



UTM DEGREE PROGRAMME

UNIVERSITI TEKNOLOGI MALAYSIA

Database

(SECD 2523)

Lab 2:DML 1 -Part 1

Name of Lecturer: Dr Noor Hidayah binti Zakaria

Name: Cheng See Chee

Matric number: A22EC0043

Section: 08

Section 6 Lesson 4 Exercise 1: Data Manipulation Language

Use DML operations to manage database tables (S6L4 Objective 2)

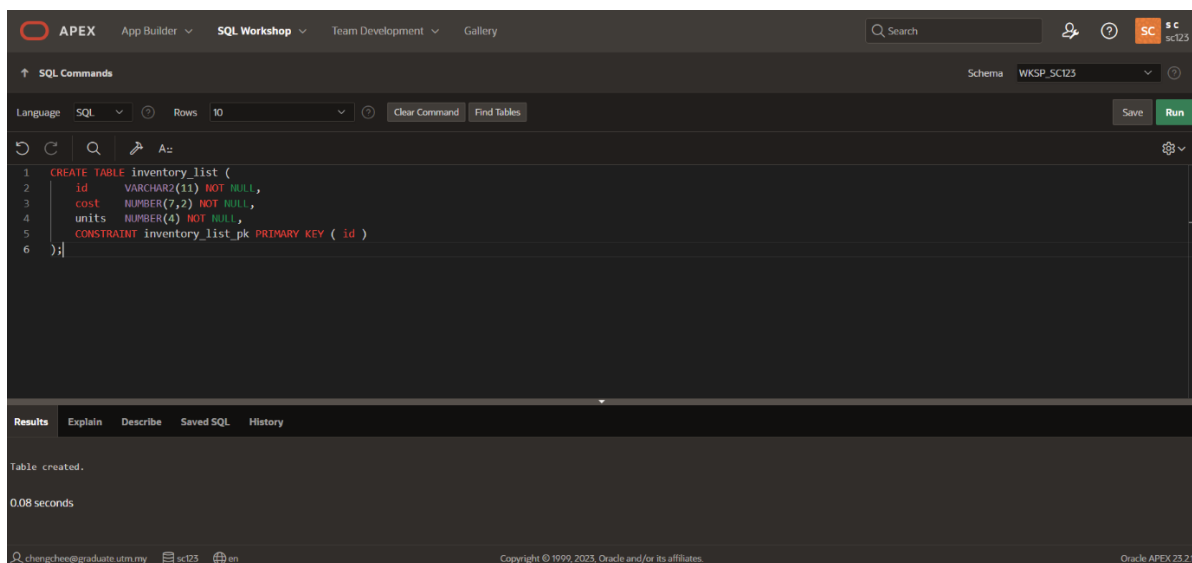
In this exercise you will populate and work with the data that is stored in the database system tables.

Part 1 : Running a script to populate the tables.

You have to consider the order of the tables when populating them. A table that has a foreign key field cannot be populated before the related table with the primary key.

1. Use the table mapping document and list the order that you would use to populate the tables.

- *inventory_list*
- *items*
- *price_history*
- *sales_representatives*
- *sales_rep_addresses*
- *teams*
- *customers*
- *customers_addresses*
- *Orders*
- *ordered_items*



The screenshot displays the Oracle APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user information 'sc sc123' are on the right. The main area is titled 'SQL Commands' and shows a schema dropdown set to 'WKSP_SC123'. Below this, a toolbar contains 'Language' (set to SQL), 'Rows' (set to 10), 'Clear Command', and 'Find Tables'. The SQL editor contains the following code:

```
1 CREATE TABLE inventory_list (  
2   id VARCHAR2(11) NOT NULL,  
3   cost NUMBER(7,2) NOT NULL,  
4   units NUMBER(4) NOT NULL,  
5   CONSTRAINT inventory_list_pk PRIMARY KEY ( id )  
6 );
```

At the bottom, the 'Results' tab is active, displaying the message 'Table created.' and the execution time '0.08 seconds'. The footer shows the user 'chengchee@graduate.utrm.my', the schema 'sc123', the copyright 'Copyright © 1999, 2023, Oracle and/or its affiliates.', and the version 'Oracle APEX 23.21'.

APEX App Builder SQL Workshop Team Development Gallery

Search

SQL Commands Schema WKSP_SC123

Language SQL Rows 10 Clear Command Find Tables Save Run

```
1 CREATE TABLE items (
2   itm_number VARCHAR2(10) NOT NULL,
3   name        VARCHAR2(20) NOT NULL,
4   description  VARCHAR2(50) NOT NULL,
5   category    VARCHAR2(25) NOT NULL,
6   color       VARCHAR2(15),
7   "Size"      CHAR(1),
8   ilt_id      VARCHAR2(11) NOT NULL,
9   CONSTRAINT item_pk PRIMARY KEY ( itm_number )
10 );
```

Results Explain Describe Saved SQL History

Table created.

