

PART 1

1. 10 tables
2. 6 columns
3. NOT NULL
4. ctr_number
5. lowest: -99 | highest:99
6. lowest: -99999.99 | highest:99999.99
7. itm_num | start_date | start_time

PART 2

MODIFYING COLUMN

1. run the DESCRIBE command

The screenshot shows the APEX SQL Workshop interface. The SQL Commands pane contains the command `DESC orders;`. The Results pane shows the table structure for `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_UNITS	NUMBER	-	2	0	-	-	-	-
	CTR_NUMBER	VARCHAR2	6	-	-	-	-	-	-

2. modify the odr_date column

The screenshot shows the APEX SQL Workshop interface. The SQL Commands pane contains the command `ALTER TABLE orders MODIFY odr_date DATE DEFAULT SYSDATE;`. The Results pane shows the message "Table altered." and the execution time "0.04 seconds".

3. run the DESCRIBE command

The screenshot shows the APEX SQL Workshop interface. The SQL Commands pane contains the command `DESC orders;`. The Results pane shows the 'Describe' tab with a table of column details for the 'ORDERS' table.

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ORDERS	ID	VARCHAR2	9	-	-	1	-	-	-
	ORD_DATE	DATE	7	-	-	-	-	SYSDATE	-
	ORD_TIME	DATE	7	-	-	-	-	-	-
	NUMBER_OF_UNITS	NUMBER	-	2	0	-	-	-	-
	CTR_NUMBER	VARCHAR2	6	-	-	-	-	-	-

ADDING A CHECK CONSTRAINT

1. run the DESCRIBE command

The screenshot shows the APEX SQL Workshop interface. The SQL Commands pane contains the command `DESC customers;`. The Results pane shows the 'Describe' tab with a table of column details for the 'CUSTOMERS' table.

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. Modify the current_balance column and set the value to only 0 and above.

The screenshot shows the APEX SQL Workshop interface. The 'SQL Commands' tab is active, displaying the following SQL command:

```
1 ALTER TABLE customers
2 MODIFY current_balance NUMBER(6, 2) CONSTRAINT current_balance_min CHECK (current_balance >= 0);
```

The 'Results' tab is selected, showing the message 'Table altered.' and the execution time '0.07 seconds'.

3. Run the DESC command

The screenshot shows the APEX SQL Workshop interface. The 'SQL Commands' tab is active, displaying the following SQL command:

```
1 DESC customers;
```

The 'Describe' tab is selected, showing the table structure for '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. Open object browser to make sure the command was succesful

The screenshot shows the APEX Object Browser interface. The 'CUSTOMERS' table is selected, and the 'Constraints' tab is active. The following constraint is listed:

Constraint	Type	Search Condition	Related Constraint	Columns	Delete Rule	Status	Last Change
CURRENT_BALANCE_MIN	Check	current_balance >= 0				ENABLED	12/06/2023

ADDING A COLUMN

1. Run the DESC command

The screenshot shows the Oracle APEX SQL Workshop interface. The 'SQL Commands' tab is active, and the command `DESC customers;` has been executed. The results are displayed in a table format under the 'Describe' tab.

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. ADD the mobile_phone_number column

The screenshot shows the Oracle APEX SQL Workshop interface. The 'SQL Commands' tab is active, and the command `ALTER TABLE customers ADD mobile_phone_number NUMBER(11);` has been executed. The results show 'Table altered.' and the execution time is 0.06 seconds.

****I altered the table since I set the wrong data type. I know the table is wrong because it fills up value in the precision and the scale instead of length.**

The screenshot shows the Oracle APEX SQL Workshop interface. The 'SQL Commands' tab is active, and the command `ALTER TABLE customers MODIFY mobile_phone_number VARCHAR2(11);` has been executed. The results show 'Table altered.' and the execution time is 0.04 seconds.

3. Run the DESC command

The screenshot shows the Oracle APEX SQL Workshop interface. At the top, there's a navigation bar with 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. Below this, the 'SQL Commands' section is active, showing the schema 'WKSP_SQL1NIDA'. The 'Language' is set to 'SQL' and 'Rows' to '10'. The command entered is 'DESC customers;'. The 'Run' button is highlighted in green. Below the command, there are tabs for 'Results', 'Explain', 'Describe', 'Saved SQL', and 'History'. The 'Describe' tab is selected, displaying a table with the following columns: Table, Column, Data Type, Length, Precision, Scale, Primary Key, Nullable, Default, and Constraints. The table lists the columns of the 'CUSTOMERS' table: CTR_NUMBER (VARCHAR2, 6, Primary Key), 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), and MOBILE_PHONE_NUMBER (VARCHAR2, 11). The 'Nullable' column shows checkmarks for SRE_ID, TEM_ID, LOYALTY_CARD_NUMBER, and MOBILE_PHONE_NUMBER. The footer includes the user 'nidaqistina@graduate.utm.my', the version 'Oracle APEX 23.2.1', and the copyright notice 'Copyright © 1999, 2023, Oracle and/or its affiliates.'

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Con
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	-	-	-	✓	-	-
	MOBILE_PHONE_NUMBER	VARCHAR2	11	-	-	-	✓	-	-

DROPPING A COLUMN

1. Run the DESC command

APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

SQL Commands

SchemaWKSP_SQL1NIDA

LanguageSQLRows10Clear CommandFind TablesSaveRun

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1DESC customers;

Results

Explain

Describe

Saved SQL

History

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Con
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	-	-	-	✓	-	-
	MOBILE_PHONE_NUMBER	VARCHAR2	11	-	-	-	✓	-	-

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sql1_nida

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Oracle APEX 23.21

2. DROP the mobile_phone_number column

APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

SQL Commands

SchemaWKSP_SQL1NIDA

LanguageSQLRows10Clear CommandFind TablesSaveRun

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1ALTER TABLE customers
2DROP (mobile_phone_number);

Results

Explain

Describe

Saved SQL

History

Table altered.

0.06 seconds

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sql1_nida

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Oracle APEX 23.21

3. Run the DESC command

The screenshot shows the Oracle APEX SQL Workshop interface. At the top, there's a navigation bar with 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user information 'Nida Qistina Abd ...' are also present. Below the navigation bar, the 'SQL Commands' section is active, showing the command 'DESC customers;'. The 'Run' button is highlighted. Below the command, the 'Describe' tab is selected, displaying the structure of the 'CUSTOMERS' table. The table has 10 columns: CTR_NUMBER, EMAIL, FIRST_NAME, LAST_NAME, PHONE_NUMBER, CURRENT_BALANCE, SRE_ID, TEM_ID, LOYALTY_CARD_NUMBER, and an unnamed column. The columns are listed with their data types, lengths, and other attributes.

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	-	-	-	✓	-	-

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