Lab 4

Section 6 Lesson 9 Exercise 1: Joining Tables Using JOIN Part 1: Creating Natural Joins.

1. Display all of the information about sales representatives and their addresses using a natural join.

SELECT *
FROM Sales_representations MITURAL JOIN sales_rep- addresses;

ID	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	COMMISSION_RATE	SUPERVISOR_ID	ADDRESS_LINE_1	ADDRESS_LINE_2	СІТҮ	ZIP_CODE
sr01	chray@obl.com	Charles	Raymond	0134598761		sr01	12 Cherry Lane	Denton	Detroit	DT48211
sr02	vwright@obl.com	Victoria	Wright	0134598762		sr01	87 Blossom Hill	Uptown	Detroit	DT52314
sr03	bspeed@obl.com	Barry	Speed	0134598763		sr01	12 Junction Row	Skinflats	Detroit	DT52564
3 rows ret	urned in 0.00 seconds	Download								

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.

SELECT id, first_name, lost_name, address_line_1, address_line_2, city, email, phone_number FROM sales_representations MATURAL JOHN sales_rep-addresses;

ID	FIRST_NAME	LAST_NAME	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	EMAIL	PHONE_NUMBER
sr01	Charles	Raymond	12 Cherry Lane	Denton	Detroit	chray@obl.com	0134598761
sr02	Victoria	Wright	87 Blossom Hill	Uptown	Detroit	vwright@obl.com	0134598762
sr03	Barry	Speed	12 Junction Row	Skinflats	Detroit	bspeed@obl.com	0134598763
3 rows returned	d in 0.04 seconds Download						

Part 2: Creating Joins with the USING Clause

1. Adapt the previous query answer to use the USING clause instead of a natural join.

SELECT *
FROM soles_representations JOH soles_rep- addresses
VSING (id);

SELECT id, first_name, last_name, address_line_1, address_line_1, city, email, phone_number FROM sales_representatives JOHN sales_rep- addresses

VSING Cid);

ID	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	COMMISSION_RATE	SUPERVISOR_ID	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	ZIP_CODE
sr01	chray@obl.com	Charles	Raymond	0134598761		sr01	12 Cherry Lane	Denton	Detroit	DT48211
srO2	vwright@obl.com	Victoria	Wright	0134598762		sr01	87 Blossom Hill	Uptown	Detroit	DT52314
sr03	bspeed@obl.com	Barry	Speed	0134598763		sr01	12 Junction Row	Skinflats	Detroit	DT52564
3 rows ret	rows returned in 0.01 seconds Download									

2. Display all of the information about items and their price history by joining the items and price_history tables.

SEKECT *
FROM CHEMS JOIN Drive-history
USING Citm-number);

ID	FIRST_NAME	LAST_NAME	ADDRESS_LINE_1	ADDRESS_LINE_2	сту	EMAIL	PHONE_NUMBER
sr01	Charles	Raymond	12 Cherry Lane	Denton	Detroit	chray@obl.com	0134598761
sr02	Victoria	Wright	87 Blossom Hill	Uptown	Detroit	vwright@obl.com	0134598762
sr03	Barry	Speed	12 Junction Row	Skinflats	Detroit	bspeed@obl.com	0134598763
3 rows returned	d in 0.01 seconds Download						

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.

SELECT c. ctr_number "Customer Humber", c. first_name "Customer First Hame", c. last_name "Customer Last Hame", c. phone_number "Customer Phone thumber", c. email "Customer Email", s. id "Sales Rep ID", s. first_name "Sales Rep Last Hame", s. last_name "Sales Rep Last Hame", s. last_name "Sales Rep Last Hame", s. email "Sales Rep Email"

From customers c Join sales_representatives a

On (c.ste_id = s.id);

Customer Number	cr Customer Fisrt 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		bob.thornberry@heatmail.com		Charles	Raymond	chray@obl.com
c00101	John	Doe		unknown@here.com	sr01	Charles	Raymond	chray@obl.com
c01986	Maria	Galant		margal87@delphiview.com	sr03	Barry	Speed	bspeed@obl.com
3 rows returned in 0.01 sec	conds Download							

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.

