## **Section 6 Lesson 3 Exercise : Data Definition Language**

- Part 1: Reading information from a script In this exercise you will use the "obl Sports.ddl" file to consolidate your knowledge of DDL. Open the "obl Sports.ddl" in a text editor.
- 1. How many tables have been created using the CREATE TABLE statement?

  10 tables
- 2. How many columns are created for the price history table?
  6 columns
- 3. What statement is used to enforce the constraint that the category column of the items table must have a value?

"NOT NULL" statement

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

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?

Lowest: -99 Highest: 99

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

Lowest: -99999.99 Highest: 99999.99

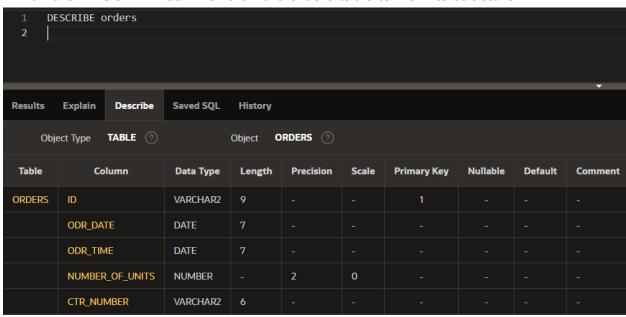
7. What are the 3 columns that make up the primary key for the price\_history table? <a href="mailto:ltm\_number">ltm\_number</a>, start\_time

#### Part 2: Updating Constraints

Log-in to APEX and go to the SQL commands environment

#### Modifying a column

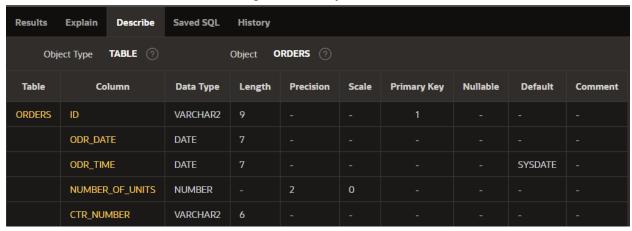
1. Run the DESCRIBE command on the orders table to view its structure.



2. Task: Add a default constraint that will use todays date to assign a value to the odr\_date column of the orders table if no date is provided.

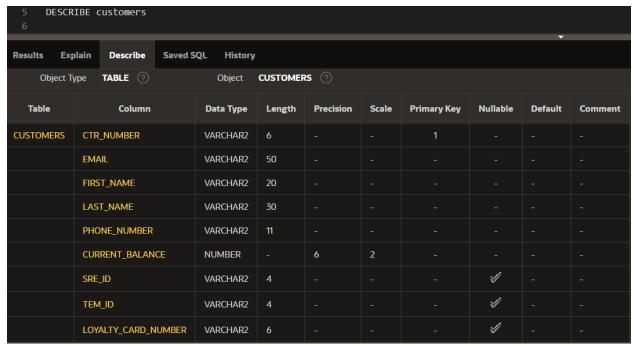
ALTER TABLE orders MODIFY ODR\_TIME DATE DEFAULT SYSDATE;

3. Run the DESCRIBE command again to verify the command was successful.



### Adding a check constraint

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



2. Task: Add a check constraint that will not allow the customers current balance to go below zero.

```
ALTER TABLE customers ADD CONSTRAINT min_current_balance CHECK
(current_balance >= 0 )
```

3. Run the DESCRIBE command again to verify the command was successful.

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
CUSTOMERS	CTR_NUMBER	VARCHAR2	6			1			-
	EMAIL	VARCHAR2	50						-
	FIRST_NAME	VARCHAR2	20						-
	LAST_NAME	VARCHAR2	30						-
	PHONE_NUMBER	VARCHAR2	11						-
	CURRENT_BALANCE	NUMBER		6	2				-
	SRE_ID	VARCHAR2	4				<b>V</b>		-
	TEM_ID	VARCHAR2	4				<b></b> ✓		-
	LOYALTY_CARD_NUMBER	VARCHAR2	6	-	-	-	<b></b> ✓	-	-

- 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 to view its structure.

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
CUSTOMERS	CTR_NUMBER	VARCHAR2	6			1			-
	EMAIL	VARCHAR2	50						-
	FIRST_NAME	VARCHAR2	20						-
	LAST_NAME	VARCHAR2	30						-
	PHONE_NUMBER	VARCHAR2	11						-
	CURRENT_BALANCE	NUMBER		6	2				-
	SRE_ID	VARCHAR2	4				<b></b> √		-
	TEM_ID	VARCHAR2	4				<b></b> ✓		-
	LOYALTY_CARD_NUMBER	VARCHAR2	6	-	-	-	S/	-	-

2. Task: Add column that will satisfy the clients requirements

# ALTER TABLE customers ADD cust\_phone\_num VARCHAR2(11);

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

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
CUSTOMERS	CTR_NUMBER	VARCHAR2	6			1			
	EMAIL	VARCHAR2	50						
	FIRST_NAME	VARCHAR2	20						
	LAST_NAME	VARCHAR2	30						
	PHONE_NUMBER	VARCHAR2	11						
	CURRENT_BALANCE	NUMBER		6	2				
	SRE_ID	VARCHAR2	4				<b></b> √		
	TEM_ID	VARCHAR2	4				<b></b>		
	LOYALTY_CARD_NUMBER	VARCHAR2	6				s/		
	CUST_PHONE_NUM	VARCHAR2	11				\$		

# Dropping a 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.

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
CUSTOMERS	CTR_NUMBER	VARCHAR2	6			1			
	EMAIL	VARCHAR2	50						
	FIRST_NAME	VARCHAR2	20						
	LAST_NAME	VARCHAR2	30						
	PHONE_NUMBER	VARCHAR2	11						
	CURRENT_BALANCE	NUMBER		6	2				
	SRE_ID	VARCHAR2	4				\$		
	TEM_ID	VARCHAR2	4				<b>V</b>		
	LOYALTY_CARD_NUMBER	VARCHAR2	6				<b></b>		
	CUST_PHONE_NUM	VARCHAR2	11	-	-	-	<b>V</b>	-	-

2. Task: Drop the column that was created to store the mobile phone number.

# ALTER TABLE customers DROP (cust\_phone\_num)

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

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
CUSTOMERS	CTR_NUMBER	VARCHAR2	6			1			
	EMAIL	VARCHAR2	50						
	FIRST_NAME	VARCHAR2	20						
	LAST_NAME	VARCHAR2	30						
	PHONE_NUMBER	VARCHAR2	11						
	CURRENT_BALANCE	NUMBER		6	2				
	SRE_ID	VARCHAR2	4				S		
	TEM_ID	VARCHAR2	4				s/		
	LOYALTY_CARD_NUMBER	VARCHAR2	6				s/		