UNIVERSITI TEKNOLOGI MALAYSIA

SEMESTER 1, SESSION 2023/2024

LAB EXERCISE 2

SECD2523 : DATABASE

SECTION 10

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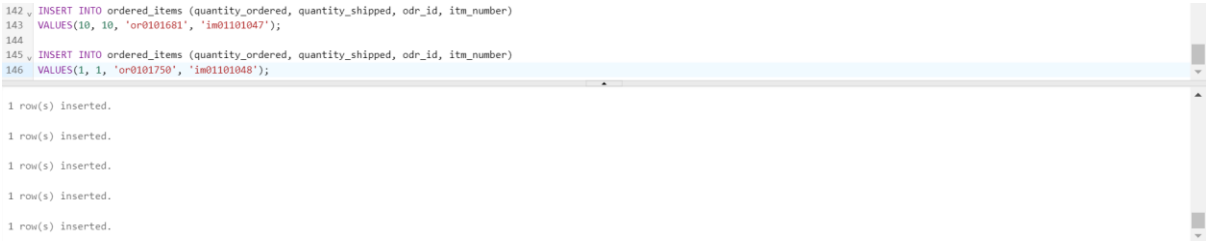
Exercise 1: Data Manipulation Language

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

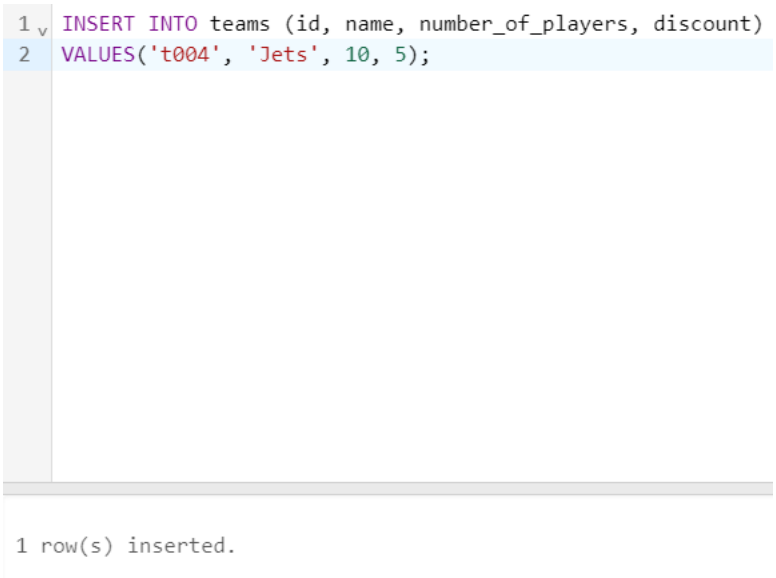
1. Use the table mapping document and list the order that you would use to populate the tables.
2. Open the “sports data.sql” and look at the order the data is being added there, does your list match?
3. Run the “sports data.sql” script in APEX to populate your tables
4. Check that no errors occurred when you ran the script



No errors occurred

Part 2- Inserting rows to the system

1. Add a new team to the system



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

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

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

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

```
UPDATE customers
SET current_balance = 50
WHERE ctr_number = 'c02001';
```

```
1 row(s) updated.
```

Exercise 2: Data Manipulation Language

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')
17-JUN-17	09:00:00	4.99	-	-
25-NOV-16	09:00:00	14.99	25-JAN-17	17:00
25-JAN-17	17:01:00	8.99	25-JAN-17	19:00
26-JAN-17	09:00:00	15.99	-	-
12-FEB-17	12:30:00	7.99	-	-
25-APR-17	10:10:10	24.99	-	-
31-MAY-17	16:35:30	149	-	-

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

```
UPDATE price_history
SET end_date = SYSDATE,
    end_time = SYSDATE
WHERE itm_number = 'im01101048' AND end_time IS NULL;
```

```
1 row(s) updated.
```

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

START_DATE	TO_CHAR(START_TIME,'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME,'HH24:MI')
17-JUN-17	09:00:00	4.99	-	-
25-NOV-16	09:00:00	14.99	25-JAN-17	17:00
25-JAN-17	17:01:00	8.99	25-JAN-17	19:00
26-JAN-17	09:00:00	15.99	-	-
12-FEB-17	12:30:00	7.99	-	-
25-APR-17	10:10:10	24.99	-	-
31-MAY-17	16:35:30	149	27-DEC-23	17:13

4. Insert a new row that will use the current date and time to set the new price of the premium bat to be 99.9

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

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

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

START_DATE	TO_CHAR(START_TIME,'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME,'HH24:MI')
17-JUN-17	09:00:00	4.99	-	-
25-NOV-16	09:00:00	14.99	25-JAN-17	17:00
25-JAN-17	17:01:00	8.99	25-JAN-17	19:00
26-JAN-17	09:00:00	15.99	-	-
12-FEB-17	12:30:00	7.99	-	-
25-APR-17	10:10:10	24.99	-	-
31-MAY-17	16:35:30	149	27-DEC-23	17:13
27-DEC-23	17:18:09	99.99	-	-

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 address_line_1 = '83 Barrhill Drive';
```

```
1 row(s) deleted.
```

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	ST45AGV	c00101
ca0104	36 Watercress Lane	-	Jump	JP23YTH	c01986
ca0105	63 Acacia Drive	Skins	Liverpool	LP83JHR	c00001