0.05 seconds

APEX App Builder SQL Workshop Team Development Gallery

Search

SQL Commands Schema WKSP_SC123

Language SQL Rows 10 Clear Command Find Tables Save Run

```
1 CREATE TABLE price history (
2   start_date DATE NOT NULL,
3   start_time DATE NOT NULL,
4   price      NUMBER(7,2) NOT NULL,
5   end_date   DATE,
6   end_time   DATE,
7   itm_number VARCHAR2(10) NOT NULL,
8   CONSTRAINT price_history_pk PRIMARY KEY ( itm_number, start_date, start_time ),
9   CONSTRAINT price_history_items_fk FOREIGN KEY ( itm_number ) REFERENCES items ( itm_number )
10 );
11
12
```

Results Explain Describe Saved SQL History

Table created.

0.06 seconds

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APEX App Builder SQL Workshop Team Development Gallery

SQL Commands Schema WKSP_SC123

Language SQL Rows 10 Clear Command Find Tables Save Run

```
1 CREATE TABLE sales_representatives (  
2     id VARCHAR2(4) NOT NULL,  
3     email VARCHAR2(50) NOT NULL,  
4     first_name VARCHAR2(20) NOT NULL,  
5     last_name VARCHAR2(30) NOT NULL,  
6     phone_number VARCHAR2(11) NOT NULL,  
7     commission_rate NUMBER(2) NOT NULL,  
8     supervisor_id VARCHAR2(4) NOT NULL,  
9     CONSTRAINT sales_representative_pk PRIMARY KEY ( id ),  
10    CONSTRAINT sre_email_uk UNIQUE (email)  
11 );
```

Results Explain Describe Saved SQL History

Table created.

0.06 seconds

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APEX App Builder SQL Workshop Team Development Gallery

SQL Commands Schema WKSP_SC123

Language SQL Rows 10 Clear Command Find Tables Save Run

```
1 CREATE TABLE sales_rep_addresses (  
2     id VARCHAR2(4) NOT NULL,  
3     address_line_1 VARCHAR2(30) NOT NULL,  
4     address_line_2 VARCHAR2(30),  
5     city VARCHAR2(15) NOT NULL,  
6     zip_code VARCHAR2(7) NOT NULL,  
7     CONSTRAINT sales_rep_address_pk PRIMARY KEY ( id )  
8 );
```

Results Explain Describe Saved SQL History

Table created.

0.05 seconds

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APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

SC

sc123

SQL Commands

Schema WKSP_SC123

Language SQL

Rows 10

Clear Command

Find Tables

Save

Run

A:

```
1 CREATE TABLE teams (
2     id          VARCHAR2(4) NOT NULL,
3     name        VARCHAR2(20) NOT NULL,
4     number_of_players NUMBER(2) NOT NULL,
5     discount    NUMBER(2),
6     CONSTRAINT team_pk PRIMARY KEY ( id )
7 );
```

Results

Explain

Describe

Saved SQL

History

Table created.

0.06 seconds

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sc123

en

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APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

SC

sc123

SQL Commands

Schema WKSP_SC123

Language SQL

Rows 10

Clear Command

Find Tables

Save

Run

A:

```
1 CREATE TABLE customers (
2     ctr_number    VARCHAR2(6) NOT NULL,
3     email         VARCHAR2(50) NOT NULL,
4     first_name    VARCHAR2(20) NOT NULL,
5     last_name     VARCHAR2(30) NOT NULL,
6     phone_number  VARCHAR2(11) NOT NULL,
7     current_balance NUMBER(6,2) NOT NULL,
8     sre_id        VARCHAR2(4),
9     tea_id        VARCHAR2(4),
10    loyalty_card_number VARCHAR2(6),
11    CONSTRAINT customer_pk PRIMARY KEY ( ctr_number ),
12    CONSTRAINT ctr_email_uk UNIQUE (email),
13    CONSTRAINT ctr_lcn_uk UNIQUE (loyalty_card_number)
14 );
```

Results

Explain

Describe

Saved SQL

History

Table created.

0.08 seconds

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sc123

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APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

SC

sc123

SQL Commands

Schema WKSP_SC123

Language SQL

Rows 10

Clear Command

Find Tables

Save

Run

A:

```
1 CREATE TABLE customers_addresses (
2     id          VARCHAR2(8) NOT NULL,
3     address_line_1 VARCHAR2(30) NOT NULL,
4     address_line_2 VARCHAR2(30),
5     city        VARCHAR2(15) NOT NULL,
6     zip_code    VARCHAR2(7) NOT NULL,
7     ctr_number  VARCHAR2(6) NOT NULL,
8     CONSTRAINT customer_address_pk PRIMARY KEY ( id )
9 );
10
```

Results

Explain

Describe

Saved SQL

History

Table created.

