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## Database Design Project

### Oracle Baseball League Store Database

#### Project Scenario:

You are a small consulting company specializing in database development. You have just been awarded the contract to develop a data model for a database application system for a small retail store called Oracle Baseball League (OBL).

The Oracle Baseball League store serves the entire surrounding community selling baseball kit. The OBL has two types of customer, there are individuals who purchase items like balls, cleats, gloves, shirts, screen printed t-shirts, and shorts. Additionally customers can represent a team when they purchase uniforms and equipment on behalf of the team.

Teams and individual customers are free to purchase any item from the inventory list, but teams get a discount on the list price depending on the number of players. When a customer places an order we record the order items for that order in our database.

OBL has a team of three sales representatives that officially only call on teams but have been known to handle individual customer complaints.

## 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.
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.

#### 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

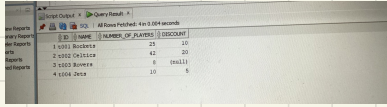
2. Add a new Customer with the following details to the system

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		

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.

## Part 2

### 1. INSERT INTO teams values ('004', 'jets', 10, 5)

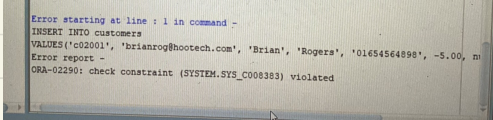


SQL Developer - Query Results

NAME	TYPE	VALUES	STATUS
004	NUMBER	10	OK
005	NUMBER	5	OK

### 2. INSERT INTO customers

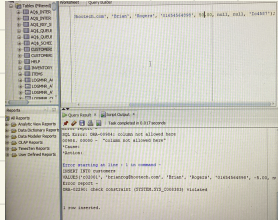
values ('c02001', 'brianrog@hoootech.com', 'Brian', 'Rogers', '01654564898', -5.00, null, null, 'Ic4S87');



Error starting at line: 1 in command -  
INSERT INTO customers  
VALUES ('c02001', 'brianrog@hoootech.com', 'Brian', 'Rogers', '01654564898', -5.00, null, null, 'Ic4S87');  
ORA-02290: check constraint (SYSTEM.SYS\_C008383) violated

### 3. INSERT INTO customers

values ('c02001', 'brianrog@hoootech.com', 'Brian', 'Rogers', '01654564898', 50.00, null, null, 'Ic4S87');



SQL Developer - Query Results

NAME	TYPE	VALUES	STATUS
004	NUMBER	10	OK
005	NUMBER	5	OK



SQL Developer - Query Results

NAME	TYPE	VALUES	STATUS
004	NUMBER	10	OK
005	NUMBER	5	OK

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OBL has a team of three sales representatives that officially only call on teams but have been known to handle individual customer complaints.

