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.

```
CREATE TABLE inventory_list (
id VARCHAR(12) PRIMARY KEY,
cost DECIMAL(5, 2),
 units INT
);


CREATE TABLE items (
 itm_number VARCHAR(10) PRIMARY KEY,
 name VARCHAR(50),
description VARCHAR(255),
category VARCHAR(50),
color VARCHAR(50),
"Size" VARCHAR(5),
 ilt_id VARCHAR(12),
FOREIGN KEY (ilt_id) REFERENCES inventory_list(id)
);

CREATE TABLE price_history (
 start_date DATE,
 start_time TIMESTAMP,
 price DECIMAL(5, 2),
end_date DATE,
 end_time TIMESTAMP,
 itm_number VARCHAR(10),
 FOREIGN KEY (itm_number) REFERENCES items(itm_number)
 );

CREATE TABLE sales_representatives (
 id VARCHAR(4) PRIMARY KEY,
email VARCHAR(255),
first_name VARCHAR(50),
last_name VARCHAR(50),
phone_number VARCHAR(15),
commission_rate DECIMAL(5, 2),
supervisor_id VARCHAR(4)
);
```

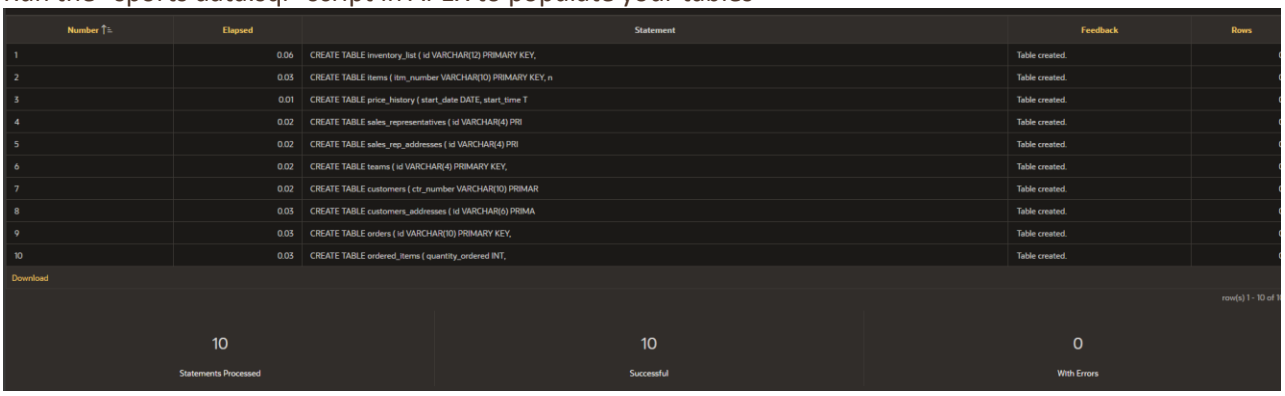
```
CREATE TABLE sales_rep_addresses (
id VARCHAR(4) PRIMARY KEY,
 address_line_1 VARCHAR(255),
 address_line_2 VARCHAR(255),
 city VARCHAR(50),
 zip_code VARCHAR(10)
);

CREATE TABLE teams (
id VARCHAR(4) PRIMARY KEY,
 name VARCHAR(50),
number_of_players INT,
discount INT
);

CREATE TABLE customers (
 ctr_number VARCHAR(10) PRIMARY KEY,
 email VARCHAR(255),
 first_name VARCHAR(50),
  last_name VARCHAR(50),
  phone_number VARCHAR(15),
  current_balance DECIMAL(8, 2),
 sre_id VARCHAR(4),
 tem_id VARCHAR(4),
 loyalty_card_number VARCHAR(10)
);

CREATE TABLE customers_addresses (
 id VARCHAR(6) PRIMARY KEY,
  address_line_1 VARCHAR(255),
 address_line_2 VARCHAR(255),
  city VARCHAR(50),
  zip_code VARCHAR(10),
 ctr_number VARCHAR(10),
 FOREIGN KEY (ctr_number) REFERENCES customers(ctr_number)
);

CREATE TABLE orders (
  id VARCHAR(10) PRIMARY KEY,
  odr_date DATE,
   odr_time TIMESTAMP,
   number_of_units INT,
   ctr_number VARCHAR(10),
    FOREIGN KEY (ctr_number) REFERENCES customers(ctr_number)
);
```

```
CREATE TABLE ordered_items (
quantity_ordered INT,
 quantity_shipped INT,
 odr_id VARCHAR(10),
 itm_number VARCHAR(10),
 PRIMARY KEY (odr_id, itm_number),
FOREIGN KEY (odr_id) REFERENCES orders(id),
FOREIGN KEY (itm_number) REFERENCES items(itm_number)
);
```