0.05 seconds

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sc123

en

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Oracle APEX 23.21

2

APEX SQL Workshop interface showing the execution of a SQL command to create a table named `orders`.

Schema: WKSP_SC123

Language: SQL Rows: 10

SQL Command:

```
1 CREATE TABLE orders (  
2   id          VARCHAR2(9) NOT NULL,  
3   odr_date    DATE NOT NULL,  
4   odr_time    DATE NOT NULL,  
5   number_of_units NUMBER(2) NOT NULL,  
6   ctr_number  VARCHAR2(6) NOT NULL,  
7   CONSTRAINT orders_pk PRIMARY KEY ( id )  
8 );
```

Results: Table created.
0.06 seconds

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APEX SQL Workshop interface showing the execution of a SQL command to create a table named `ordered_items`.

Schema: WKSP_SC123

Language: SQL Rows: 10

SQL Command:

```
1 CREATE TABLE ordered_items (  
2   quantity_ordered NUMBER(3) NOT NULL,  
3   quantity_shipped NUMBER(3) NOT NULL,  
4   itm_number       VARCHAR2(10) NOT NULL,  
5   odr_id           VARCHAR2(9) NOT NULL,  
6   CONSTRAINT ordered_item_pk PRIMARY KEY ( itm_number, odr_id )  
7 );  
8  
9
```

Results: Table created.
0.06 seconds

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APEX App Builder SQL Workshop Team Development Gallery

Schema WKSP_SC123

Language: SQL Rows: 10 Clear Command Find Tables Save Run

```
1 ALTER TABLE customers_addresses ADD CONSTRAINT customer_address_customer_fk FOREIGN KEY ( ctr_number )
2 | REFERENCES customers ( ctr_number );
3
```

Results Explain Describe Saved SQL History

Table altered.

0.07 seconds

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APEX App Builder SQL Workshop Team Development Gallery

Schema WKSP_SC123

Language: SQL Rows: 10 Clear Command Find Tables Save Run

```
1 ALTER TABLE customers ADD CONSTRAINT customer_sales_rep_fk FOREIGN KEY ( sre_id )
2 | REFERENCES sales_representatives ( id );
3
```

Results Explain Describe Saved SQL History

Table altered.

0.06 seconds

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APEX App Builder SQL Workshop Team Development Gallery

Search

SQL Commands Schema WKSP_SC123

Language SQL Rows 10 Clear Command Find Tables Save Run

```
1 ALTER TABLE customers ADD CONSTRAINT customer_team_fk FOREIGN KEY ( tem_id )
2 REFERENCES teams ( id );
```

Results Explain Describe Saved SQL History

Table altered.

0.06 seconds

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APEX App Builder SQL Workshop Team Development Gallery

Search

SQL Commands Schema WKSP_SC123

Language SQL Rows 10 Clear Command Find Tables Save Run

```
1 ALTER TABLE items ADD CONSTRAINT item_inventory_list_fk FOREIGN KEY ( ilt_id )
2 REFERENCES inventory_list ( id );
3
```

Results Explain Describe Saved SQL History

Table altered.

0.06 seconds

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APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

SC sc123

SQL Commands

Schema WKSP_SC123

Language SQL

Rows 10

Clear Command

Find Tables

Save

Run

↶ ↷ 🔍 ↵ A:

1 ALTER TABLE orders ADD CONSTRAINT order_customer_fk FOREIGN KEY (ctr_number)

2 REFERENCES customers (ctr_number);

3

Results

Explain

Describe

Saved SQL

History

Table altered.

0.06 seconds

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APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

SC sc123

SQL Commands

Schema WKSP_SC123

Language SQL

Rows 10

Clear Command

Find Tables

Save

Run

↶ ↷ 🔍 ↵ A:

1 ALTER TABLE ordered_items ADD CONSTRAINT ordered_item_item_fk FOREIGN KEY (itm_number)

2 REFERENCES items (itm_number);

3

4

Results

Explain

Describe

Saved SQL

History

Table altered.

0.04 seconds

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APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

SC

sc123

SQL Commands

SchemaWKSP_SC123

LanguageSQL

Rows10

Clear Command

Find Tables

Save

Run

A:

1ALTER TABLE ordered_items ADD CONSTRAINT ordered_item_order_fk FOREIGN KEY (odr_id)

2REFERENCES orders (id);

Results

Explain

Describe

Saved SQL

History

Table altered.

0.05 seconds

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APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

SC

sc123

SQL Commands

SchemaWKSP_SC123

LanguageSQL

Rows10

Clear Command

Find Tables

Save

Run

A:

1ALTER TABLE sales_rep_addresses ADD CONSTRAINT sales_rep_add_sales_rep_fk FOREIGN KEY (id)

2REFERENCES sales_representatives (id);

Results

Explain

Describe

Saved SQL

History

Table altered.

