

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 9 Exercise 1: Joining Tables Using JOIN

Write SELECT Statements Using Data From Multiple Tables Using Equijoins and Non-Equijoins (S6L9 Objective 1)

In this exercise you will write SELECT statements to access data from more than one table.

Part 1: Creating Natural Joins.

1. Display all of the information about sales representatives and their addresses using a natural join.
2. Adapt the query from the previous question to only show the id, first name, last name, address line 1, address line 2, city, email and phone_number for the sales representatives.

Part 2: Creating Joins with the USING Clause

1. Adapt the previous query answer to use the USING clause instead of a natural join.
2. Display all of the information about items and their price history by joining the items and price_history tables.

Part 3: Creating Joins with the ON Clause

1. Use an ON clause to join the customer and sales representative table so that you display the customer number, customer first name, customer last name, customer phone number, customer email, sales representative id, sales representative first name, sales representative last name and sales representative email. You will need to use a table alias in your answer as both tables have columns with the same name.

Part 4- Creating Three-Way Joins with the ON Clause

1. Using the answer to Task 3 add a join that will allow the team name that the customer represents to be included in the results.

Part 5: Applying Additional Conditions to a Join

1. Using the answer to Task 4 add an additional condition to only show the results for the customer that has the number - c00001.

Part 6: Retrieving Records with Nonequijoins

1. Write a query that will display name and cost of the item with the number im01101045 on the 12th of December 2016. The output of the query should look like this:

The cost of the under shirt on this day was 14.99

PART 1

```
SELECT ID, FIRST_NAME, LAST_NAME, ADDRESS_LINE_1, ADDRESS_LINE_2, CITY, EMAIL, PHONE_NUMBER
FROM SALES_REPRESENTATIVES natural join SALES REP_ADDRESSES;
```

ID	FIRST_NAME	LAST_NAME	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	EMAIL	PHONE_NUMBER
1 sr01	Charles	Raymond	12 Cherry Lane	Denton	Detroit	chray@obl.com	0134598761
2 sr02	Victoria	Wright	87 Blossom Hill	Uptown	Detroit	vwright@obl.com	0134598762
3 sr03	Barry	Speed	12 Junction Row	Skinflats	Detroit	bspeed@obl.com	0134598763

PART 2

```
SELECT *
```

```
FROM ITEMS JOIN PRICE_HISTORY
```

```
USING (ITEM_NUMBER);
```

ITEM_NUMBER	NAME	DESCRIPTION	CATEGORY	COLOR	Size	ILT_ID	START_DATE	START_TIME	PRICE	END_DATE	END_TIME
1 01101044	gloves	catcher mitt	clothing	brown	L	i1010230124	17/06/2017	17/06/2016	4.99	(null)	(null)
2 01101045	under shirt top	worn under the game top	clothing	white	s	i1010230125	25/11/2016	25/11/2016	14.99	25/01/2017	25/01/2017
3 01101045	under shirt top	worn under the game top	clothing	white	s	i1010230125	25/01/2017	25/01/2017	8.99	25/01/2017	25/01/2017
4 01101045	under shirt top	worn under the game top	clothing	white	s	i1010230125	26/01/2017	26/01/2017	15.99	(null)	(null)
5 01101046	socks	team socks with emblem	clothing	range	l	i1010230126	12/02/2017	12/02/2017	7.99	(null)	(null)
6 01101047	game top	team shirt with emblem	clothing	range	m	i1010230127	25/04/2017	25/04/2017	24.99	(null)	(null)
7 01101048	premium bat	high quality baseball bat	equipment	(null)	(null)	i1010230128	31/05/2017	31/05/2017	149	09/11/2023	09/11/2023
8 01101048	premium bat	high quality baseball bat	equipment	(null)	(null)	i1010230128	09/11/2023	09/11/2023	99.99	(null)	(null)

