

## **Lab 1**

### **Part 1:**

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?

**The name of the foreign key constraint 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 value is -99 and the highest value is 99.**

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

**The lowest value is -99999.99 while the highest value is 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:

### Modifying a column

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

#### DESCRIBE orders

Name	Null?	Type
-----	-----	-----
ID	NOT NULL	VARCHAR2(9)
ODR_DATE	NOT NULL	DATE
ODR_TIME	NOT NULL	DATE
NUMBER_OF_UNITS	NOT NULL	NUMBER(2)
CTR_NUMBER	NOT NULL	VARCHAR2(6)

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\_TIME DATE DEFAULT SYSDATE;**

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

#### DESCRIBE orders

	COLUMN_NAME	DATA_DEFAULT
1	ODR_DATE	SYSDATE

### Adding a check constraint

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

#### DESCRIBE customers

Name	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)

- 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 )
```

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

```
DESCRIBE customers
```

- 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.

7	MIN_CURR_BALANCE	Check	current_balance >= 0
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### 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.

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

```
DESCRIBE customers
```

Name	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)

- 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.

### DESCRIBE customers

Name	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)
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.

### DESCRIBE customers

Name	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)
CUST_PHONE_NUM		VARCHAR2(11)

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.

### DESCRIBE customers

Name	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)