**TOPIC 09: USING DDL Statements**

**Exercises**

**\*\*\* This exercise is performed on HR Schema (HR database) \*\*\***

**\*\* This exercise may include some of the topics examined previously\*\***

1. Determine how many objects of each type are in your schema.

select object\_type, count(object\_type) from user\_objects group by object\_type;

1. Determine how many objects in total your schema has permissions on:

select count(\*) from all\_objects;

1. Determine who owns the objects your schema can see.

select distinct owner from all\_objects;

1. Write query to read similar information like the ones you get when you use DESCRIBE command. Issue this command for table REGIONS.

select column\_name "name", nullable "Null?", concat(concat(concat(data\_type,'('),data\_length),')') "type"

from user\_tab\_columns

where table\_name='REGIONS'

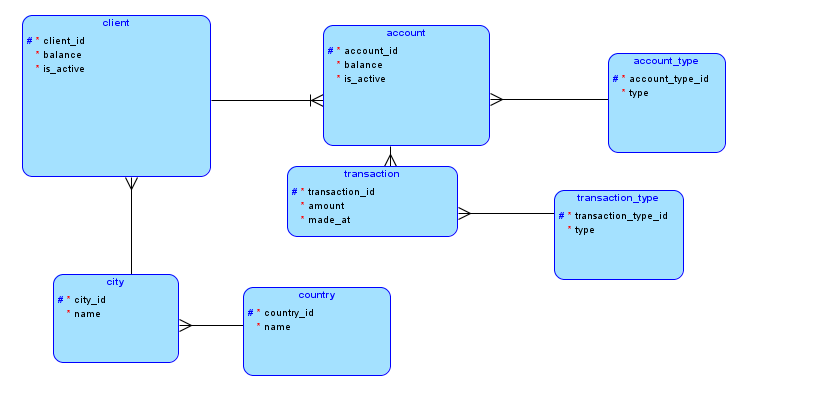
1. Use a query against a data dictionary view to show what columns make up the EMPLOYEES table, as the DESCRIBE command would:

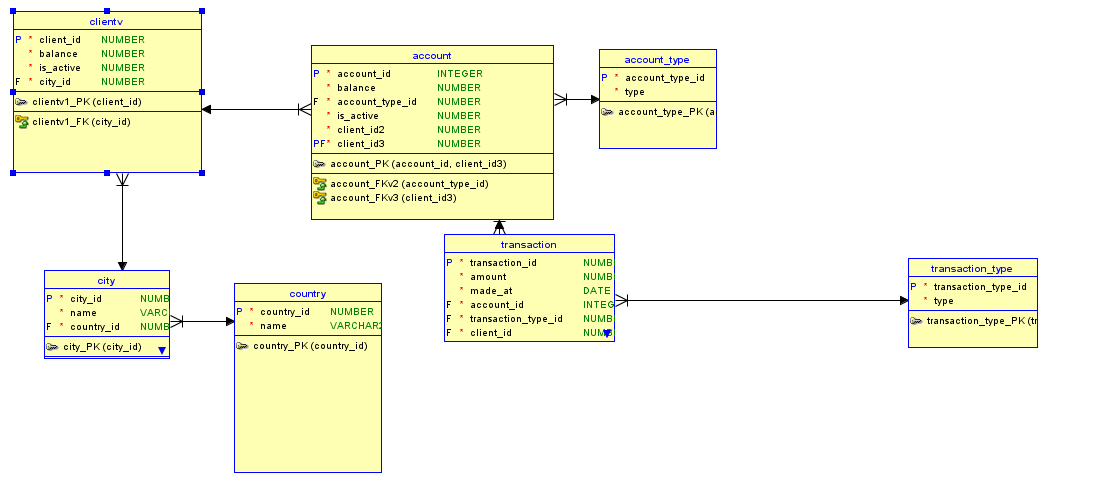
select column\_name "Name", nullable "Null?", concat(concat(concat(data\_type,'('),data\_length),')') "Type"

from user\_tab\_columns

where table\_name='employees';

1. Below are given relational model and ERD model. According to the presented models, generate SQL DDL statements.





CREATE TABLE account (

account\_id INTEGER NOT NULL,

balance NUMBER,

is\_active NUMBER,

client\_client\_id NUMBER NOT NULL,

account\_type\_account\_type\_id INTEGER NOT NULL,

client\_id NUMBER NOT NULL

);

ALTER TABLE account ADD CONSTRAINT account\_pk PRIMARY KEY ( account\_id, client\_id );

CREATE TABLE account\_type ( account\_type\_id INTEGER NOT NULL, type VARCHAR2(30));

ALTER TABLE account\_type ADD CONSTRAINT account\_type\_pk PRIMARY KEY ( account\_type\_id );

CREATE TABLE city (city\_id NUMBER NOT NULL,name VARCHAR2(30),country\_country\_id NUMBER NOT NULL);

ALTER TABLE city ADD CONSTRAINT city\_pk PRIMARY KEY ( city\_id );

CREATE TABLE client (

client\_id NUMBER NOT NULL,

balacne NUMBER NOT NULL,

is\_active NUMBER NOT NULL,

city\_city\_id NUMBER NOT NULL

);

ALTER TABLE client ADD CONSTRAINT client\_pk PRIMARY KEY ( client\_id );

CREATE TABLE country (

country\_id NUMBER NOT NULL,

name VARCHAR2(30));

ALTER TABLE country ADD CONSTRAINT country\_pk PRIMARY KEY ( country\_id );

CREATE TABLE transaction (

transaction\_id NUMBER NOT NULL,

amount NUMBER,

made\_at DATE,

account\_account\_id INTEGER NOT NULL,

account\_client\_client\_id NUMBER NOT NULL,

transaction\_type\_transaction\_type\_id NUMBER NOT NULL,

client\_id NUMBER NOT NULL);

ALTER TABLE transaction ADD CONSTRAINT transaction\_pk PRIMARY KEY ( transaction\_id );

CREATE TABLE transaction\_type (transaction\_type\_id NUMBER NOT NULL,type VARCHAR2(30));

ALTER TABLE transaction\_type ADD CONSTRAINT transaction\_type\_pk PRIMARY KEY ( transaction\_type\_id );

ALTER TABLE account ADD CONSTRAINT account\_account\_type\_fk FOREIGN KEY ( account\_type\_account\_type\_id ) REFERENCES account\_type ( account\_type\_id );

ALTER TABLE account ADD CONSTRAINT account\_client\_fk FOREIGN KEY ( client\_client\_id ) REFERENCES client ( client\_id );

ALTER TABLE city ADD CONSTRAINT city\_country\_fk FOREIGN KEY ( country\_country\_id ) REFERENCES country ( country\_id );

ALTER TABLE client ADD CONSTRAINT client\_city\_fk FOREIGN KEY ( city\_city\_id ) REFERENCES city ( city\_id );

ALTER TABLE transaction ADD CONSTRAINT transaction\_account\_fk FOREIGN KEY ( account\_account\_id, client\_id ) REFERENCES account (account\_id, client\_id );

ALTER TABLE transaction ADD CONSTRAINT transaction\_transaction\_type\_fk FOREIGN KEY ( transaction\_type\_transaction\_type\_id ) REFERENCES transaction\_type ( transaction\_type\_id );