

DATABASE - SECD2523

SECTION: 06

LAB 4

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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.
 - 1. SELECT & FROM SALES_REPRESENTATIVES NATURAL TOIN SALES_REP_ ADDRESSES;



- 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.
 - 2. SELECT id, first_name, last_name, address_line_1, address_line_2, city, erail,

 phone_number FROM SALES_REPRESENTATIVES NATURAL JOIN SALES_REP_ADDRESSES;



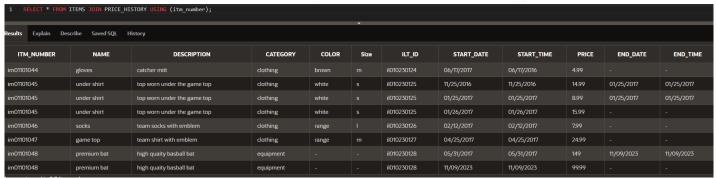
Part 2: Creating Joins with the USING Clause

- 1. Adapt the previous query answer to use the USING clause instead of a natural join.
 - 1. SELECT id, first_name, last_name, address_line_1, address_line_2, city, email,

 phone_number FROM SALES_REPRESENTATIVES JOIN SALES_RER_ADDRESSES USING(id);

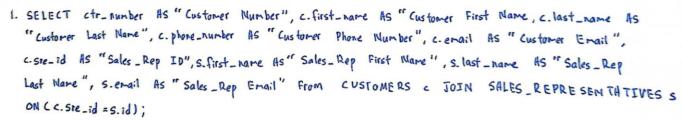


- 2. Display all of the information about items and their price history by joining the items and price history tables.
 - 2. SELECT * FROM ITEMS JOIN PRICE_HISTORY USING Citn-number);



Part 3: Creating Joins with the ON Clause

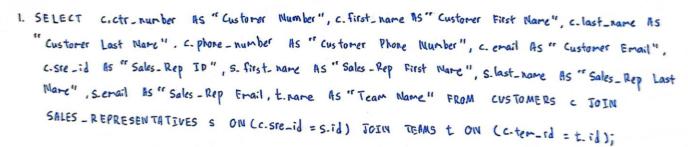
1. Use an ON clause to join the customer and sales representative table so that you display the customer number, customer fist name, customer last name, customer phone number, customer email, sales representative id, sales representative first name, sales representative last name and sales representative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



SELECT c.ctr_number AS "Customer Number", c.first_name AS "Customer First Name", c.last_name AS "Customer Last Name", c.phone_number AS "Customer Phone Number", c.email AS "Customer Email", c.sre_id AS "Sales_Rep_ID",s.first_name AS "Sales_Rep_First Name", s.last_name AS "Sales_Rep_Last Name", s.email AS "Sales_Rep_Email" FROM CUSTOMERS c JOIN SALES_REPRESENTATIVES s ON (c.sre_id = s.id);												
Results Explain Describe Saved SQL History												
Customer Number	Customer First Name	Customer Last Name	Customer Phone Number	Customer Email	Sales_Rep ID	Sales_Rep First Name	Sales_Rep Last Name	Sales_Rep Email				
c00001	Robert	Thornberry	01234567898	bob.thornberry@heatmail.com	sr01	Charles	Raymond	chray@obl.com				
c00101	John	Doe	03216547808	unknown@here.com	sr01	Charles	Raymond	chray@obl.com				
c01986	Maria	Galant	01442736589	margal87@delphiview.com	sr03	Barry	Speed	bspeed@obl.com				

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.
 - 1. SELECT ctr_number, c. sirst_name, c.last_name, c. phone_number, c.email, s.id, s. sirst_name,

 S.last_name, S.email, t. name FROM CUSTOMERS c JOIN SALES_REPRESENTATIVES S

 ON (c.sre_id = 5.id) JOIN TEAM t ON (c.ten_id = t.id) WHERE c.ctr_number = coool!;