0.04 seconds

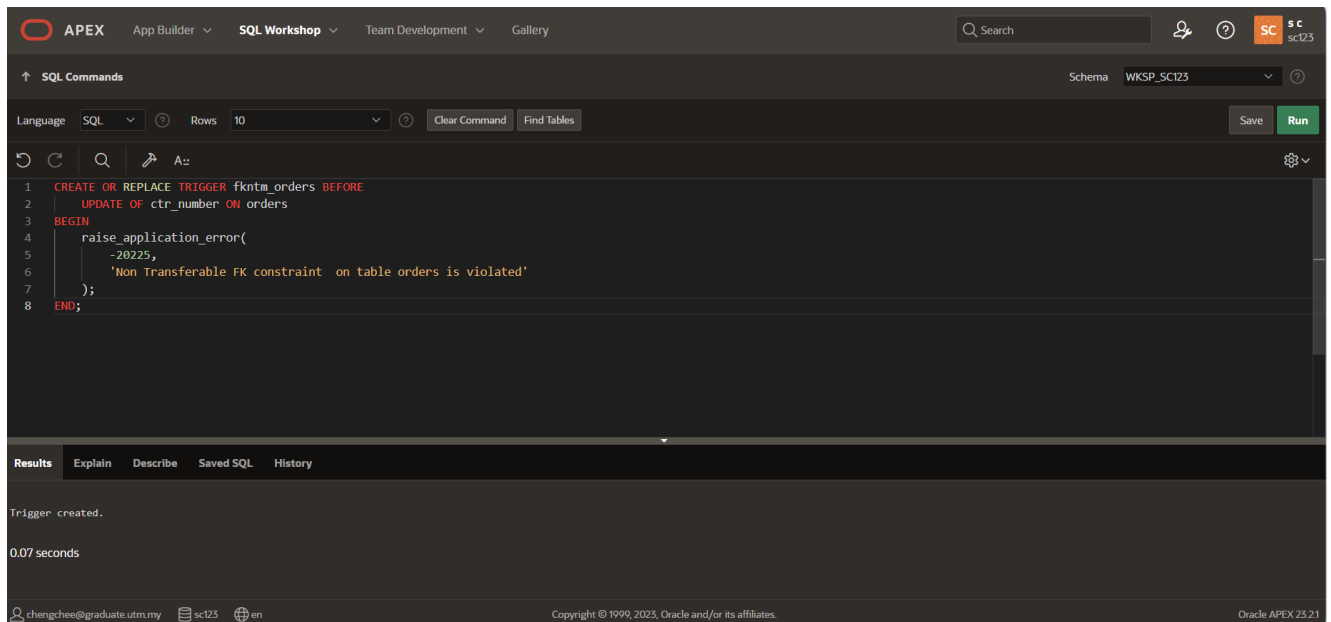
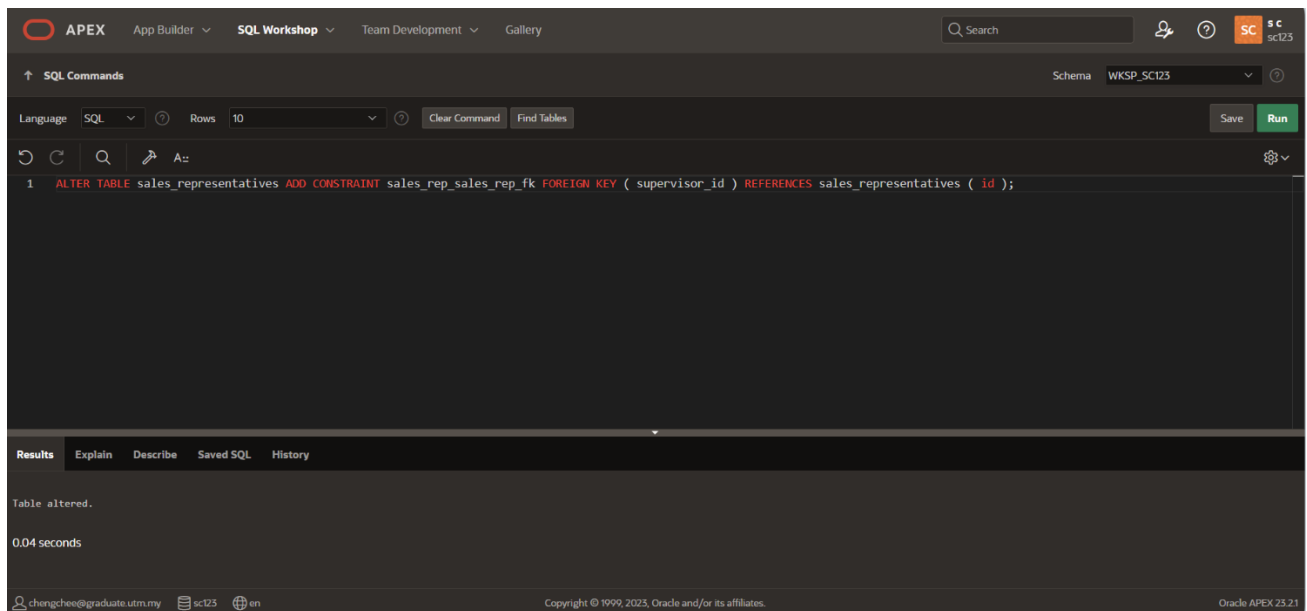
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2. Open the “sports data.sql” and look at the order the data is being added there, does your list match? This file can be found in the Section 6 Lesson 4 interaction (sports data.zip) and must first be extracted.