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,it does

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

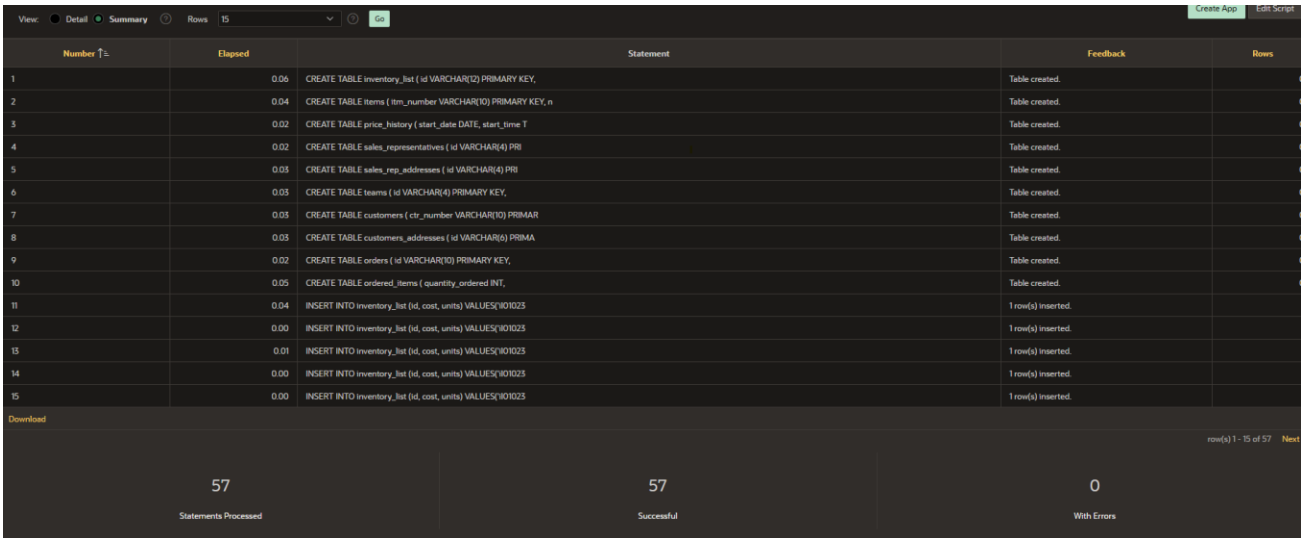


Number	Elapsed	Statement	Feedback	Rows
1	0.06	CREATE TABLE inventory_list (id VARCHAR(12) PRIMARY KEY,	Table created.	
2	0.03	CREATE TABLE items (itm_number VARCHAR(10) PRIMARY KEY, n	Table created.	
3	0.01	CREATE TABLE price_history (start_date DATE, start_time T	Table created.	
4	0.02	CREATE TABLE sales_representatives (id VARCHAR(4) PRI	Table created.	
5	0.02	CREATE TABLE sales_rep_addresses (id VARCHAR(4) PRI	Table created.	
6	0.02	CREATE TABLE teams (id VARCHAR(4) PRIMARY KEY,	Table created.	
7	0.02	CREATE TABLE customers (ctr_number VARCHAR(10) PRIMAR	Table created.	
8	0.03	CREATE TABLE customers_addresses (id VARCHAR(6) PRIMA	Table created.	
9	0.03	CREATE TABLE orders (id VARCHAR(10) PRIMARY KEY,	Table created.	
10	0.03	CREATE TABLE ordered_items (quantity_ordered INT,	Table created.	

Download

10 Statements Processed | 10 Successful | 0 With Errors

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



View: Detail Summary Rows 15 Go — Create App Edit Script

Number	Elapsed	Statement	Feedback	Rows
1	0.06	CREATE TABLE inventory_list (id VARCHAR(12) PRIMARY KEY,	Table created.	
2	0.04	CREATE TABLE items (itm_number VARCHAR(10) PRIMARY KEY, n	Table created.	
3	0.02	CREATE TABLE price_history (start_date DATE, start_time T	Table created.	
4	0.02	CREATE TABLE sales_representatives (id VARCHAR(4) PRI	Table created.	
5	0.03	CREATE TABLE sales_rep_addresses (id VARCHAR(4) PRI	Table created.	
6	0.03	CREATE TABLE teams (id VARCHAR(4) PRIMARY KEY,	Table created.	
7	0.03	CREATE TABLE customers (ctr_number VARCHAR(10) PRIMAR	Table created.	
8	0.03	CREATE TABLE customers_addresses (id VARCHAR(6) PRIMA	Table created.	
9	0.02	CREATE TABLE orders (id VARCHAR(10) PRIMARY KEY,	Table created.	
10	0.05	CREATE TABLE ordered_items (quantity_ordered INT,	Table created.	
11	0.04	INSERT INTO inventory_list (id, cost, units) VALUES('1101023	1 row(s) inserted.	
12	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('1101023	1 row(s) inserted.	
13	0.01	INSERT INTO inventory_list (id, cost, units) VALUES('1101023	1 row(s) inserted.	
14	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('1101023	1 row(s) inserted.	
15	0.00	INSERT INTO inventory_list (id, cost, units) VALUES('1101023	1 row(s) inserted.	

Download — row(s) 1 - 15 of 57 Next

57 Statements Processed | 57 Successful | 0 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

```
NSERT INTO teams (id, name, number_of_players, discount)
VALUES('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		

```
INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number,
current_balance, loyalty_card_number)
VALUES('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.

```
UPDATE customers
SET current_balance = 50
WHERE ctr_number = 'c02001';
```