



**FACULTY OF COMPUTING**  
UTM Johor Bahru

**SECD2523  
SECTION 10**

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**LAB EXERCISE 2**

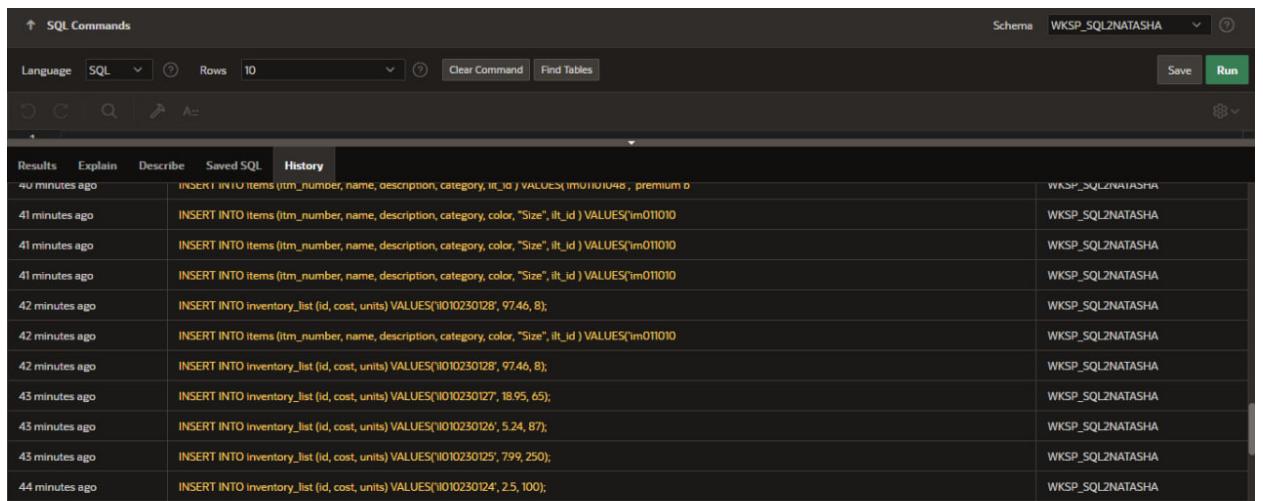
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MATRIC NUMBERS : A22EC0243**

## DML1 PART 1

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



Time Ago	SQL Statement	Schema
40 minutes ago	INSERT INTO items (itm_number, name, description, category, iir_id ) VALUES('im0101048', 'premium p')	WKSP_SQL2NATASHA
41 minutes ago	INSERT INTO items (itm_number, name, description, category, color, "Size", iit_id ) VALUES('im011010	WKSP_SQL2NATASHA
41 minutes ago	INSERT INTO items (itm_number, name, description, category, color, "Size", iit_id ) VALUES('im011010	WKSP_SQL2NATASHA
41 minutes ago	INSERT INTO items (itm_number, name, description, category, color, "Size", iit_id ) VALUES('im011010	WKSP_SQL2NATASHA
42 minutes ago	INSERT INTO inventory_list (id, cost, units) VALUES('I010230128', 97.46, 8);	WKSP_SQL2NATASHA
42 minutes ago	INSERT INTO items (itm_number, name, description, category, color, "Size", iit_id ) VALUES('im011010	WKSP_SQL2NATASHA
42 minutes ago	INSERT INTO inventory_list (id, cost, units) VALUES('I010230128', 97.46, 8);	WKSP_SQL2NATASHA
43 minutes ago	INSERT INTO inventory_list (id, cost, units) VALUES('I010230127', 18.95, 65);	WKSP_SQL2NATASHA
43 minutes ago	INSERT INTO inventory_list (id, cost, units) VALUES('I010230126', 5.24, 87);	WKSP_SQL2NATASHA
43 minutes ago	INSERT INTO inventory_list (id, cost, units) VALUES('I010230125', 799, 250);	WKSP_SQL2NATASHA
44 minutes ago	INSERT INTO inventory_list (id, cost, units) VALUES('I010230124', 2.5, 100);	WKSP_SQL2NATASHA