[Yes, my list is matched.](#)

3. Run the “sports data.sql” script in APEX to populate your tables
4. Check that no errors occurred when you ran the script.

SQL Scripts Results				
Script: sports_data.sql Status: Complete				
View: <input type="radio"/> Detail <input checked="" type="radio"/> Summary Rows: 15 <input type="button" value="Go"/>				
<input type="button" value="Create App"/>	<input type="button" value="Edit Script"/>			
Number ↑	Elapsed	Statement	Feedback	Rows
1	0.03	INSERT INTO inventory_list (id, cost, units) VALUES('t01023	1 row(s) inserted.	1
2	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('t01023	1 row(s) inserted.	1
3	0.01	INSERT INTO inventory_list (id, cost, units) VALUES('t01023	1 row(s) inserted.	1
4	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('t01023	1 row(s) inserted.	1
5	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('t01023	1 row(s) inserted.	1
6	0.02	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.	1
7	0.00	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.	1
8	0.00	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.	1
9	0.00	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.	1
10	0.00	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.	1
11	0.02	INSERT INTO price_history (start_date, start_time, price, it	1 row(s) inserted.	1
12	0.00	INSERT INTO price_history (start_date, start_time, price, en	1 row(s) inserted.	1
13	0.01	INSERT INTO price_history (start_date, start_time, price, en	1 row(s) inserted.	1
14	0.00	INSERT INTO price_history (start_date, start_time, price, it	1 row(s) inserted.	1
15	0.00	INSERT INTO price_history (start_date, start_time, price, it	1 row(s) inserted.	1

Download			row(s) 1 - 15 of 47 <input type="button" value="Next"/>	
47			47	
Statements Processed			Successful	
			0	
			With Errors	
chengchee@graduate.utm.my sc123 en			Copyright © 1999, 2023, Oracle and/or its affiliates. Oracle APEX 23.21	

Part 2- Inserting rows to the system

- 1. Add a new team to the system

id	name	Number_of_players	discount
t004	Jets	10	5

APEX App Builder SQL Workshop Team Development Gallery				
SQL Commands Schema: WKSP_SC123				
Language: SQL Rows: 10 <input type="button" value="Clear Command"/> <input type="button" value="Find Tables"/> <input type="button" value="Save"/> <input type="button" value="Run"/>				
<pre> 1 INSERT INTO teams(id, name, Number_of_players, discount) 2 VALUES ('t004', 'Jets', '10', '5') </pre>				
Results Explain Describe Saved SQL History				
1 row(s) inserted.				
0.02 seconds				
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The screenshot shows the Oracle APEX SQL Workshop interface. On the left is the Object Browser with a tree view containing Tables, Views, Indexes, Sequences, Types, Packages, and Procedures. The 'TEAMS' table is selected under the Tables category. The main pane displays the 'Data' tab for the 'TEAMS' table, showing a grid with columns: ID, NAME, NUMBER_OF_PLAYERS, and DISCOUNT. The data rows are:

ID	NAME	NUMBER_OF_PLAYERS	DISCOUNT
t004	Jets	10	5
t001	Rockets	25	10
t002	Celtics	42	20
t003	Rovers	8	

At the bottom of the grid, it says '1 cells selected' and '1 - 4'.

2. Add a new Customer with the following details to the system

ctr number	email	First name	Last name	Phone number	Current balance	Loyalty card number	tem id	sre id
c02001	brianrog@hootech.com	Brian	Rogers	01654564898	-5	lc4587		

The screenshot shows the Oracle APEX SQL Workshop interface. The 'SQL Commands' pane is active, showing the following SQL command:

```
1 INSERT INTO customers (ctr_number,email,first_name,last_name,phone_number,current_balance,loyalty_card_number)
2 VALUES ('c02001','brianrog@hootech.com','Brian','Rogers','01654564898','-5','lc4587')
```

Below the command pane, the 'Results' tab is selected, showing the output of the command:

```
1 row(s) inserted.
0.00 seconds
```

