

### 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?

**category VARCHAR(25) NOT NULL**

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

**ctr\_number**

5. What are the lowest and highest values that can be stored in the commission\_rate column for the sales\_representatives table?

**-99.99 to 99**

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

**-99999.99 to 99999.99**

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.

**DESCRIBE orders;**

```
1 DESCRIBE orders;
2
```

Column	Null?	Type
ID	NOT NULL	VARCHAR2(9)
ODR_DATE	NOT NULL	DATE
ODR_TIME	NOT NULL	DATE
NUMBER_OF_UNITS	NOT NULL	NUMBER(2,0)
CTR_NUMBER	NOT NULL	VARCHAR2(6)

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5 rows selected.

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 DATE DEFAULT SYSDATE;**

```
1 DESCRIBE orders;
2
3 ALTER TABLE orders
4 MODIFY odr_date DATE DEFAULT SYSDATE;
```

Column	Null?	Type
ID	NOT NULL	VARCHAR2(9)
ODR_DATE	NOT NULL	DATE
ODR_TIME	NOT NULL	DATE
NUMBER_OF_UNITS	NOT NULL	NUMBER(2,0)
CTR_NUMBER	NOT NULL	VARCHAR2(6)

Download CSV

5 rows selected.

Table altered.

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

### DESCRIBE orders;

```
5
6 DESCRIBE orders;
```

Table altered.

TABLE ORDERS

Column	Null?	Type
ID	NOT NULL	VARCHAR2(9)
ODR_DATE	NOT NULL	DATE
ODR_TIME	NOT NULL	DATE
NUMBER_OF_UNITS	NOT NULL	NUMBER(2,0)
CTR_NUMBER	NOT NULL	VARCHAR2(6)

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5 rows selected.

### Adding a check constraint

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

### DESCRIBE customers;

```
8 DESCRIBE customers;
```

TABLE CUSTOMERS

Column	Null?	Type
CTR_NUMBER	NOT NULL	VARCHAR2(6)
EMAIL	NOT NULL	VARCHAR2(50)
FIRST_NAME	NOT NULL	VARCHAR2(20)
LAST_NAME	NOT NULL	VARCHAR2(30)
PHONE_NUMBER	NOT NULL	VARCHAR2(11)
CURRENT_BALANCE	NOT NULL	NUMBER(6,2)
SRE_ID	-	VARCHAR2(4)
TEP_ID	-	VARCHAR2(4)
LOYALTY_CARD_NUMBER	-	VARCHAR2(6)

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

### ALTER TABLE customers

### ADD CONSTRAINT check\_curr\_balance CHECK (current\_balance >= 0);

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

### DESCRIBE customers;

```

8 DESCRIBE customers;
9
10 ALTER TABLE customers
11 ADD CONSTRAINT check_curr_balance CHECK (current_balance >= 0);
12
13 DESCRIBE customers;

```

Table altered.

TABLE CUSTOMERS

Column	Null?	Type
CTR_NUMBER	NOT NULL	VARCHAR2(6)
EMAIL	NOT NULL	VARCHAR2(50)
FIRST_NAME	NOT NULL	VARCHAR2(20)
LAST_NAME	NOT NULL	VARCHAR2(30)
PHONE_NUMBER	NOT NULL	VARCHAR2(11)
CURRENT_BALANCE	NOT NULL	NUMBER(6,2)
SRE_ID	-	VARCHAR2(4)
TEM_ID	-	VARCHAR2(4)
LOYALTY_CARD_NUMBER	-	VARCHAR2(6)

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

Schema \

### CUSTOMERS

Syntax Help Actions View All Objects

Show All Columns Constraints Related Constraints Triggers Indexes Code

Constraint	Type	Condition	Related Constraint	Related Table	Constraint Columns	On Delete	Status	Last Change	Invalid?
CHECK_BALANCE	Check	current_balance >= 0	-	-	-	-	ENABLED	2 minutes ago	-
CHECK_CURR_BALANCE	Check	current_balance >= 0	-	-	-	-	ENABLED	94 seconds ago	-
SYS_C00137064818	Check	"CTR_NUMBER" IS NOT NULL	-	-	-	-	ENABLED	10 minutes ago	-
SYS_C00137064819	Check	"EMAIL" IS NOT NULL	-	-	-	-	ENABLED	10 minutes ago	-
SYS_C00137064820	Check	"FIRST_NAME" IS NOT NULL	-	-	-	-	ENABLED	10 minutes ago	-
SYS_C00137064821	Check	"LAST_NAME" IS NOT NULL	-	-	-	-	ENABLED	10 minutes ago	-
SYS_C00137064822	Check	"PHONE_NUMBER" IS NOT NULL	-	-	-	-	ENABLED	10 minutes ago	-
SYS_C00137064823	Check	"CURRENT_BALANCE" IS NOT NULL	-	-	-	-	ENABLED	10 minutes ago	-

### 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.

**DESCRIBE customers;**

```
14
15 DESCRIBE customers;
16
```

Column	Null?	Type
CTR_NUMBER	NOT NULL	VARCHAR2(6)
EMAIL	NOT NULL	VARCHAR2(50)
FIRST_NAME	NOT NULL	VARCHAR2(20)
LAST_NAME	NOT NULL	VARCHAR2(30)
PHONE_NUMBER	NOT NULL	VARCHAR2(11)
CURRENT_BALANCE	NOT NULL	NUMBER(6,2)
SRE_ID	-	VARCHAR2(4)
TEM_ID	-	VARCHAR2(4)
LOYALTY_CARD_NUMBER	-	VARCHAR2(6)

2. **Task:** Add 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.

**DESCRIBE customers;**

```
15 DESCRIBE customers;
16 ALTER TABLE customers
17 ADD mobile_number VARCHAR2(11);
18 DESCRIBE customers;
19
```

Column	Null?	Type
CTR_NUMBER	NOT NULL	VARCHAR2(6)
EMAIL	NOT NULL	VARCHAR2(50)
FIRST_NAME	NOT NULL	VARCHAR2(20)
LAST_NAME	NOT NULL	VARCHAR2(30)
PHONE_NUMBER	NOT NULL	VARCHAR2(11)
CURRENT_BALANCE	NOT NULL	NUMBER(6,2)
SRE_ID	-	VARCHAR2(4)
TEM_ID	-	VARCHAR2(4)
LOYALTY_CARD_NUMBER	-	VARCHAR2(6)
MOBILE_NUMBER	-	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.

**DESCRIBE customers;**

MOBILE_NUMBER	-	VARCHAR2(11)
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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.

**DESCRIBE customers;**

SQL Worksheet

Clear Find Actions Save Run

```
20 DESCRIBE customers;
21 ALTER TABLE customers
22 DROP COLUMN mobile_number;
23 DESCRIBE customers;
```

Table altered.

TABLE CUSTOMERS

Column	Null?	Type
CTR_NUMBER	NOT NULL	VARCHAR2(6)
EMAIL	NOT NULL	VARCHAR2(50)
FIRST_NAME	NOT NULL	VARCHAR2(20)
LAST_NAME	NOT NULL	VARCHAR2(30)
PHONE_NUMBER	NOT NULL	VARCHAR2(11)
CURRENT_BALANCE	NOT NULL	NUMBER(6,2)
SRE_ID	-	VARCHAR2(4)
TEH_ID	-	VARCHAR2(4)
LOYALTY_CARD_NUMBER	-	VARCHAR2(6)

