

## 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.  
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.

The list is matched

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

Number ↑	Elapsed	Statement	Feedback
1	0.06	INSERT INTO inventory_list (id, cost, units) VALUES('il01023	1 row(s) inserted.
2	0.01	INSERT INTO inventory_list (id, cost, units) VALUES('il01023	1 row(s) inserted.
3	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('il01023	1 row(s) inserted.
4	0.01	INSERT INTO inventory_list (id, cost, units) VALUES('il01023	1 row(s) inserted.
5	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('il01023	1 row(s) inserted.
6	0.03	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.
7	0.01	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.
8	0.00	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.
9	0.01	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.
10	0.00	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.
11	0.02	INSERT INTO price_history (start_date, start_time, price, it	1 row(s) inserted.
12	0.00	INSERT INTO price_history (start_date, start_time, price, en	1 row(s) inserted.
13	0.00	INSERT INTO price_history (start_date, start_time, price, en	1 row(s) inserted.
14	0.00	INSERT INTO price_history (start_date, start_time, price, it	1 row(s) inserted.
15	0.00	INSERT INTO price_history (start_date, start_time, price, it	1 row(s) inserted.

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

```
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\_ELVISCHANG.CTR\_CURRENT\_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, 'Ic4587');

```

Results Explain Describe Saved SQL History

1 row(s) inserted.

0.04 seconds

## 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;

```

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.

```
1 UPDATE price_history
2 SET end_date = SYSDATE, end_time = SYSDATE
3 WHERE itm_number = 'im01101048' and end_date is null
```

**Results** Explain Describe Saved SQL History

1 row(s) updated.

0.02 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;
```

**Results** Explain Describe Saved SQL History

START_DATE	TO_CHAR(START_TIME,'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME,'HH24:MI')
06/17/2017	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	12/20/2023	21:21

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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.

```
1 INSERT INTO price_history (start_date, start_time, price, itm_number)
2 VALUES (SYSDATE, SYSDATE, 99.99, 'im01101048')
3
4
```

**Results** Explain Describe Saved SQL History

1 row(s) inserted.

0.01 seconds

5. 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;				
Results	Explain	Describe	Saved SQL	History		
00/11/2017		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		12:30:00	7.99	-	-	
04/25/2017		10:10:10	24.99	-	-	
05/31/2017		16:35:30	149	12/20/2023	21:21	
12/20/2023		21:25:51	99.99	-	-	
8 rows returned in 0.01 seconds <a href="#">Download</a>						

## 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.

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