APEX App Builder SQL Workshop Team Development Gallery

Search

Object Browser Schema WKSP_SC123

Type to filter... +

Tables

- CUSTOMERS
- CUSTOMERS_ADDRESSES
- HTMLDB_PLAN_TABLE
- INVENTORY_LIST
- ITEMS
- ORDERED_ITEMS
- ORDERS
- PRICE_HISTORY
- SALES_REPRESENTATIVES
- SALES_REP_ADDRESSES
- TEAMS

Views

Indexes

Sequences

Types

Packages

Procedures

CUSTOMERS

Columns Data Indexes Constraints Grants Statistics Triggers Dependencies DDL Sample Queries

+ Insert Row Columns... Filter... Count Rows Load Data Download Refresh

	CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUM
	c02001	brianrog@hoote...	Brian	Rogers	01654564898	-5			lc4587
	c00001	bob.thornberry...	Robert	Thornberry	01234567898	150	sr01	t001	
	c00012	JJones@freemai...	Jennifer	Jones	01505214598	0			lc1015
	c00101	unknown@here...	John	Doe	03216547808	987.5	sr01	t002	
	c00103	MurciaA@globa...	Andrew	Murcia	07715246890	85			lc2341
	c01986	margal87@delp...	Maria	Galand	01442736589	125.65	sr03	t003	

1 cells selected 1 - 6

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- This information violates the check constraint that the current balance must not be less than zero. Change the current balance to 50 and rerun the query.

APEX App Builder SQL Workshop Team Development Gallery

Search

SQL Commands Schema WKSP_SC123

Language SQL Rows 10 Clear Command Find Tables Save Run

```

1 ALTER TABLE customers
2 ADD CHECK (CURRENT_BALANCE >= 0)
3

```

Results Explain Describe Saved SQL History

ORA-02293: cannot validate (WKSP_SC123.) - check constraint violated

0.03 seconds

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APEXApp BuilderSQL WorkshopTeam DevelopmentGallery

SearchSCsc123

SQL CommandsSchemaWKSP_SC123

LanguageSQLRows10Clear CommandFind TablesSaveRun

1UPDATE customers2SET current_balance=503WHERE ctr_number='c02001'4

ResultsExplainDescribeSaved SQLHistory

1 row(s) updated.
0.03 seconds

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APEXApp BuilderSQL WorkshopTeam DevelopmentGallery

SearchSCsc123

Object BrowserSchemaWKSP_SC123

Type to filter...+▼

TablesCUSTOMERSCUSTOMERS_ADDRESSESHTMLDB_PLAN_TABLEINVENTORY_LISTITEMSORDERED_ITEMSORDERSPRICE_HISTORYSALES_REPRESENTATIVESSALES_REP_ADDRESSESTEAMSViewsIndexesSequencesTypesPackagesProcedures

CUSTOMERS

ColumnsDataIndexesConstraintsGrantsStatisticsTriggersDependenciesDDLSample Queries

+ Insert RowColumns...Filter...Count RowsLoad DataDownloadRefresh

	CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUM
	c02001	brianrog@hoo...	Brian	Rogers	01654564898	50			lc4587
	c00001	bob.thornberry...	Robert	Thornberry	01234567898	150	sr01	t001	
	c00012	JJones@freemai...	Jennifer	Jones	01505214598	0			lc1015
	c00101	unknown@here...	John	Doe	03216547808	987.5	sr01	t002	
	c00103	MurciaA@globa...	Andrew	Murcia	07715246890	85			lc2341
	c01986	margal87@delp...	Maria	Galant	01442736589	125.65	sr03	t003	

1 cells selected1 - 6

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2



UTM DEGREE PROGRAMME

UNIVERSITI TEKNOLOGI MALAYSIA

Database

(SECD 2523)

