



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

Faculty of Computing

SECD2523 : Database

LAB 1 : DDL

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SECTION : 08

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Part 1: Reading information from a script

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

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 value is -99 and the highest value is 99 that can be stored.

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 and the highest values is 99999.99 that can be stored.

7. What are the 3 columns that make up the primary key for the price_history table?

itm_number, start_date and start_time

Part 2 : Updating Constraints

Modifying a column

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

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_date DATE DEFAULT SYSDATE);

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

⚡	COLUMN_NAME	⚡	DATA_TYPE	⚡	NULLABLE	DATA_DEFAULT	⚡	COLUMN_ID	⚡	COMMENTS
1	ID		VARCHAR2(9 BYTE)	No		(null)		1		(null)
2	ODR_DATE		DATE	No		SYSDATE		2		(null)
3	ODR_TIME		DATE	No		(null)		3		(null)
4	NUMBER_OF_UNITS		NUMBER(2,0)	No		(null)		4		(null)
5	CTR_NUMBER		VARCHAR2(6 BYTE)	No		(null)		5		(null)

Adding a check constraint

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

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)

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

ALTER TABLE customers

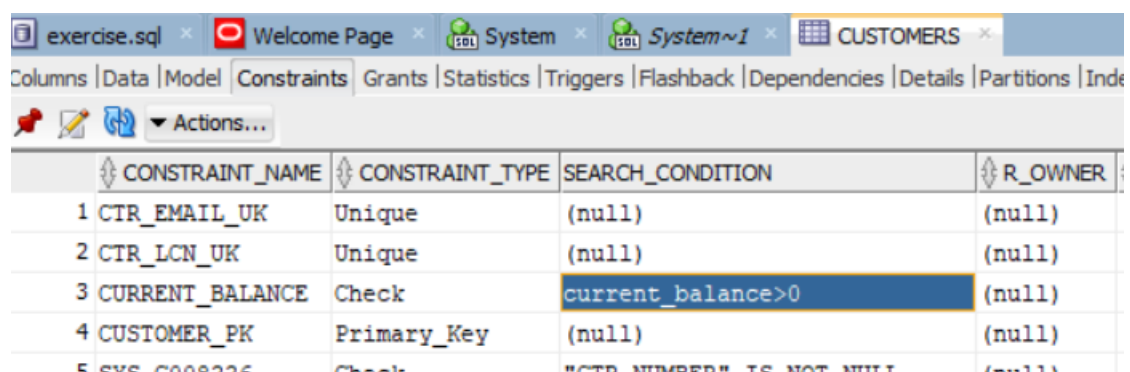
ADD CONSTRAINTS current_balance CHECK (current_balance >= 0);

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

DESCRIBE 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.



	CONSTRAINT_NAME	CONSTRAINT_TYPE	SEARCH_CONDITION	R_OWNER
1	CTR_EMAIL_UK	Unique	(null)	(null)
2	CTR_LCN_UK	Unique	(null)	(null)
3	CURRENT_BALANCE	Check	current_balance > 0	(null)
4	CUSTOMER_PK	Primary_Key	(null)	(null)
5	SYS_C000005	Check	CTR_NUMBER IS NOT NULL	(null)

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.**

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)

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

`ALTER TABLE customers`

`ADD mobile_phone VARCHAR2(11);`

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

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)
MOBILE_PHONE		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.

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)
MOBILE_PHONE		VARCHAR2(11)

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

ALTER TABLE customers

DROP (mobile_phone);

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

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)