↑ SQL Commands

Language: SQL Rows: 10 Schema: WKSP\_SQL2NATASHA

Clear Command Find Tables Save Run

History

5 minutes ago	INSERT INTO sales_rep_addresses (id, address_line_1, address_line_2, city, zip_code ) VALUES(sr01,	WKSP_SQL2NATASHA
37 minutes ago	INSERT INTO sales_representatives (id, email, first_name, last_name, phone_number, commission_rate,	WKSP_SQL2NATASHA
38 minutes ago	INSERT INTO sales_representatives (id, email, first_name, last_name, phone_number, commission_rate,	WKSP_SQL2NATASHA
38 minutes ago	INSERT INTO sales_representatives (id, email, first_name, last_name, phone_number, commission_rate,	WKSP_SQL2NATASHA
38 minutes ago	INSERT INTO price_history (start_date, start_time, price, itm_number) VALUES(TO_DATE('31-May-2017',	WKSP_SQL2NATASHA
39 minutes ago	INSERT INTO price_history (start_date, start_time, price, itm_number) VALUES(TO_DATE('25-Apr-2017',	WKSP_SQL2NATASHA
39 minutes ago	INSERT INTO price_history (start_date, start_time, price, itm_number) VALUES(TO_DATE('12-Feb-2017',	WKSP_SQL2NATASHA
39 minutes ago	INSERT INTO price_history (start_date, start_time, price, itm_number) VALUES(TO_DATE('26-Jan-2017',	WKSP_SQL2NATASHA
40 minutes ago	INSERT INTO price_history (start_date, start_time, price, end_date, end_time, itm_number) VALUES(TO_	WKSP_SQL2NATASHA
40 minutes ago	INSERT INTO price_history (start_date, start_time, price, end_date, end_time, itm_number) VALUES(TO_	WKSP_SQL2NATASHA
40 minutes ago	INSERT INTO price_history (start_date, start_time, price, end_date, end_time, itm_number) VALUES(TO_DATE('17-Jun-2017',	WKSP_SQL2NATASHA

↑ SQL Commands

Language: SQL Rows: 10 Schema: WKSP\_SQL2NATASHA

Clear Command Find Tables Save Run

History

34 minutes ago	INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, loya	WKSP_SQL2NATASHA
34 minutes ago	INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, sre_	WKSP_SQL2NATASHA
35 minutes ago	INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, loya	WKSP_SQL2NATASHA
35 minutes ago	INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, s	WKSP_SQL2NATASHA
35 minutes ago	INSERT INTO teams (id, name, number_of_players, discount) VALUES('1003', 'Rovers', 8, null);	WKSP_SQL2NATASHA
36 minutes ago	INSERT INTO teams (id, name, number_of_players, discount) VALUES('1002', 'Celtics', 42, 20);	WKSP_SQL2NATASHA
36 minutes ago	INSERT INTO teams (id, name, number_of_players, discount) VALUES('1001', 'Rockets', 25, 10);	WKSP_SQL2NATASHA
36 minutes ago	INSERT INTO sales_rep_addresses (id, address_line_1, address_line_2, city, zip_code ) VALUES(sr02,	WKSP_SQL2NATASHA
36 minutes ago	INSERT INTO sales_rep_addresses (id, address_line_1, address_line_2, city, zip_code ) VALUES(sr03,	WKSP_SQL2NATASHA
37 minutes ago	INSERT INTO sales_rep_addresses (id, address_line_1, address_line_2, city, zip_code ) VALUES(sr02,	WKSP_SQL2NATASHA
37 minutes ago	INSERT INTO sales_rep_addresses (id, address_line_1, address_line_2, city, zip_code ) VALUES(sr01,	WKSP_SQL2NATASHA

↑ SQL Commands

Language: SQL Rows: 10 Schema: WKSP\_SQL2NATASHA

Clear Command Find Tables Save Run

History

31 minutes ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('or0101681', TO_DATE	WKSP_SQL2NATASHA
31 minutes ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('or0101425', TO_DATE	WKSP_SQL2NATASHA
31 minutes ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('or0101350', TO_DATE	WKSP_SQL2NATASHA
32 minutes ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('or0101250', TO_DATE	WKSP_SQL2NATASHA
32 minutes ago	INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number) VAL	WKSP_SQL2NATASHA
32 minutes ago	INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number) VAL	WKSP_SQL2NATASHA
33 minutes ago	INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number) VAL	WKSP_SQL2NATASHA
33 minutes ago	INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number) VAL	WKSP_SQL2NATASHA
33 minutes ago	INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number) VAL	WKSP_SQL2NATASHA
34 minutes ago	INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, sre_	WKSP_SQL2NATASHA
34 minutes ago	INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, loya	WKSP_SQL2NATASHA

