



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

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SEMESTER 1, SESSION 2023/2024

LAB 3 – DML 3 PART 2

SECD2523: DATABASE

SECTION 10

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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.

```
1 SELECT
2     rep.first_name || ' ' || rep.last_name AS Rep,
3     sup.first_name || ' ' || sup.last_name AS Supervisor
4 FROM
5     sales_representatives rep
6 LEFT JOIN
7     sales_representatives sup ON rep.supervisor_id = sup.id;
```

REP	SUPERVISOR
Charles Raymond	Charles Raymond
Victoria Wright	Charles Raymond
Barry Speed	Charles Raymond

3 rows returned in 0.03 seconds [Download](#)

PART 2: Use OUTER joins (S6L9 Objective 3)

1.

```
1 SELECT
2     t.id AS Team_ID,
3     t.name AS Team_Name, t.number_of_players AS Number_of_Players, t.discount AS Team_Discount,
4     c.ctr_number AS Customer_ID, c.email AS Customer_Email,
5     c.first_name AS Customer_First_Name, c.last_name AS Customer_Last_Name,
6     c.phone_number AS Customer_Phone_Number, c.current_balance AS Customer_Current_Balance
7 FROM
8     teams t
9 LEFT JOIN
10    customers c ON t.id = c.tem_id;
```

TEAM_ID	TEAM_NAME	NUMBER_OF_PLAYERS	TEAM_DISCOUNT	CUSTOMER_ID	CUSTOMER_EMAIL	CUSTOMER_FIRST_NAME	CUSTOMER_LAST_NAME	CUSTOMER_PHONE_NUMBER
1001	Rockets	25	10	c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898
1002	Celtics	42	20	c00101	unknown@here.com	John	Doe	03216547808
1003	Rovers	8	-	c01986	margal87@delphiview.com	Maria	Galant	01442736589

3 rows returned in 0.03 seconds [Download](#)

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

1.

```
1 SELECT
2     c.ctr_number AS Customer_ID,
3     c.email AS Customer_Email, c.first_name AS Customer_First_Name,
4     c.last_name AS Customer_Last_Name, c.phone_number AS Customer_Phone_Number,
5     c.current_balance AS Customer_Current_Balance,
6     s.id AS Sales_Rep_ID,
7     s.email AS Sales_Rep_Email, s.first_name AS Sales_Rep_First_Name,
8     s.last_name AS Sales_Rep_Last_Name, s.phone_number AS Sales_Rep_Phone_Number,
9     s.commission_rate AS Sales_Rep_Commission_Rate, s.supervisor_id AS Sales_Rep_Supervisor_ID
10 FROM
11     customers c
12 CROSS JOIN
13     sales_representatives s;
```

Output:

1 SELECT							
Results	Explain	Describe	Saved SQL	History			
CUSTOMER_ID	CUSTOMER_EMAIL	CUSTOMER_FIRST_NAME	CUSTOMER_LAST_NAME	CUSTOMER_PHONE_NUMBER	CUSTOMER_CURRENT_BALANCE	SALES_REP_ID	SALES_RE
c02001	brianrog@hoootech.com	Brian	Rogers	01654564898	50	sr01	chray@obl
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01	chray@obl
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598	0	sr01	chray@obl
c00101	unknown@here.com	John	Doe	03216547808	987.5	sr01	chray@obl
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85	sr01	chray@obl
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr01	chray@obl
c02001	brianrog@hoootech.com	Brian	Rogers	01654564898	50	sr02	vwright@c
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr02	vwright@c
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598	0	sr02	vwright@c
c00101	unknown@here.com	John	Doe	03216547808	987.5	sr02	vwright@c
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85	sr02	vwright@c

1 SELECT							
Results	Explain	Describe	Saved SQL	History			
CUSTOMER_CURRENT_BALANCE	SALES_REP_ID	SALES_REP_EMAIL	SALES_REP_FIRST_NAME	SALES_REP_LAST_NAME	SALES_REP_PHONE_NUMBER	SALES_REP_COMMISSION_RATE	SALES_REP_SUPERVISOR_ID
50	sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
150	sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
0	sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
987.5	sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
85	sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
125.65	sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
50	sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01
150	sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01
0	sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01
987.5	sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01
85	sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01
125.65	sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01