LONG
- > NUMBER
- > DATE
- > TIMESTAMP
- > BLOB
- > RAW
- > LONG RAW
- https://docs.oracle.com/en/database/oracle/oracle-database/21/sqlrf/Data-Types.html#GUID-A3C0D836-BADB-44E5-A5D4-265BA5968483

Quick demo

SQL command types

- > DDL: Data Definition Language
- > DML: Data Manipulation Language
- > DQL: Data Query Language
- > DCL: Data Control Language
- > TCL: Transaction Control Language

SQL command types

- > DDL: Data Definition Language
 - > CREATE, DROP, ALTER, TRUNCATE
- > DML: Data Manipulation Language
 - > INSERT, UPDATE, DELETE, ...
- > DQL: Data Query Language
 - > SELECT
- > DCL: Data Control Language
 - ➤ GRANT, REVOKE

SQL command types

- > TCL: Transaction Control Language
 - > COMMIT, SAVEPOINT, ROLLBACK, ...

Sample PL/SQL structure

```
DECLARE
...
BEGIN
...
EXCEPTION
...
END;
```

Sample PL/SQL structure

Quick demo

Few more topics

- > SQL Joins
- > Sub-queries
- > Normalization
- > Indexes
- > Partitions
- Procedures & Functions
- Packages
- > Triggers
- Cursors & their types
- Exceptions & types

Linux

Quick demo