↑ SQL Commands

Language: SQL Rows: 10 Schema: WKSP\_SQL2NATASHA

Clear Command Find Tables Save Run

History

29 minutes ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(1, 1, 'or0	WKSP_SQL2NATASHA
29 minutes ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(10, 10, 'o	WKSP_SQL2NATASHA
29 minutes ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(18, 18, 'o	WKSP_SQL2NATASHA
30 minutes ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(5, 5, 'or0	WKSP_SQL2NATASHA
30 minutes ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(5, 5, 'or0	WKSP_SQL2NATASHA
30 minutes ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(5, 5, 'or0	WKSP_SQL2NATASHA
31 minutes ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('or0101750', TO_DATE	WKSP_SQL2NATASHA
31 minutes ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('or0101681', TO_DATE	WKSP_SQL2NATASHA
31 minutes ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('or0101425', TO_DATE	WKSP_SQL2NATASHA
31 minutes ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('or0101350', TO_DATE	WKSP_SQL2NATASHA

↑ SQL Commands

Language: SQL Rows: 10 Schema: WKSP\_SQL2NATASHA

Clear Command Find Tables Save Run

History

15 minutes ago	INSERT INTO teams (id, name, number_of_players, discount) VALUES ('1004', 'Jets', 10,5);	WKSP_SQL2NATASHA
29 minutes ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(1, 1, 'or0	WKSP_SQL2NATASHA
29 minutes ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(10, 10, 'o	WKSP_SQL2NATASHA
29 minutes ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(18, 18, 'o	WKSP_SQL2NATASHA
30 minutes ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(5, 5, 'or0	WKSP_SQL2NATASHA
30 minutes ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(5, 5, 'or0	WKSP_SQL2NATASHA
30 minutes ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(5, 5, 'or0	WKSP_SQL2NATASHA
31 minutes ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('or0101750', TO_DATE	WKSP_SQL2NATASHA
31 minutes ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('or0101681', TO_DATE	WKSP_SQL2NATASHA
31 minutes ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('or0101425', TO_DATE	WKSP_SQL2NATASHA
31 minutes ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('or0101350', TO_DATE	WKSP_SQL2NATASHA

## Part 2- Inserting rows to the system

1. Add a new team to the system

The screenshot shows a SQL command window with the following details:

- Language:** SQL
- Schema:** WKSP\_SQL2NATALASHA
- Query:**

```
1 INSERT INTO teams (id, name, number_of_players, discount)
2 VALUES ('t004', 'Jets', 10,5);
```
- Results:**
  - 1 row(s) inserted.
  - 0.01 seconds

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

The screenshot shows a SQL command window with the following details:

- Language:** SQL
- Schema:** WKSP\_SQL2NATALASHA
- Query:**

```
1 INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, loyalty_card_number, tem_id, sre_id)
2 VALUES ('c02001', 'brianrog@hooitech.com', 'Brian', 'Rogers', '01654564898', -5, '1c4587', null, null);
```
- Results:**
  - 1 row(s) inserted.
  - 0.01 seconds

3. Change the current balance to 50 and rerun the query.

The screenshot shows a SQL command window with the following details:

- Language:** SQL
- Schema:** WKSP\_SQL2NATALASHA
- Query:**

```
1 UPDATE customers
2 SET current_balance = 50;
```
- Results:**
  - 6 row(s) updated.

