

## 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 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.

1. INVENTORY \_ LIST

2. ITEMS

3. PRICE \_ HISTORY

4. SALES \_ REPRESENTIVES

5. SALES \_ REP \_ ADDRESS

6. TEAMS

7. CUSTOMERS

8. CUSTOMERS - ADDRESSES

9. ORDERS

10. ORDERED \_ ITEMS

Recently Created Tables	
ORDERED_ITEMS	17 minutes ago
ORDERS	17 minutes ago
CUSTOMERS_ADDRESSES	18 minutes ago
CUSTOMERS	18 minutes ago
TEAMS	18 minutes ago
SALES_REP_ADDRESSES	18 minutes ago
SALES_REPRESENTATIVES	18 minutes ago
PRICE_HISTORY	18 minutes ago
ITEMS	18 minutes ago
INVENTORY_LIST	19 minutes ago

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 matches.

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

3 seconds ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(1, 1, 'o	WKSP_LAB2CQY
7 seconds ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(10, 10, 'o	WKSP_LAB2CQY
12 seconds ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(18, 18, 'o	WKSP_LAB2CQY
17 seconds ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(5, 5, 'o0	WKSP_LAB2CQY
21 seconds ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(5, 5, 'o0	WKSP_LAB2CQY
29 seconds ago	INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number) VALUES(5, 5, 'o0	WKSP_LAB2CQY
37 seconds ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('o0101750', TO_DATE	WKSP_LAB2CQY
43 seconds ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('o0101681', TO_DATE	WKSP_LAB2CQY
50 seconds ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('o0101425', TO_DATE	WKSP_LAB2CQY
55 seconds ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('o0101350', TO_DATE	WKSP_LAB2CQY
60 seconds ago	INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number) VALUES('o0101250', TO_DATE	WKSP_LAB2CQY
67 seconds ago	INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number) VAL	WKSP_LAB2CQY
75 seconds ago	INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number) VAL	WKSP_LAB2CQY
83 seconds ago	INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number) VAL	WKSP_LAB2CQY
89 seconds ago	INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number) VA	WKSP_LAB2CQY
95 seconds ago	INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number) VAL	WKSP_LAB2CQY
101 seconds ago	INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, sre	WKSP_LAB2CQY
106 seconds ago	INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, loya	WKSP_LAB2CQY
114 seconds ago	INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, sre	WKSP_LAB2CQY
120 seconds ago	INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, loya	WKSP_LAB2CQY
2 minutes ago	INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, s	WKSP_LAB2CQY
2 minutes ago	INSERT INTO teams (id, name, number_of_players, discount) VALUES('1003', 'Rovers', 8, null);	WKSP_LAB2CQY
2 minutes ago	INSERT INTO teams (id, name, number_of_players, discount) VALUES('1002', 'Celtics', 42, 20);	WKSP_LAB2CQY
2 minutes ago	INSERT INTO teams (id, name, number_of_players, discount) VALUES('1001', 'Rockets', 25, 10);	WKSP_LAB2CQY
3 minutes ago	INSERT INTO sales_rep_addresses (id, address_line_1, address_line_2, city, zip_code ) VALUES('sr03',	WKSP_LAB2CQY
3 minutes ago	INSERT INTO sales_rep_addresses (id, address_line_1, address_line_2, city, zip_code ) VALUES('sr02',	WKSP_LAB2CQY
3 minutes ago	INSERT INTO sales_rep_addresses (id, address_line_1, address_line_2, city, zip_code ) VALUES('sr01',	WKSP_LAB2CQY
3 minutes ago	INSERT INTO sales_representatives (id, email, first_name, last_name, phone_number, commission_rate,	WKSP_LAB2CQY
3 minutes ago	INSERT INTO sales_representatives (id, email, first_name, last_name, phone_number, commission_rate,	WKSP_LAB2CQY
3 minutes ago	INSERT INTO sales_representatives (id, email, first_name, last_name, phone_number, commission_rate,	WKSP_LAB2CQY
3 minutes ago	INSERT INTO price_history (start_date, start_time, price, itm_number) VALUES(TO_DATE('31-May-2017',	WKSP_LAB2CQY
4 minutes ago	INSERT INTO price_history (start_date, start_time, price, itm_number) VALUES(TO_DATE('25-Apr-2017',	WKSP_LAB2CQY
4 minutes ago	INSERT INTO price_history (start_date, start_time, price, itm_number) VALUES(TO_DATE('12-Feb-2017',	WKSP_LAB2CQY
4 minutes ago	INSERT INTO price_history (start_date, start_time, price, itm_number) VALUES(TO_DATE('26-Jan-2017',	WKSP_LAB2CQY
4 minutes ago	INSERT INTO price_history (start_date, start_time, price, end_date, end_time, itm_number) VALUES(TO_	WKSP_LAB2CQY
4 minutes ago	INSERT INTO price_history (start_date, start_time, price, end_date, end_time, itm_number) VALUES(TO_	WKSP_LAB2CQY
5 minutes ago	INSERT INTO price_history (start_date, start_time, price, itm_number) VALUES(TO_DATE('17-Jun-2017',	WKSP_LAB2CQY
5 minutes ago	INSERT INTO items (itm_number, name, description, category, ilt_id ) VALUES('m01101048', 'premium b	WKSP_LAB2CQY
5 minutes ago	INSERT INTO items (itm_number, name, description, category, color, "Size", ilt_id ) VALUES('m011010	WKSP_LAB2CQY
5 minutes ago	INSERT INTO items (itm_number, name, description, category, color, "Size", ilt_id ) VALUES('m011010	WKSP_LAB2CQY
5 minutes ago	INSERT INTO items (itm_number, name, description, category, color, "Size", ilt_id ) VALUES('m011010	WKSP_LAB2CQY
5 minutes ago	INSERT INTO items (itm_number, name, description, category, color, "Size", ilt_id ) VALUES('m011010	WKSP_LAB2CQY
5 minutes ago	INSERT INTO inventory_list (id, cost, units) VALUES('1010230128', 9746, 8);	WKSP_LAB2CQY
5 minutes ago	INSERT INTO inventory_list (id, cost, units) VALUES('1010230127', 1895, 65);	WKSP_LAB2CQY
5 minutes ago	INSERT INTO inventory_list (id, cost, units) VALUES('1010230126', 524, 87);	WKSP_LAB2CQY
6 minutes ago	INSERT INTO inventory_list (id, cost, units) VALUES('1010230125', 799, 250);	WKSP_LAB2CQY
6 minutes ago	INSERT INTO inventory_list (id, cost, units) VALUES('1010230124', 2.5, 100);	WKSP_LAB2CQY