Lab 2:DML 1 -Part 2

Name of Lecturer: Dr Noor Hidayah binti Zakaria

Name: Cheng See Chee

Matric number: A22EC0043

Section: 08

Section 6 Lesson 4 Exercise 2: Data Manipulation Language

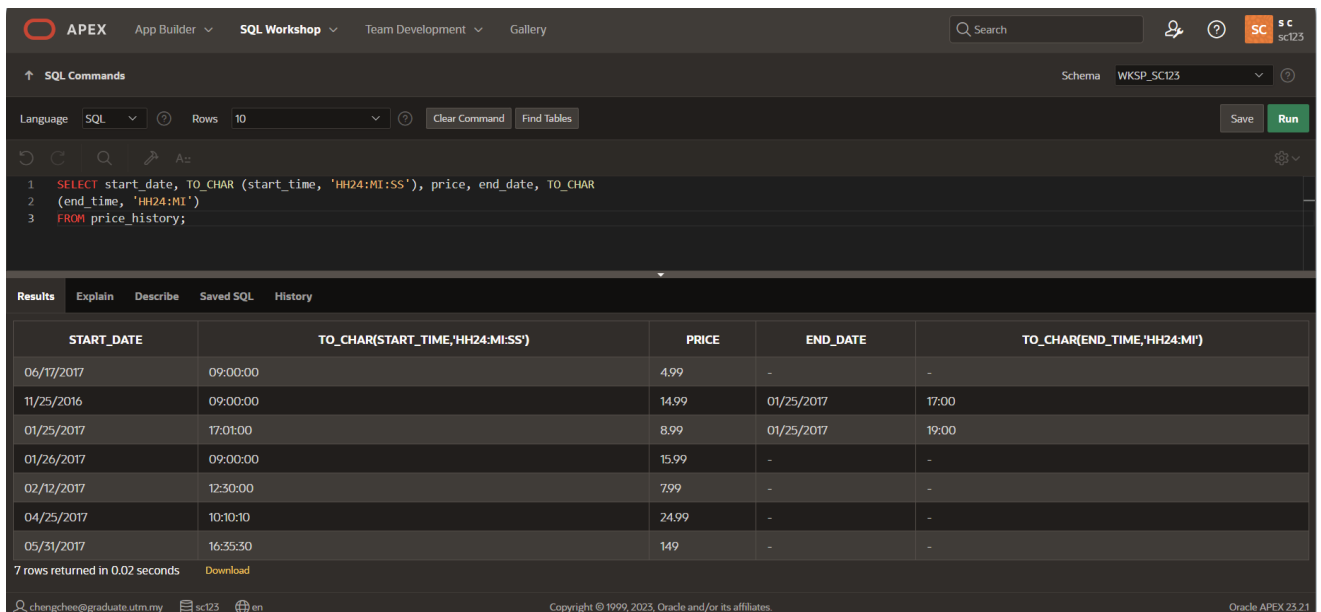
Use DML operations to manage database tables (S6L4 Objective 2)

In this exercise you will populate and work with the data that is stored in the database system.

Part 1- Updating rows to the system

1. Run the following query to view the content of the price_history table:

```
SELECT start_date, TO_CHAR (start_time, 'HH24:MI:SS'), price, end_date, TO_CHAR  
(end_time, 'HH24:MI')  
FROM price_history;
```



The screenshot shows the APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile are on the right. Below the navigation bar, the 'SQL Commands' tab is active, showing a query with three lines: `SELECT start_date, TO_CHAR (start_time, 'HH24:MI:SS'), price, end_date, TO_CHAR (end_time, 'HH24:MI')`, `FROM price_history;`. The 'Results' tab is selected, displaying a table with 7 rows. The table has five columns: `START_DATE`, `TO_CHAR(START_TIME,'HH24:MI:SS')`, `PRICE`, `END_DATE`, and `TO_CHAR(END_TIME,'HH24:MI')`. The data rows show various dates and times, with prices ranging from 4.99 to 24.99. At the bottom, it states '7 rows returned in 0.02 seconds' and provides a 'Download' link. The footer includes the user 'chengchee@graduate.uttm.my', the schema 'sc123', and the Oracle APEX version '23.2.1'.

START_DATE	TO_CHAR(START_TIME,'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME,'HH24:MI')
06/17/2017	09:00:00	4.99	-	-
11/25/2016	09:00:00	14.99	01/25/2017	17:00
01/25/2017	17:01:00	8.99	01/25/2017	19:00
01/26/2017	09:00:00	15.99	-	-
02/12/2017	12:30:00	7.99	-	-
04/25/2017	10:10:10	24.99	-	-
05/31/2017	16:35:30	14.9	-	-

2. Obl is going to update the price of the premium bat so you will need to write a query that will close off the current price by adding the system date values to the end_date and end_time fields. To run this query you will need to both match the item number and identify that the end date is null. This ensures that you are updating the latest price.

APEX App Builder SQL Workshop Team Development Gallery

Schema: WKSP_SCT23

Language: SQL Rows: 10 Clear Command Find Tables Save Run

```

1 UPDATE price_history
2 SET end_date = SYSDATE,
3 end_time = SYSDATE
4 WHERE itm_number = 'im01101048'
5 AND end_date IS NULL;
6
7

```

Results Explain Describe Saved SQL History

1 row(s) updated.

