

SECD2523 DATABASE

SECTION 10

SQL LAB 1 - DDL

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Section 6 Lesson 3 Exercise: Data Definition Language Use DDL to build and maintain a database tables (S6L3 Objective 3)

Part 1: Reading information from a script

In this exercise, you will use the "obl Sports.ddl" file to consolidate your knowledge of DDL.

- 1. How many tables have been created using the CREATE TABLE statement? There are 10 tables that have been created using the CREATE TABLE statement.
- 2. How many columns are created for the price history table?

 There are 6 columns created for the price history table: 'start_date', 'start_time', 'price', 'end_date', 'end_time' and 'itm_number'.
- 3. What statement is used to enforce the constraint that the category column of the items table must have a value?

The 'NOT NULL' constraint is used to enforce that the 'category' column of the 'items' table must have a value.

4. What is the name of the foreign key constraint between the customers and customer addresses tables?

The name of the foreign key constraint between the customers and customer addresses tables is 'customer address customer fk'.

5. What are the lowest and highest values that can be stored in the commission_rate column for the sales_representatives table?

The lowest and highest values that can be stored in the commission_rate column for the sales_representatives table is 0 to 99.

6. What are the lowest and highest values that can be stored in the price column for the price_history table?

The lowest and highest values that can be stored in the price column for the price_history table is -9999999.99, and the highest value is 9999999.99.

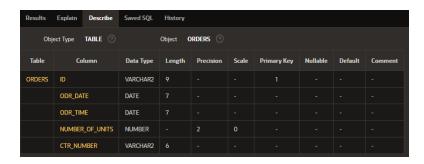
7. What are the 3 columns that make up the primary key for the price_history table? 'itm number', 'start date', 'start time'.

Part 2: Updating Constraints

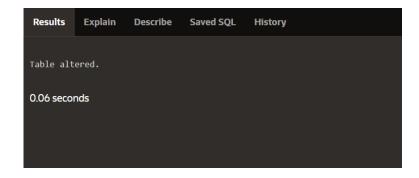
Log-in to APEX and go to the SQL Commands environment.

Modifying a column

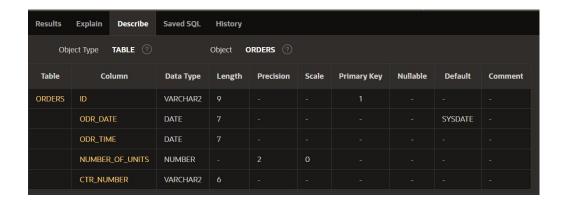
- 1. Run the DESCRIBE command on the orders table to view its structure.
 - DESC orders;



- 2. Task: Add a default constraint that will use today's date to assign a value to the odr_date column of the orders table if no date is provided.
 - ALTER TABLE orders MODIFY odr_date DEFAULT SYSDATE;

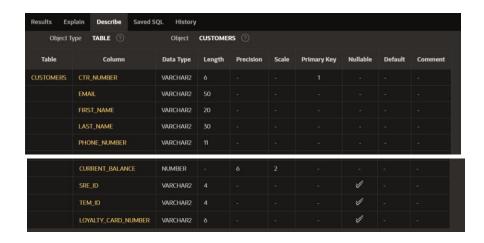


- 3. Run the DESCRIBE command again to verify the command was successful.
 - DESC orders;

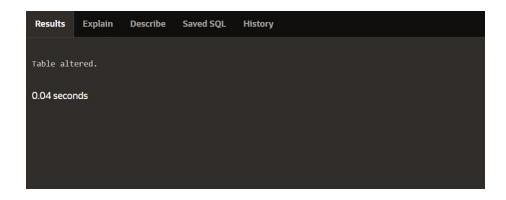


Adding a check constraint

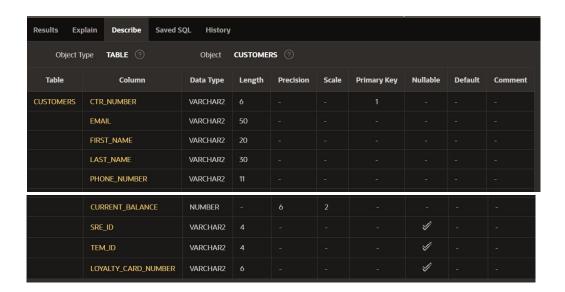
- 1. Run the DESCRIBE command on the customers table to view its structure.
 - DESC customers;