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

id	name	Number_of_players	discount
t004	Jets	10	5

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

  Live SQL

SQL Worksheet

```
1 v INSERT INTO teams (id, name, number_of_players, discount)
2   VALUES('t004', 'Jets', 10, 5);
3
4   select * from teams;
```

1 row(s) inserted.

ID	NAME	NUMBER_OF_PLAYERS	DISCOUNT
t001	Rockets	25	10
t002	Celtics	42	20
t003	Rovers	8	-
t004	Jets	10	5


Download CSV

4 rows selected.

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		

There will be a error here. Since we add a constraint about the current-balance must be greater or equal than 0.

 Live SQL

Feedback Help qingyee0219@gmail.com

SQL Worksheet

Clear Find Actions Save Run

```
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')
```

ORA-02290: check constraint (SQL\_VKXQDBGLCGACSLCZCWEZTTLJ.CHECK\_BALANCE) violated ORA-06512: at "SYS.DBMS\_SQL", line 1721

More Details: <https://docs.oracle.com/error-help/db/ora-02290>

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.

```
INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number,
                       current_balance, loyalty_card_number)
VALUES ('c02001', 'brianrog@hooitech.com', 'Brian', 'Rogers', '01654564898', 50, '1c4587');
```

#### SQL Worksheet

```
1 v INSERT INTO customers(ctr_number, email, first_name, last_name, phone_number, current_balance, loyalty_card_number)
2   VALUES('c02001', 'brianrog@hooitech.com', 'Brian', 'Rogers', '01654564898', 50, '1c4587');
3
4   select * from customers;
```

1 row(s) inserted.

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01	t001	-
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598	0	-	-	1c1015
c00101	unknown@here.com	John	Doe	03216547808	987.5	sr01	t002	-
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85	-	-	1c2341
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	-
c02001	brianrog@hooitech.com	Brian	Rogers	01654564898	50	-	-	1c4587

Download CSV

6 rows selected.