0.01 seconds

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APEX App Builder SQL Workshop Team Development Gallery

Schema: WKSP_SCT23

Object Browser

Type to filter... +

- Tables
 - CUSTOMERS
 - CUSTOMERS_ADDRESSES
 - HTMLDB_PLAN_TABLE
 - INVENTORY_LIST
 - ITEMS
 - ORDERED_ITEMS
 - ORDERS
 - PRICE_HISTORY**
 - SALES_REPRESENTATIVES
 - SALES_REP_ADDRESSES
 - TEAMS
- Views
- Indexes
- Sequences
- Types
- Packages
- Procedures

PRICE_HISTORY

Columns Data Indexes Constraints Grants Statistics Triggers Dependencies DDL Sample Queries

+ Insert Row Columns... Filter... Count Rows Load Data Download Refresh

	START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
	06/17/2017	06/17/2016	4.99			im01101044
	11/25/2016	11/25/2016	14.99	01/25/2017	01/25/2017	im01101045
	01/25/2017	01/25/2017	8.99	01/25/2017	01/25/2017	im01101045
	01/26/2017	01/26/2017	15.99			im01101045
	02/12/2017	02/12/2017	7.99			im01101046
	04/25/2017	04/25/2017	24.99			im01101047
	05/31/2017	05/31/2017	149	12/18/2023	12/18/2023	im01101048

1 cells selected

1 - 7

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3. Rerun the select statement on the price_history table to ensure that the statement has been executed.

APEX SQL Workshop Team Development Gallery

Schema: WKSP_SC123

Language: SQL Rows: 10 Clear Command Find Tables Save Run

```

1 SELECT start_date, TO_CHAR (start_time, 'HH24:MI:SS'), price, end_date, TO_CHAR
2 (end_time, 'HH24:MI')
3 FROM price_history;

```

Results Explain Describe Saved SQL History

START_DATE	TO_CHAR(START_TIME, 'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME, 'HH24:MI')
06/11/2017	09:00:00	4.99	-	-
11/25/2016	09:00:00	14.99	01/25/2017	17:00
01/25/2017	17:01:00	8.99	01/25/2017	19:00
01/26/2017	09:00:00	15.99	-	-
02/12/2017	12:50:00	7.99	-	-
04/25/2017	10:10:10	24.99	-	-
05/31/2017	16:35:30	14.9	12/18/2023	10:11

7 rows returned in 0.01 seconds Download

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4. Insert a new row that will use the current date and time to set the new price of the premium bat to be 99.99.

APEX SQL Workshop Team Development Gallery

Schema: WKSP_SC123

Language: SQL Rows: 10 Clear Command Find Tables Save Run

```

1 INSERT INTO PRICE_HISTORY (START_DATE, START_TIME, PRICE, ITM_NUMBER)
2 VALUES (SYSDATE, CURRENT_TIMESTAMP, 99.99, 'im01101048');

```

Results Explain Describe Saved SQL History

1 row(s) inserted.

0.01 seconds

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5. Rerun the select statement on the price_history table to ensure that the statement has been executed.

APEX SQL Workshop interface showing a SQL query and its results.

Schema: WKSP_SC123

Language: SQL Rows: 10

SQL Command:

```

1 SELECT start_date, TO_CHAR (start_time, 'HH24:MI:SS'), price, end_date, TO_CHAR
2 (end_time, 'HH24:MI')
3 FROM price_history;
4

```

Results:

START_DATE	TO_CHAR(START_TIME,'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME,'HH24:MI')
12/18/2023	10:17:57	99.99	-	-
06/17/2017	09:00:00	4.99	-	-
11/25/2016	09:00:00	14.99	01/25/2017	17:00
01/25/2017	17:01:00	8.99	01/25/2017	19:00
01/26/2017	09:00:00	15.99	-	-
02/12/2017	12:30:00	7.99	-	-
04/25/2017	10:10:10	24.99	-	-
05/31/2017	16:35:30	149	12/18/2023	10:11

8 rows returned in 0.01 seconds

Part 2: Deleting rows from the system

- Bob Thornberry has contacted Obl to ask that the 83 Barrhill Drive address be removed from the system as he can no longer receive parcels at this address. Write a SQL statement that will remove this address from the system.

APEX SQL Workshop interface showing a SQL query and its results.

Schema: WKSP_SC123

Language: SQL Rows: 10

SQL Command:

```

1 DELETE FROM CUSTOMERS_ADDRESSES
2 WHERE ADDRESS_LINE_1 = '83 Barrhill Drive'
3

```

Results:

1 row(s) deleted.

0.01 seconds

- Run a select statement on the customers_addresses table to ensure that the statement has been executed.

APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

scsc123

SQL Commands

SchemaWKSP_SC123

LanguageSQL

Rows10

Clear Command

Find Tables

Save

Run

A:

1SELECT * FROM CUSTOMERS_ADDRESSES;

Results

Explain

Describe

Saved SQL

History

ID	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	ZIP_CODE	CTR_NUMBER
ca0102	17 Gartsquare Road	Starford	Liverpool	LP89JH-K	c00001
ca0103	54 Ropehill Crescent	Georgetown	Star	ST45AGV	c00101
ca0104	36 Watercress Lane	-	Jump	JP23YTH	c01986
ca0105	63 Acacia Drive	Skins	Liverpool	LP83JHR	c00001

4 rows returned in 0.02 secondsDownload

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