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:

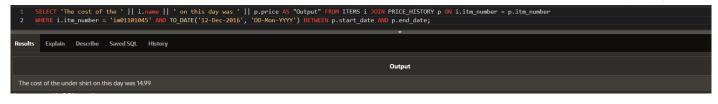
The cost of the under shirt on this day was 14.99

1. SELECT 'The cost of the 'lliname ll'on this day was 'll p.price As "output"

FROM ITEMS : JOIN PRICE - HISTORY p ON 1. itm_number = p. itm_number where

i - itm_number = 'imollo1045' AND To_DATE('12 - Dec - 2016', 'DD - MM - YYYY') BETWEEN

p. start - date AND p. end - date;





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Section 6 Lesson 9 Exercise 2: Joining Tables Using JOIN

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

Part 1: Use a Self-Join to Join a Table to Itself (S6L9 Objective 2)

1. Write a query that will display who the supervisor is for each of the sales representatives. The information should be displayed in two columns, the first column will be the first name and last name of the sales representative and the second will be the first name and last name of the supervisor. The column aliases should be Rep and Supervisor.

```
1. SELECT r.first_name II ' . II r.last_name As "Rep", s.first_name II' II

S.last_name As "Supervisor" FROM SALES REPRESENTATIVES r JOIN

SALES_REPRESENTATIVES s ON (r.supervisor_id = s.id );
```



Part 2: Use OUTER joins (S6L9 Objective 3)

1. Write a query that will display all of the team and customer information even if there is no match with the tableon the left (team).



Part 3: Generating a Cartesian Product (S6L9 Objective 4)

1. Create a Cartesian product between the customer and sales representative tables.

L SELECT * FROM CUSTOMERS CROSS TOIN SALES_REPRESENTATIVES;

1 SELECT * FROM CUSTOMERS CROSS JOHN SALES_REPRESENTATIVES;													·		
Explain Describe Served SQL History															
CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER	ID	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	COMMISSION_RATE	SUPERVISOR_ID
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898						chray@obl.com	Charles	Raymond	0134598761		
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598				lc1015	sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
c00101	unknown@here.com			03216547808						chray@obl.com	Charles	Raymond	0134598761		
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85			lc2341	sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
c01986	margal87@delphiview.com	Maria	Galant	01442736589						chray@obl.com	Charles	Raymond	0134598761		
c02001	brianrogy@hootech.com	Brian	Rogers	01654564898	50			Ic4587	sr01	chray@obl.com	Charles	Raymond	0134598761		sr01
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898						vwright@obl.com	Victoria	Wright	0134598762		
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598				Ic1015	sr02	vwright@obl.com	Victoria	Wright	0154598762		sr01
c00101	unknown@here.com			03216547808	987.5					vwright@obl.com	Victoria	Wright	0134598762		
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85			lc2341	sr02	vwright@obl.com	Victoria	Wright	0134598762		sr01
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65					vwright@obl.com	Victoria	Wright	0134598762		
c02001	brianrogy@hootech.com	Brian	Rogers	01654564898				lc4587	sr02	vwright@obl.com	Victoria	Wright	0134598762		sr01
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898						bspeed@obl.com	Barry	Speed	0134598763		
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598				lc1015	sr03	bspeed@obl.com	Barry	Speed	0134598763		sr01
c00101	unknown@here.com		Doe	03216547808	987.5		t002			bspeed@obl.com	Barry	Speed	0134598763		
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85			Ic2341	sr03	bspeed@obl.com	Barry	Speed	0134598763		sr01
c01986	margal87@delphiview.com	Maria	Galant	01442756589	125.65	sr03	t003			bspeed@obl.com	Barry	Speed	0154598763		
c02001	brianrogy@hootech.com	Brian	Rogers	01654564898	50			Ic4587	sr03	bspeed@obl.com	Barry	Speed	0134598763		sr01
Brown returned in 0.01 seconds Downtood															