CETECT c.ctr_number "Customer Humber", c.first_name "Customer First Hame", c.last_name "Customer Last Hame", c.phone_number "Customer Phone thumber", c.email "Customer Email", s.id "Sales Rep ID", c.first_name "Sales Rep Last Hame", s.last_name "Sales Rep Lost Hame", s.email "Sales Rep Email", t.name "Team Hame' From customers c Join sales_representatives s

On Coste_id = s.id)
Join team t

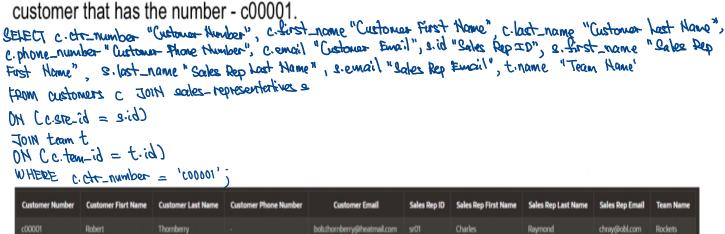
On Co.tem_id = t.id)

Customer Number	Customer Fisrt Name	Customer Fisrt Name Customer Last Name		Customer Email	Sales Rep ID	Sales Rep First Name	Sales Rep Last Name	Sales Rep Email	Team Name
c00001	Robert	Thornberry		bob.thornberry@heatmail.com		Charles	Raymond	chray@obl.com	Rockets
c00101	John	Doe		unknown@here.com	sr01	Charles	Raymond	chray@obl.com	Celtics
c01986	Maria	Galant		margal87@delphiview.com	sr03	Barry	Speed	bspeed@obl.com	Rovers
3 rows returned in 0.02 seconds Download									

Part 5: Applying Additional Conditions to a Join

1 rows returned in 0.01 seconds Down

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 the 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

SELECT 'The cost of the ' || î name || ' on this day was ' || h.price

FROM items i JONN inventory-list !

ON (i. ith_id = l. id)

JONN price-history h

ON (i.itm_number = h.itm_number)

WHERE i.itm_number = 'in 01101045' AND h.start_date < 'Dec-12-2016' AND h.end-date > 'Dec-12-2016';

THECOSTOFTHE'||LNAME||'ONTHISDAYWAS'||H.PRICE

The cost of the under shirt on this day was 14.99

1 rows returned in 0.03 seconds Download

Section 6 Lesson 9 Exercise 2: Joining Tables Using JOIN 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.

```
BELECT r. first_name ||' || r. lost_name "Rep", s. first_name ||' || s. lost_name "Supervisor"
FROM sales_representatives r JOH sales_representatives s
ON (r. supervisor_id = s.id);
```

Rep	Supervisor
Charles Raymond	Charles Raymond
Victoria Wright	Charles Raymond
Barry Speed	Charles Raymond
3 rows returned in 0.00 seconds Download	

Part 2: Use OUTER joins (S6L9 Objective 3)

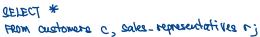
1. Write a query that will display all of the team and customer information even if there is no match with the table on the left (team).

```
SELECT **
FROM teams t LEFT outer JOH automors c
ON (t.id = 0.tem-id);
```



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

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



CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER	PHONE_NUMBER	ID	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	COMMISSION_RATE	SUPERVISOR_ID				
c00001	bob.thornberry@heatmail.com	Robert	Thornberry							chray@obl.com	Charles	Raymond	0134598761						
c00012	Jjones@freemail.com	Jennifer	Jones	0			lc1015		sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01				
c00101	unknown@here.com									chray@obl.com	Charles	Raymond	0134598761						
c00103	MurciaA@globaltech.com	Andrew	Murcia	85			lc2341		sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01				
c01986	margal87@delphiview.com	Maria	Galant							chray@obl.com	Charles	Raymond	0134598761						
c02001	brianrog@hootech.com	Brian	Rogers	50			lc4587	01654564898	sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01				
c00001	bob.thornberry@heatmail.com	Robert	Thornberry							vwright@obl.com		Wright	0134598762						
c00012	Jjones@freemail.com	Jennifer	Jones				lc1015		sr02	vwright@obl.com	Victoria	Wright	0134598762		sr01				
c00101	unknown@here.com									vwright@obl.com	Victoria	Wright	0134598762						
c00103	MurciaA@globaltech.com	Andrew	Murcia	85			lc2341		sr02	vwright@obl.com	Victoria	Wright	0134598762		sr01				
More than 10 row	s available. Increase rows selector to																		
10 rows returned in	0.01 seconds Download							rows returned in 0.07 seconds Download											