PART 3

```
SELECT C.CTR_NUMBER "Customer Number", C.FIRST_NAME "Cust First Name", C.LAST_NAME "Cust Last Name",
C.PHONE_NUMBER "Cust Phone Number", C.EMAIL "Cust Email", S.ID "Sales ID", S.FIRST_NAME "Sales First Name",
S.LAST_NAME "Sales Second Name", S.EMAIL "Sales Email"
```

```
FROM CUSTOMERS C JOIN SALES_REPRESENTATIVE S
```

```
ON (C.CSRE_ID = S.ID);
```

Customer Number	Cust First Name	Cust Second Name	Cust Phone Number	Cust Email	Sales ID	Sales First Name	Sales Second Name	Sales Email
1 c00001	Robert	Thornberry	01234567898	bob.thornberry@heatmail.com	sr01	Charles	Raymond	chray@obl.com
2 c00101	John	Doe	03216547808	unknown@here.com	sr01	Charles	Raymond	chray@obl.com
3 c01986	Maria	Galant	01442736589	margal87@delphiview.com	sr03	Barry	Speed	bspeed@obl.com

PART 4

```

SELECT C.CTR_NUMBER "Customer Number", C.FIRST_NAME "Cust First Name", C.LAST_NAME "Cust Last Name",
C.PHONE_NUMBER "Cust Phone Number", C.EMAIL "Cust Email", S.ID "Sales ID", S.FIRST_NAME "Sales First Name",
S.LAST_NAME "Sales Second Name", S.EMAIL "Sales Email", T.NAME "Team Name"
FROM CUSTOMERS C JOIN SALES_REPRESENTATIVE S
ON (C.SRE_ID = S.ID);
JOIN TEAMS T
ON C.TEM_ID = T.ID;

```

Customer Number	Cust First Name	Cust Second Name	Cust Phone Number	Cust Email	Sales ID	Sales First Name	Sales Second Name	Sales Email	Team Name
1 c00001	Robert	Thornberry	01234567898	bob.thornberry@heatmail.com	sr01	Charles	Raymond	chray@obl.com	Rockets
2 c00101	John	Doe	03216547808	unknown@here.com	sr01	Charles	Raymond	chray@obl.com	Celtics
3 c01986	Maria	Galant	01442736589	margal87@delphiview.com	sr03	Barry	Speed	bspeed@obl.com	Rovers

PART 5

```

SELECT C.CTR_NUMBER "Customer Number", C.FIRST_NAME "Cust First Name", C.LAST_NAME "Cust Last Name",
C.PHONE_NUMBER "Cust Phone Number", C.EMAIL "Cust Email", S.ID "Sales ID", S.FIRST_NAME "Sales First Name",
S.LAST_NAME "Sales Second Name", S.EMAIL "Sales Email", T.NAME "Team Name"
FROM CUSTOMERS C JOIN SALES_REPRESENTATIVE S
ON (C.SRE_ID = S.ID);
JOIN TEAMS T
ON C.TEM_ID = T.ID;
WHERE C.CTR_NUMBER = 'c00001';

```

Customer Number	Cust First Name	Cust Second Name	Cust Phone Number	Cust Email	Sales ID	Sales First Name	Sales Second Name	Sales Email	Team Name
1 c00001	Robert	Thornberry	01234567898	bob.thornberry@heatmail.com	sr01	Charles	Raymond	chray@obl.com	Rockets

PART 6

```
SELECT 'The cost of the ' || J.NAME || ' on this day was ' || P.PRICE  
AS "Items and Cost Information"  
FROM ITEMS J JOIN PRICE_HISTORY P  
ON J.ITE NUMBER = P.ITE NUMBER  
JOIN INVENTORY_LIST L  
ON J.ITE ID = L.ID  
WHERE J.ITE NUMBER = 'im0101045'  
AND TO_DATE('2016-12-12', 'YYYY-MM-DD')  
BETWEEN P.START-DATE AND P.END-DATE;
```

Items and Cost information

1 The cost of the under shirt on this day was 14.99