

## UNIVERSITI TEKNOLOGI MALAYSIA SEMESTER 1, SESSION 2023/2024

# **EXERCISE 4**

SECD2523 : DATABASE
SECTION 10

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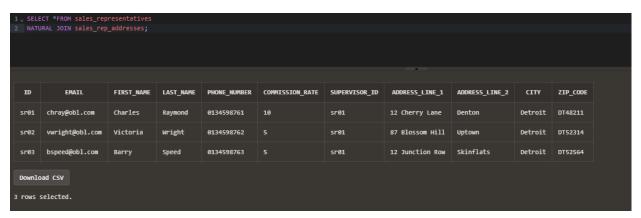
LECTURER'S NAME : DR. ROZILAWATI BINTI DOLLAH @ MD. ZAIN

Marks:

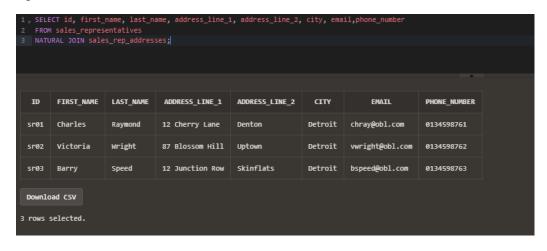
#### Section 6 Lesson 9 Exercise 1: Joining Tables Using JOIN

#### Part 1: Creating Natural Joins.

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



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.

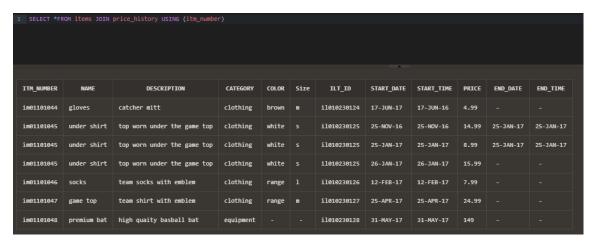


#### Part 2: Creating Joins with the USING Clause

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

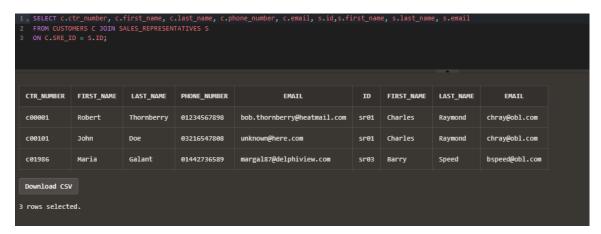


2) Display all of the information about items and their price history by joining the items and price\_history tables.



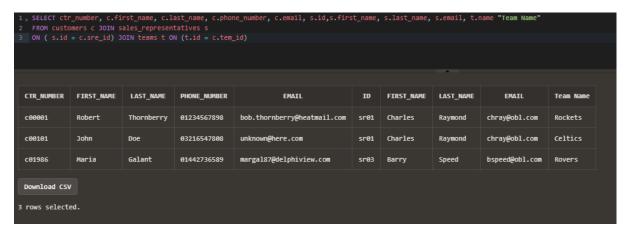
#### Part 3: Creating Joins with the ON Clause

1) Use an ON clause to join the customer and sales representative table so that you display the customer number, customer 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.



#### 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

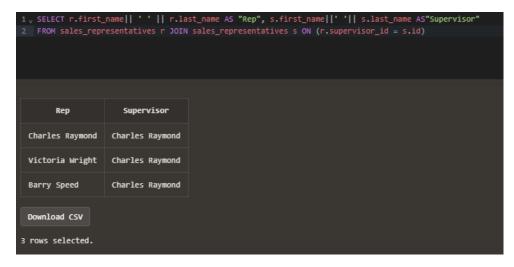
1) Write a query that will display name and cost of the item with the number im01101045 on the 12th of December 2016. The output of the query should look like this: The cost of the under shirt on this day was 14.99



#### **Section 6 Lesson 9 Exercise 2: Joining Tables Using JOIN**

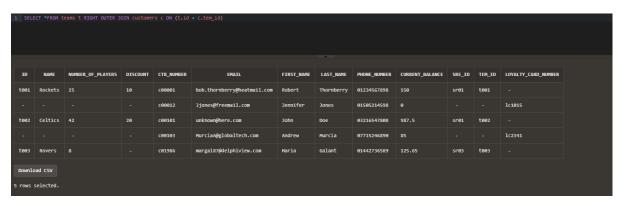
#### Part 1: Use a Self-Join to Join a Table to Itself (S6L9 Objective 2)

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.



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).



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

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

```
1 SELECT *FROM customers CROSS JOIN sales_representatives;
```

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	150	sr01	t001		sr01	chray@obl.com	Charles	Raymond	0134598761		sr01
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598				lc1015	sr01	chray@obl.com	Charles	Raymond	0134598761		sr01
c00101	unknown@here.com	3ohn	Doe	03216547808	987.5	sr01	t002		sr01	chray@obl.com	Charles	Raymond	0134598761		sr01
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890				lc2341	sr01	chray@obl.com	Charles	Raymond	0134598761		sr01
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003		sr01	chray@obl.com	Charles	Raymond	0134598761		sr01
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01	t001		sr02	vwright@obl.com	Victoria	Wright	0134598762		sr01
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598				lc1015	sr02	vwright@obl.com	Victoria	Wright	0134598762		sr01
c00101	unknown@here.com	John	Doe	03216547808	987.5	sr01	t002		sr02	vwright@obl.com	Victoria	Wright	0134598762		sr01
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890				1c2341	sr02	vwright@obl.com	Victoria	Wright	0134598762		sr01
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003		sr02	vwright@obl.com	Victoria	Wright	0134598762		sr01
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01	t001		sr03	bspeed@obl.com	Barry	Speed	0134598763		sr01
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598				lc1015	sr03	bspeed@obl.com	Barry	Speed	0134598763		sr01

c00101	unknown@here.com	John	Doe	03216547808	987.5	sr01	t002	-	sr03	bspeed@obl.com	Barry	Speed	0134598763	5	sr@1
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890				1c2341	sr03	bspeed@obl.com	Barry	Speed	0134598763		sr01
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003		sr03	bspeed@obl.com	Barry	Speed	0134598763		sr01
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