

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.

- 1) sales_rep_addresses
- 2) sales_representatives
- 3) teams
- 4) customers_addresses
- 5) customers
- 6) inventory_list
- 7) items
- 8) price_history
- 9) orders
- 10) 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.

- 1) sales_rep_addresses - Matches
- 2) sales_representatives - Matches
- 3) teams - Matches
- 4) customers_addresses - Matches
- 5) customers - Matches
- 6) inventory_list - Matches
- 7) items - Matches
- 8) price_history - Matches
- 9) orders - Matches
- 10) ordered_items - Matches

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

4. Check that no errors occurred when you ran the script.

Script: sportsData Status: Complete View: Detail Summary Rows: 15 Go Create App Edit Script

Number ↑	Elapsed	Statement	Feedback	Rows
1	0.06	INSERT INTO inventory_list (id, cost, units) VALUES('i01023	1 row(s) inserted.	1
2	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('i01023	1 row(s) inserted.	1
3	0.01	INSERT INTO inventory_list (id, cost, units) VALUES('i01023	1 row(s) inserted.	1
4	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('i01023	1 row(s) inserted.	1
5	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('i01023	1 row(s) inserted.	1
6	0.02	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.	1
7	0.00	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.	1
8	0.00	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.	1
9	0.00	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.	1
10	0.00	INSERT INTO items (itm_number, name, description, category,	1 row(s) inserted.	1
11	0.02	INSERT INTO price_history (start_date, start_time, price, it	1 row(s) inserted.	1
12	0.00	INSERT INTO price_history (start_date, start_time, price, en	1 row(s) inserted.	1
13	0.01	INSERT INTO price_history (start_date, start_time, price, en	1 row(s) inserted.	1
14	0.00	INSERT INTO price_history (start_date, start_time, price, it	1 row(s) inserted.	1
15	0.00	INSERT INTO price_history (start_date, start_time, price, it	1 row(s) inserted.	1

Download row(s) 1 - 15 of 47 Next ▶

47
Statements Processed

47
Successful

0
With Errors

khadijah-03@graduate.utm.my lab_dml1 en

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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

SK

Siti Khadijah

lab_dml1

SQL Commands

Schema WKSP_LABDML1

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

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lab_dml1

en

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APEX

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Object Browser

Schema WKSP_LABDML1

Type to filter...

Tables

CUSTOMERS

CUSTOMERS_ADDRESSES

INVENTORY_LIST

ITEMS

ORDERED_ITEMS

ORDERS

PRICE_HISTORY

SALES_REPRESENTATIVES

SALES_REP_ADDRESSES

TEAMS

Views

Indexes

Sequences

Types

Packages

Procedures

Functions

Triggers

Database Links

Materialized Views

Synonyms

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

1 cells selected

1 - 4

https://apex.oracle.com/pls/apex/#ob_view_DATA

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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@hoootech.com	Brian	Rogers	01654564898	-5	lc4587		

APEX App Builder SQL Workshop Team Development Gallery

Search

Schema: WKSP_LABDML1

Language: SQL Rows: 10 Clear Command Find Tables Save Run

```

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@hoootech.com','Brian','Rogers',01654564898, -5, 'lc4587', NULL, NULL);

```

Results Explain Describe Saved SQL History

1 row(s) inserted.

0.00 seconds

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CUSTOMERS

Columns Data Indexes Constraints Grants Statistics Triggers Dependencies DDL Sample Queries

+ Insert Row Columns... Filter... Count Rows Load Data Download Refresh

	CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER
	c00001	bob.thornberry@heat...	Robert	Thornberry	01234567898	150	sr01	tt001	
	c00012	JJones@freemail.com	Jennifer	Jones	01505214598	0			lc1015
	c00101	unknown@here.com	John	Doe	03216547808	9875	sr01	tt002	
	c00703	MurciaA@globaltech.c...	Andrew	Murcia	07715246890	85			lc2341
	c01986	margal87@delphiview...	Maria	Galant	01442736589	125.65	sr03	tt003	
	c02001	brianrog@hoootech.com	Brian	Rogers	1654564898	-5			lc4587

1 cells selected 1 - 6

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 displays the Oracle APEX SQL Workshop interface. At the top, the navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile 'Siti Khadijah lab_dml1' are on the right. Below the navigation bar, the 'SQL Commands' section is active, showing a schema dropdown set to 'WKSP_LABDML1'. The 'Language' is set to 'SQL' and 'Rows' to '10'. The SQL command editor contains the following code:

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

Below the editor, the 'Results' tab is selected, showing the execution output: '6 row(s) updated.' and '0.02 seconds'. The footer of the interface includes the user email 'khadijah-03@graduate.utm.my', the lab identifier 'lab_dml1', the language 'en', the copyright notice 'Copyright © 1999, 2023, Oracle and/or its affiliates.', and the version 'Oracle APEX 23.2.0-20'.

APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

SK

Siti Khadijah

lab_dm11

Object Browser

SchemaWKSP_LABDML1

Type to filter...

Tables

CUSTOMERS

CUSTOMERS_ADDRESSES

INVENTORY_LIST

ITEMS

ORDERED_ITEMS

ORDERS

PRICE_HISTORY

SALES_REPRESENTATIVES

SALES_REP_ADDRESSES

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Materialized Views

Synonyms

CUSTOMERS

ColumnsDataIndexesConstraintsGrantsStatisticsTriggersDependenciesDDLSample Queries

+ Insert RowColumns...Filter...Count RowsLoad DataDownloadRefresh

	CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER...	CURRENT_BALANC	SRE_ID	TEM_ID	LOYALTY_CARD_NU
	c00001	bob.thornberry...	Robert	Thornberry	01234567898	50	sr01	t001	
	c00012	Jjones@freema...	Jennifer	Jones	01505214598	50			lc1015
	c00101	unknown@her...	John	Doe	03216547808	50	sr01	t002	
	c00103	MurciaA@glob...	Andrew	Murcia	07715246890	50			lc2341
	c01986	margal87@delp...	Maria	Galant	01442736589	50	sr03	t003	
	c02001	brianrog@hoot...	Brian	Rogers	1654564898	50			lc4587

1 cells selected

1 - 6

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lab_dm11

en

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