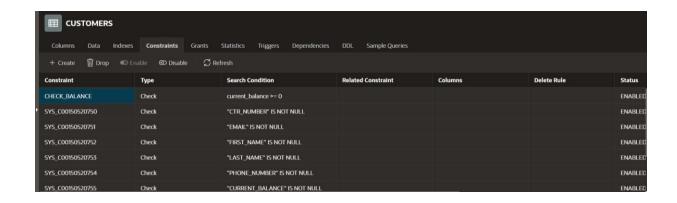
- 2. Task: Add a check constraint that will not allow the customers current balance to go below zero.
 - ALTER TABLE customers
 ADD CONSTRAINT check_balance CHECK (current_balance >= 0);



- 3. Run the DESCRIBE command again to verify the command was successful.
 - DESC customers;



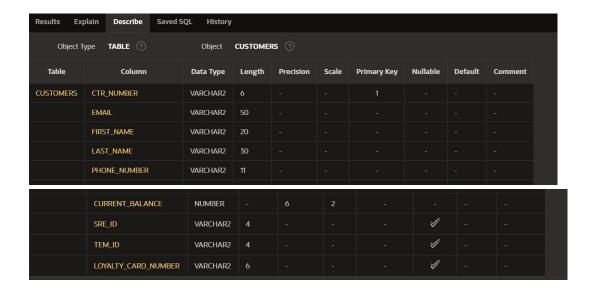
- 4. A check constraint is not shown in the results of a describe command.
 - a. Go to the Object Browser.
 - b. Select the customers table.
 - c. Click on the CONSTRAINTS TAB.
 - d. You will see your constraint here.



Adding a column

The client has decided that they would like a separate column for the customer's mobile phone number. This is an optional column that will be required to store 11 digits.

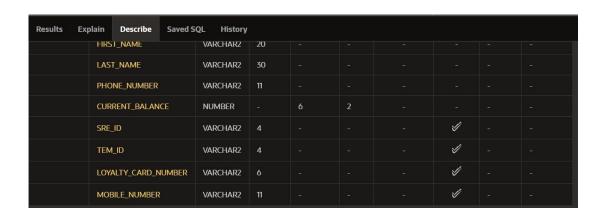
- 1. Run the DESCRIBE command on the customers table that will view its structure.
 - DESC customers;



- 2. Task: Add the column that will satisfy the clients requirements.
 - ALTER TABLE customers
 ADD mobile_number VARCHAR2(11);



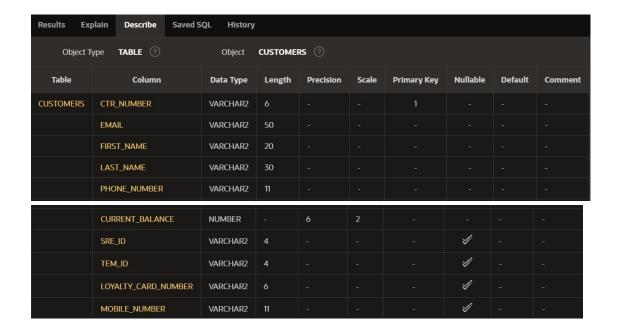
- 3. Run the DESCRIBE command on the customers table to view its structure.
 - DESC customers;



Dropping Column

The client has decided that they don't need the mobile number column as most customers only provide a single contact number and that is already catered for with the existing phone_number column.

- 1. Run the DESCRIBE command on the customers table to view its structure.
 - DESC customers;



- 2. Task: Drop the column that was created to store the mobile phone number.
 - ALTER TABLE customers
 DROP COLUMN mobile_number;



- 3. Run the DESCRIBE command on the customers table to view its structure.
 - DESC customers;

