



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

**FACULTY OF COMPUTING**  
UTM Johor Bahru

**SECD2523 - 08 Database**

**SEMESTER I, SESSION 2023/2024**

**LAB 2 - DML 1**

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## SQL2 - DML 1 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.

inventory\_list

items

price\_history

sales\_representatives

sales\_rep\_addresses

teams

customers

customers\_addresses

orders

ordered\_items

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 the list match

3. Run the "sports data.sql" script in APEX to populate your tables

4. Check that no errors occurred when you ran the script.

| Number ↑ | Elapsed | Statement  | Feedback           | Rows |
|----------|---------|--|--------------------|------|
| 1        | 0.06    | INSERT INTO inventory_list (id, cost, units) VALUES('101023  | 1 row(s) inserted. | 1    |
| 2        | 0.01    | INSERT INTO inventory_list (id, cost, units) VALUES('101023  | 1 row(s) inserted. | 1    |
| 3        | 0.00    | INSERT INTO inventory_list (id, cost, units) VALUES('101023  | 1 row(s) inserted. | 1    |
| 4        | 0.00    | INSERT INTO inventory_list (id, cost, units) VALUES('101023  | 1 row(s) inserted. | 1    |
| 5        | 0.00    | INSERT INTO inventory_list (id, cost, units) VALUES('101023  | 1 row(s) inserted. | 1    |
| 6        | 0.03    | 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        | 0.01    | 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       | 0.00    | 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       | 0.01    | INSERT INTO price_history (start_date, start_time, price, it | 1 row(s) inserted. | 1    |

## 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        |

```
1  INSERT INTO teams (id, name, number_of_players, discount)
2  VALUES ('t004', 'Jets', 10, 5);
```

Results Explain Describe Saved SQL History

1 row(s) inserted.

0.04 seconds

### 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              |        |        |

```
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');
```

Results Explain Describe Saved SQL History

ORA-02290: check constraint (WKSP\_JINGZHEEE.MIN\_BALANCE) violated

3. 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.

```
1 INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, loyalty_card_number)
2 VALUES('c02001', 'brianrog@hoootech.com', 'Brian', 'Rogers', '01654564898', 50, 'lc4587');
```

**Results** Explain Describe Saved SQL History

1 row(s) inserted.

0.01 seconds

## SQL2 - DML 1 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;
```

| 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  | -          | -                          |

7 rows returned in 0.04 seconds Download

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.

```

1  UPDATE price_history
2  SET end_date = sysdate, end_time = CURRENT_TIMESTAMP
3  WHERE itm_number='im01101048' AND end_date IS NULL;

```

**Results**   Explain   Describe   Saved SQL   History

1 row(s) updated.

0.03 seconds

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

```

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

```

| 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                          | 799   | -          | -                            |
| 04/25/2017 | 10:10:10                          | 24.99 | -          | -                            |
| 05/31/2017 | 16:35:30                          | 149   | 12/18/2023 | 16:25                        |

7 rows returned in 0.01 seconds   [Download](#)

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

```

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.

0.00 seconds

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

| START_DATE | TO_CHAR(START_TIME,'HH24MISS') | PRICE | END_DATE   | TO_CHAR(END_TIME,'HH24MISS') |
|------------|--------------------------------|-------|------------|------------------------------|
| 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 | 16:55:30                       | 149   | 12/18/2023 | 16:25                        |
| 12/18/2023 | 16:28:24                       | 99.99 | -          | -                            |

8 rows returned in 0.04 seconds [Download](#)

## 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.

|   |                                 |
|---|---------------------------------|
| 1 | DELETE FROM customers_addresses |
| 2 | WHERE id = 'ca0101'             |

| Results           | Explain | Describe | Saved SQL | History |
|-------------------|---------|----------|-----------|---------|
| 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.

| ID     | ADDRESS_LINE_1       | ADDRESS_LINE_2 | CITY      | ZIP_CODE | CTR_NUMBER |
|--------|----------------------|----------------|-----------|----------|------------|
| ca0102 | 17 Gartsquare Road   | Starford       | Liverpool | LP89JHK  | c00001     |
| ca0103 | 54 Ropehill Crescent | Georgetown     | Star      | ST4SAGV  | c00101     |
| ca0104 | 36 Watercress Lane   | -              | Jump      | JP23YTH  | c01986     |
| ca0105 | 63 Acacia Drive      | Skins          | Liverpool | LP83JHR  | c00001     |

4 rows returned in 0.01 seconds [Download](#)