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Section: 06

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Part 1

(1) How many tables have been created using the CREATE TABLE statement?

- 10 tables were created using CREATE TABLE statement.

(2) How many columns are created for the price history table?

- 6 columns were created for price history table.

(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 customer 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_representative table?

- Lowest value: -99
- Highest value: 99

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

- Lowest value: -99999.99
- Highest value: 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 2Modifying a column

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

- DESCRIBE orders;

Table	Column	Data type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ORDERS	ID	VARCHAR2	9	-	-	1	-	-	-
	ODR_DATE	DATE	7	-	-	-	-	-	-
	ODR_TIME	DATE	7	-	-	-	-	-	-
	NUMBER_OF	NUMBER	-	2	0	-	-	-	-
	_UNITS								
	CTR_NUMBER	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.

- DESCRIBE orders;

Table	Column	Data type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ORDERS	ID	VARCHAR2	9	-	-	1	-	-	-
	ODR_DATE	DATE	7	-	-	-	-	SYSDATE	-
	ODR_TIME	DATE	7	-	-	-	-	-	-
	NUMBER_OF	NUMBER	-	2	0	-	-	-	-
	_UNITS								
	CTR_NUMBER	VARCHAR2	6	-	-	-	-	-	-

Adding a check constraint

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

- DESCRIBE customers;

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	-	-	-	✓	-	-
	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_balance CHECK (current_balance >= 0);

(3) Run the DESCRIBE command again to verify the command was successful

- DESCRIBE customers;

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	-	-	-	✓	-	-
	LOYALTY_CARD_NUMBER	VARCHAR2	6	-	-	-	✓	-	-

(4) A check constraint is not shown in the results of a describe command.

Constraint	Type	Search Condition	Columns	Delete Rule	Status	Last Change	Index	Invalid
CHECK_BALANCE	Check	current_balance >= 0			ENABLED	11/08/2023		
SYS_C00149048427	Check	"CTR_NUMBER" is NOT NULL			ENABLED	11/06/2023		
SYS_C00149048428	Check	"EMAIL" is NOT NULL			ENABLED	11/06/2023		
SYS_C00149048429	Check	"FIRST_NAME" is NOT NULL			ENABLED	11/06/2023		
SYS_C00149048430	Check	"LAST_NAME" is NOT NULL			ENABLED	11/06/2023		
SYS_C00149048431	Check	"PHONE_NUMBER" is NOT NULL			ENABLED	11/06/2023		
SYS_C00149048432	Check	"CURRENT_BALANCE" is NOT NULL			ENABLED	11/06/2023		
CUSTOMER_SALES_REP_FK	Foreign		SRE_ID	NO ACTION	ENABLED	11/06/2023		
CUSTOMER_TEAM_FK	Foreign		TEM_ID	NO ACTION	ENABLED	11/06/2023		
CUSTOMER_PK	Primary		CTR_NUMBER		ENABLED	11/06/2023	CUSTOMER_PK	
CTR_EMAIL_UK	Unique		EMAIL		ENABLED	11/06/2023	CTR_EMAIL_UK	
CTR_LCN_UK	Unique		LOYALTY_CARD_NUMBER		ENABLED	11/06/2023	CTR_LCN_UK	

Adding a column

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

- DESCRIBE customers ;

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	-	-	-	✓	-	-
LOYALTY-	VARCHAR2	6	-	-	-	✓	-	-
CARD-NUMBER								

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

- ALTER TABLE customers

ADD mobile_phone-number VARCHAR2(11);

(3) Run the DESCRIBE commands on the customers table to view its structure.

- DESCRIBE customers;

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-	VARCHAR2	11	-	-	-	-	-	-
	NUMBER								
	CURRENT-	NUMBER	-	6	2	-	-	-	-
	BALANCE								
	SRE_ID	VARCHAR2	4	-	-	-	✓	-	-
	TEM-ID	VARCHAR2	4	-	-	-	✓	-	-
	LOYALTY-	VARCHAR2	6	-	-	-	✓	-	-
	CARD-NUMBER								
	MOBILE-PHONE	VARCHAR2	11	-	-	-	✓	-	-
	-NUMBER								

Dropping a column

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

- DESCRIBE customers;

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-	VARCHAR2	11	-	-	-	-	-	-
	NUMBER								

CURRENT_	NUMBER	-	6	2	-	-	-	-
BALANCE								
SRE_ID	VARCHAR2	4	-	-	-	✓	-	-
TEM_ID	VARCHAR2	4	-	-	-	✓	-	-
LOYALTY_	VARCHAR2	6	-	-	-	✓	-	-
CARD_NUMBER								
MOBILE_PHONE	VARCHAR2	11	-	-	-	✓	-	-
_NUMBER								

(2) Task: Drop a column that was created to store the mobile phone number

- ALTER TABLE customers
DROP(mobile_phone-number);

(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	-	-	-	-	-	-
	EMAIL								
	FIRST_NAME	VARCHAR2	50	-	-	-	-	-	-
	LAST_NAME	VARCHAR2	20	-	-	-	-	-	-
	PHONE -	VARCHAR2	11	-	-	-	-	-	-
	NUMBER								
	CURRENT_	NUMBER	-	6	2	-	-	-	-
	BALANCE								
	SRE_ID	VARCHAR2	4	-	-	-	✓	-	-
	TEM_ID	VARCHAR2	4	-	-	-	✓	-	-
	LOYALTY_	VARCHAR2	6	-	-	-	✓	-	-
	CARD_NUMBER								