## 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:SS')  
FROM price_history;
```

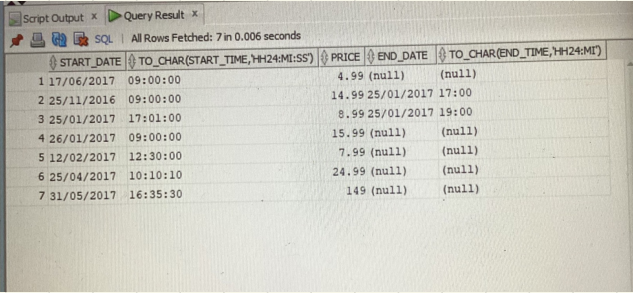
2. Obl is going to update the price of the premium bat so you will need to write a query that will close off the current price by adding the system date values to the end\_date and end\_time fields. To run this query you will need to both match the item number and identify that the end date is null. This ensures that you are updating the latest price.
3. Rerun the select statement on the price\_history table to ensure that the statement has been executed.
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.
5. Rerun the select statement on the price\_history table to ensure that the statement has been executed.

#### 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 no longer receive parcels at this address. Write a SQL statement that will remove this address from the system.
2. Run a select statement on the customers\_addresses table to ensure that the statement has been executed.

# Part 1

1.



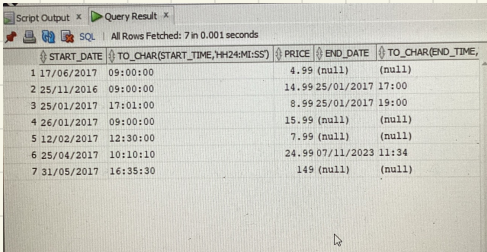
Script Output x Query Result x

All Rows Fetched: 7 in 0.006 seconds

START_DATE	TO_CHAR(START_TIME, 'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME, 'HH24:MI')
1 17/06/2017	09:00:00	4.99 (null)	(null)	
2 25/11/2016	09:00:00	14.99	25/01/2017 17:00	
3 25/01/2017	17:01:00	8.99	25/01/2017 19:00	
4 26/01/2017	09:00:00	15.99 (null)	(null)	
5 12/02/2017	12:30:00	7.99 (null)	(null)	
6 25/04/2017	10:10:10	24.99 (null)	(null)	
7 31/05/2017	16:35:30	149 (null)	(null)	

2. UPDATE price\_history  
SET end\_date = SYSDATE, end\_time = SYSTIMESTAMP  
WHERE itm\_number = 'im 01101047' AND end\_time = null;

3.



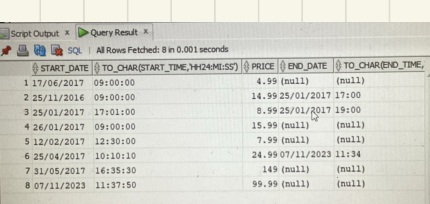
Script Output x Query Result x

All Rows Fetched: 7 in 0.001 seconds

START_DATE	TO_CHAR(START_TIME, 'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME, 'HH24:MI:SS')
1 17/06/2017	09:00:00	4.99 (null)	(null)	
2 25/11/2016	09:00:00	14.99	25/01/2017 17:00	
3 25/01/2017	17:01:00	8.99	25/01/2017 19:00	
4 26/01/2017	09:00:00	15.99 (null)	(null)	
5 12/02/2017	12:30:00	7.99 (null)	(null)	
6 25/04/2017	10:10:10	24.99	07/11/2023 11:34	
7 31/05/2017	16:35:30	149 (null)	(null)	

4. INSERT INTO price\_history (start\_date, start\_time, price, itm\_number)  
values (SYSDATE, SYSTIMESTAMP, 99.99, 'im 01101047');

5.



Script Output x Query Result x

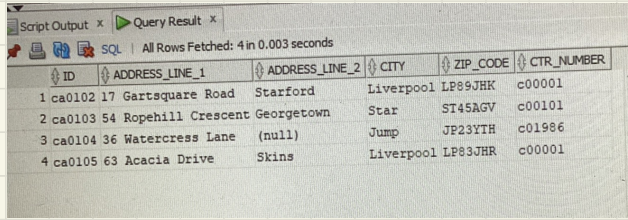
All Rows Fetched: 8 in 0.001 seconds

START_DATE	TO_CHAR(START_TIME, 'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME, 'HH24:MI:SS')
1 17/06/2017	09:00:00	4.99 (null)	(null)	
2 25/11/2016	09:00:00	14.99	25/01/2017 17:00	
3 25/01/2017	17:01:00	8.99	25/01/2017 19:00	
4 26/01/2017	09:00:00	15.99 (null)	(null)	
5 12/02/2017	12:30:00	7.99 (null)	(null)	
6 25/04/2017	10:10:10	24.99	07/11/2023 11:34	
7 31/05/2017	16:35:30	149 (null)	(null)	
8 07/11/2023	11:37:50	99.99 (null)	(null)	

## Part 2

1. DELETE FROM customers\_addresses  
WHERE address\_line\_1 = '83 Barrhill Drive';

2.



Script Output x Query Result x  
SQL | All Rows Fetched: 4 in 0.003 seconds

ID	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	ZIP_CODE	CTR_NUMBER
1	ca0102 17	Gartsquare Road	Starford	Liverpool LP89JHK	c00001
2	ca0103 54	Ropehill Crescent	Georgetown	Star ST45AGV	c00101
3	ca0104 36	Watercress Lane	(null)	Jump JF23YTH	c01986
4	ca0105 63	Acacia Drive	Skins	Liverpool LP83JHR	c00001