

## 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.

apex.oracle.com/pls/apex/f/apex/sql-workshop/results?session=1132015180263				
1	0.09	INSERT INTO inventory_list (id, cost, units) VALUES('i01023	1 row(s) inserted.	
2	0.01	INSERT INTO inventory_list (id, cost, units) VALUES('i01023	1 row(s) inserted.	
3	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('i01023	1 row(s) inserted.	
4	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('i01023	1 row(s) inserted.	
5	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('i01023	1 row(s) inserted.	
6	0.02	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.	
7	0.00	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	0.00	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.	
Download				
row(s) 1 - 15 of 47 Next				
47		47		0
Statements Processed		Successful		With Errors

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

APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

KR

Khalisah Ridzuan

sql2\_dml1\_part1

SQL Commands

Schema WKSP\_SQL2DML1PART1

Language SQL Rows 10 Clear Command Find Tables Save Run

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.

0.01 seconds

APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

KR

Khalisah Ridzuan

sql2\_dml1\_part1

Object Browser

Schema WKSP\_SQL2DML1PART1

Type to filter...

Tables

CUSTOMERS

CUSTOMERS\_ADDRESSES

INVENTORY\_LIST

ITEMS

ORDERED\_ITEMS

ORDERS

PRICE\_HISTORY

SALES\_REPRESENTATIVES

SALES\_REP\_ADDRESSES

TEAMS

Views

Indexes

TEAMS

Columns

Data

Indexes

Constraints

Grants

Statistics

Triggers

Dependencies

DDL

Sample Queries

+ Insert Row

Columns...

Filter...

Count Rows

Load Data

Download

Refresh

ID	NAME	NUMBER_OF_PLAYERS	DISCOUNT
t001	Rockets	25	10
t002	Celtics	42	20
t003	Rovers	8	
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		

**APEX SQL Workshop** | Schema: WKSP\_SQL2DML1PART1

SQL Commands

```

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

```

Results: 1 row(s) inserted. 0.00 seconds

**APEX Object Browser** | Schema: WKSP\_SQL2DML1PART1

Object Browser: CUSTOMERS

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER
c02001	brianrog@hootec...	Brian	Rogers	1654564898	-5			lc4587
c00001	bob.thornberry@...	Robert	Thornberry	01234567898	150	sr01	t001	
c00012	Jjones@freemail...	Jennifer	Jones	01505214598	0			lc1015
c00101	unknown@here.c...	John	Doe	03216547808	987.5	sr01	t002	
c00103	MurciaA@global...	Andrew	Murcia	07715246890	85			lc2341
c01986	margal87@delphi...	Maria	Galant	01442736589	125.65	sr03	t003	

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.

The screenshot shows the APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile 'Khalisah Ridzuan' are on the right. The 'SQL Commands' section is active, showing a schema of 'WKSP\_SQL2DML1PART1'. The SQL command editor contains two lines: '1 UPDATE customers' and '2 SET current\_balance = 50;'. Below the editor, the 'Results' tab shows '6 row(s) updated.' and '0.02 seconds'.

```
1 UPDATE customers
2 SET current_balance = 50;
```

Results: 6 row(s) updated.  
0.02 seconds

The screenshot shows the APEX SQL Workshop interface with the 'Object Browser' on the left and the 'CUSTOMERS' table data in the main pane. The 'Object Browser' lists tables like 'CUSTOMERS', 'CUSTOMERS\_ADDRESSES', 'INVENTORY\_LIST', 'ITEMS', 'ORDERED\_ITEMS', 'ORDERS', 'PRICE\_HISTORY', 'SALES\_REPRESENTATIVES', 'SALES\_REP\_ADDRESSES', and 'TEAMS'. The 'CUSTOMERS' table is selected, and its data is displayed in a table with columns: CTR\_NUMBER, EMAIL, FIRST\_NAME, LAST\_NAME, PHONE\_NUMBER, CURRENT\_BALANCE, SRE\_ID, TEM\_ID, and LOYALTY\_CARD. The data shows six rows of customer information.

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD
c02001	brianrog@hootec...	Brian	Rogers	1654564898	50			lc4587
c00001	bob.thornberry@...	Robert	Thornberry	01234567898	50	sr01	t001	
c00012	Jjones@freemail...	Jennifer	Jones	01505214598	50			lc1015
c00101	unknown@here.c...	John	Doe	03216547808	50	sr01	t002	
c00103	MurciaA@globalt...	Andrew	Murcia	07715246890	50			lc2341
c01986	margal87@delphi...	Maria	Galant	01442736589	50	sr03	t003	