



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

**FACULTY OF COMPUTING**  
UTM Johor Bahru

**SECD2523**

**SECTION**

**10**

**LECTURER: ROZILAWATI BINTI DOLLAH @ MD ZAIN**

**PROJECT TITLE:**

**SQL LAB4**

**(DML3)**

**PART2**

NAME	MATRIC NUMBER
NURFAZRINA SYAKILA BINTI BAHARUDDIN	A21SC0276

## 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.

```
SELECT sr.first_name || ' ' || sr.last_name AS "Rep",sv.first_name || ' ' ||  
sv.last_name AS "Supervisor"  
FROM sales_representatives sr JOIN sales_representatives  
sv ON sr.supervisor_id = sv.id;
```

```
SELECT sr.first_name || ' ' || sr.last_name AS "Rep", sv.first_name || ' ' || sv.last_name AS "Supervisor"
FROM sales_representatives sr JOIN sales_representatives sv
ON sr.supervisor_id = sv.id;
```

Script Output x | Query Result x | Query Result 1 x | Query Result 2 x | Query Result 3 x | Query Result 4 x | Query Result 5 x

SQL | All Rows Fetched: 3 in 0.014 seconds

	Rep	Supervisor
1	Charles Raymond	Charles Raymond
2	Victoria Wright	Charles Raymond
3	Barry Speed	Charles Raymond

## 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 JOIN customers  
c ON t.id = c.tem_id;
```

SELECT\*  
FROM teams t LEFT OUTER JOIN customers c  
ON t.id = c.tem\_id;

Script Output x Query Result 1 x Query Result 2 x Query Result 3 x Query Result 4 x Query Result 5 x Query Result 6 x

All Rows Fetched: 4 in 0.019 seconds

ID	NAME	NUMBER_OF_PLAYERS	DISCOUNT	CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER
1 t001	Rockets	25	10 c00001		bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150 sr01	t001	(null)	
2 t002	Celtics	42	20 c00101		unknown@here.com	John	Doe	03216547808	987.5 sr01	t002	(null)	
3 t003	Rovers	8	(null) c01986		margal87@delphiview.com	Maria	Galant	01442736589	125.45 sr03	t003	(null)	
4 t004	Jets	10	5 (null)		(null)	(null)	(null)	(null)	(null) (null)	(null)	(null)	

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

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

**SELECT\***

**FROM customers**

**CROSS JOIN sales\_representatives;**

The screenshot shows a SQL query execution window with the following SQL statement:

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

The query result is displayed in a table with 18 columns. The first 10 columns represent the 'customers' table, and the next 8 columns represent the 'sales\_representatives' table. The results show a Cartesian product of the two tables, resulting in 18 rows.

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	USE_ID	TEM_ID	LOYALTY_CARD_NUMBER	ID	EMAIL_1	FIRST_NAME_1	LAST_NAME_1	PHONE_NUMBER_1	COMMISSION_RATE	SUPERVISOR_ID
1	bob.thornberry@heatmail.com	Robert	Thornberry	01234567890	150	sc01	sc01	(null)	sc01	charney@hcl.com	Charles	Raymond	01345678901	10	sc01
2	bjones@freemail.com	Jennifer	Jones	01505214590	0	(null)	(null)	1c1015	sc01	charney@hcl.com	Charles	Raymond	01345678901	10	sc01
3	unimow@here.com	John	Doe	03214567808	987.5	sc01	sc02	(null)	sc01	charney@hcl.com	Charles	Raymond	01345678901	10	sc01
4	Marcia@globaltech.com	Andrew	Marcia	07715266890	88	(null)	(null)	1c2346	sc01	charney@hcl.com	Charles	Raymond	01345678901	10	sc01
5	marpa179@elphiview.com	Maria	Galant	01442736559	125.45	sc03	sc03	(null)	sc01	charney@hcl.com	Charles	Raymond	01345678901	10	sc01
6	brianrog@bootech.com	Brian	Rogers	01454564090	50	(null)	(null)	1c4587	sc01	charney@hcl.com	Charles	Raymond	01345678901	10	sc01
7	bob.thornberry@heatmail.com	Robert	Thornberry	01234567890	150	sc01	sc01	(null)	sc02	wright@hcl.com	Victoria	Wright	01345678902	5	sc01
8	bjones@freemail.com	Jennifer	Jones	01505214590	0	(null)	(null)	1c1015	sc02	wright@hcl.com	Victoria	Wright	01345678902	5	sc01
9	unimow@here.com	John	Doe	03214567808	987.5	sc01	sc02	(null)	sc02	wright@hcl.com	Victoria	Wright	01345678902	5	sc01
10	Marcia@globaltech.com	Andrew	Marcia	07715266890	88	(null)	(null)	1c2346	sc02	wright@hcl.com	Victoria	Wright	01345678902	5	sc01
11	marpa179@elphiview.com	Maria	Galant	01442736559	125.45	sc03	sc03	(null)	sc02	wright@hcl.com	Victoria	Wright	01345678902	5	sc01
12	brianrog@bootech.com	Brian	Rogers	01454564090	50	(null)	(null)	1c4587	sc02	wright@hcl.com	Victoria	Wright	01345678902	5	sc01
13	bob.thornberry@heatmail.com	Robert	Thornberry	01234567890	150	sc01	sc01	(null)	sc03	hoped@hcl.com	Berry	Speed	01345678903	5	sc01
14	bjones@freemail.com	Jennifer	Jones	01505214590	0	(null)	(null)	1c1015	sc03	hoped@hcl.com	Berry	Speed	01345678903	5	sc01
15	unimow@here.com	John	Doe	03214567808	987.5	sc01	sc02	(null)	sc03	hoped@hcl.com	Berry	Speed	01345678903	5	sc01
16	Marcia@globaltech.com	Andrew	Marcia	07715266890	88	(null)	(null)	1c2346	sc03	hoped@hcl.com	Berry	Speed	01345678903	5	sc01
17	marpa179@elphiview.com	Maria	Galant	01442736559	125.45	sc03	sc03	(null)	sc03	hoped@hcl.com	Berry	Speed	01345678903	5	sc01
18	brianrog@bootech.com	Brian	Rogers	01454564090	50	(null)	(null)	1c4587	sc03	hoped@hcl.com	Berry	Speed	01345678903	5	sc01