## DML2 PART 2

### 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 a SQL command window with the following details:

- SQL Commands** tab is selected.
- Language: SQL
- Rows: 10
- Schema: WKSP\_SQL2NATASHA
- Query:

```
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** tab is selected.
- Table headers:
  - START\_DATE
  - TO\_CHAR(START\_TIME,'HH24:MI:SS')
  - PRICE
  - END\_DATE
  - TO\_CHAR(END\_TIME,'HH24:MI')
- Data rows:

START_DATE	TO_CHAR(START_TIME,'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME,'HH24:MI')
01/25/2017	17:01:00	8.99	01/25/2017	19:00
06/17/2017	09:00:00	4.99	-	-
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	-	-
11/25/2016	09:00:00	14.99	01/25/2017	17:00
- Message: 7 rows returned in 0.04 seconds
- Download button

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.

The screenshot shows a SQL command window with the following details:

- SQL Commands** tab is selected.
- Language: SQL
- Rows: 10
- Schema: WKSP\_SQL2NATASHA
- Query:

```
1 UPDATE price_history  
2 SET end_date = SYSDATE,  
3 | end_time = SYSTIMESTAMP  
4 WHERE item_number = 'im01101048'  
5 AND end_date IS NULL;  
6
```

- Results** tab is selected.
- Message: 1 row(s) updated.

3. Rerun the select statement on the price\_history table to ensure that the statement has been executed.

The screenshot shows a SQL command window with the following details:

- Language: SQL
- Rows: 10
- Schema: WKSP\_SQL2NATASHA
- Query:

```
1 SELECT *
2 FROM price_history;
3
```

- Results:

START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITEM_NUMBER
01/25/2017	01/25/2017	8.99	01/25/2017	01/25/2017	im01101045
06/17/2017	06/17/2016	4.99	-	-	im01101044
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	12/25/2023	12/25/2023	im01101048
11/25/2016	11/25/2016	14.99	01/25/2017	01/25/2017	im01101045

7 rows returned in 0.01 seconds

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.

The screenshot shows a SQL command window with the following details:

- Language: SQL
- Rows: 10
- Schema: WKSP\_SQL2NATASHA
- Query:

```
1 INSERT INTO price_history (start_date, start_time, price, item_number)
2 VALUES (SYSDATE, SYSTIMESTAMP, 99.99, 'im01101048');
3
```

- Results:

1 row(s) inserted.

0.00 seconds

5. Rerun the select statement on the price\_history table to ensure that the statement has been executed

The screenshot shows a SQL command window with the following details:

- Language: SQL
- Rows: 10
- Schema: WKSP\_SQL2NATALSA
- Buttons: Save, Run

The command entered is:

```
1 SELECT *
2 FROM price_history;
```

The results table has the following columns:

START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
01/25/2017	01/25/2017	8.99	01/25/2017	01/25/2017	im01101045
06/17/2017	06/17/2016	4.99	-	-	im01101044
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	12/25/2023	12/25/2023	im01101048
11/25/2016	11/25/2016	14.99	01/25/2017	01/25/2017	im01101045
12/25/2023	12/25/2023	99.99	-	-	im01101048

## Part 2: Deleting rows from the system

1. Bob Thornberry has contacted Obl to ask that the 83 Barrhill Drive address be removed from the system as he can longer receive parcels at this address. Write a SQL statement that will remove this address from the system.

The screenshot shows a SQL command window with the following details:

- Language: SQL
- Rows: 10
- Schema: WKSP\_SQL2NATALSA
- Buttons: Save, Run

The command entered is:

```
1 DELETE FROM customers_addresses
2 WHERE id = 'ca0101';
3 |
```

The results table shows the output of the delete operation:

1 row(s) deleted.
0.03 seconds

2. Run a select statement on the customers\_addresses table to ensure that the statement has been executed

The screenshot shows a SQL command window with the following details:

- SQL Commands:** The title bar indicates the current schema is "WKSP\_SQL2NATALASHA".
- Language:** Set to "SQL".
- Rows:** Set to 10.
- Buttons:** Includes "Clear Command", "Find Tables", "Save", and a "Run" button.
- Query Editor:** Contains the following SQL code:

```
1 SELECT *
2 FROM customers_addresses;
3 |
```
- Results:** The tab is selected, showing the output of the query. The table has the following columns: ID, ADDRESS\_LINE\_1, ADDRESS\_LINE\_2, CITY, ZIP\_CODE, and CTR\_NUMBER. The data is as follows:

ID	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	ZIP_CODE	CTR_NUMBER
ca0104	36 Watercress Lane	-	Jump	JP23YTH	c01986
ca0102	17 Gartsquare Road	Starford	Liverpool	LP89JHK	c00001
ca0103	54 Ropehill Crescent	Georgetown	Star	ST45AGV	c00101
ca0105	63 Acacia Drive	Skins	Liverpool	LP83JHR	c00001