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B23CS0065

SECD2523 - 02

LAB EXERCISE 4

PART 1:

Part 1: Creating Natural Joins

1. SELECT * FROM sales_representatives
   NATURAL JOIN sales_rep_addresses;

2. SELECT
       sr.id,
       sr.first_name,
       sr.last_name,
       sra.address_line_1,
       sra.address_line_2,
       sra.city,
       sr.email,
       sr.phone_number
   FROM
       sales_representative sr
   JOIN
       sales_rep_addresses sra ON sr.id = sra.id;

Part 2: Creating Joins with the Using Clause

1.
```sql
SELECT * FROM sales_representatives
JOIN sales_rep_addresses USING (id);
```

2.
```sql
SELECT
    i.itm_number,
    i.name,
    i.description,
    i.category,
    i.color,
    i."Size",
    p.start_date,
    p.start_time,
    p.price
FROM
    items i
JOIN
    price_history p ON i.itm_number = p.itm_number;
```

Part 3: Creating Joins with the ON Clause

1. 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,
        s.id 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;

Part 4: Creating Three-Way Joins with the ON Clause

1. SELECT
        c.ctr_number,
        c.first_name ||' '|| c.last_name AS customer_name,
        c.email,
        c.phone_number,
        t.name AS team_name
    FROM customers c
    JOIN teams t ON c.tem_id = t.id
    JOIN sales_representatives s ON c.sre_id = s.id;

Part 5:

1. SELECT
        c.ctr_number,
        c.email,
        c.first_name,
        c.last_name,
        c.phone_number,
        c.current_balance,
        sre.id AS sre_id,
        sre.email AS sre_email,
        sre.first_name AS sre_first_name,
        sre.last_name AS sre_last_name,
        t.id AS tem_id,
        t.name AS tem_name,
        ca.address_line_1 AS address_line_1,
        ca.address_line_2 AS address_line_2,
        ca.city,
        ca.zip_code
   FROM customers c
   JOIN sales_representatives sre ON c.sre_id = sre.id
   JOIN teams t ON c.tem_id = t.id
   JOIN customers_addresses ca ON c.ctr_number = ca.ctr_number
   WHERE c.ctr_number = 'c00001';

Part 6:

1. SELECT
      i.name || '(' || i.itm_number || ')' AS item_name,
      ph.price AS cost
  FROM items i
  JOIN price_history ph
  ON i.itm_number = ph.itm_number
  WHERE i.itm_number = 'im01101045'
  AND TO_DATE('12-Dec-2016', 'DD-Mon-YYYY')
  BETWEEN ph.start_date AND NVL(ph.end_date, SYSDATE);

PART 2:

Part 1: Use a Self-Join to Join a Table to Itself

1.
```sql
SELECT
     Rep.first_name || ' ' || Rep.last_name AS Rep,
     Supervisor.first_name || ' ' || Supervisor.last_name
      AS Supervisor
   FROM  sales_representatives  Rep
   JOIN  sales_representatives  Supervisor
   ON  Rep.supervisor_id = Supervisor.id;
```

Part 2: Use OUTER joins

1.
```sql
SELECT
     t.id  AS team_id,
     t.name  AS team_name,
     t.number_of_players,
     t.discount  AS  team_discount,
     c.ctr_number,
     c.email  AS customer_email,
     c.first_name  AS  customer_first_name,
     c.last_name  AS  customer_last_name,
     c.phone_number  AS  customer_phone_number,
     c.current_balance  AS  customer_current_balance
   FROM teams t
   LEFT OUTER JOIN customers c
   ON  t.id = c.tem_id;
```

Part 3:

1. SELECT * FROM customers
   CROSS JOIN sales_representatives;

OUTPUT

Part 1:

1.

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	10	sr01	12 Cherry Lane	Denton	Detroit	DT48211
sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01	87 Blossom Hill	Uptown	Detroit	DT52314
sr03	bspeed@obl.com	Barry	Speed	0134598763	5	sr01	12 Junction Row	Skinflats	Detroit	DT52564

2.

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

Part 2:

1.

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	10	sr01	12 Cherry Lane	Denton	Detroit	DT48211
sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01	87 Blossom Hill	Uptown	Detroit	DT52314
sr03	bspeed@obl.com	Barry	Speed	0134598763	5	sr01	12 Junction Row	Skinflats	Detroit	DT52564

2.

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

Part 3:

CUSTOMER_NUMBER	CUSTOMER_FIRST_NAME	CUSTOMER_LAST_NAME	CUSTOMER_PHONE_NUMBER	CUSTOMER_EMAIL	SALES_REP_ID
c00001	Robert	Thornberry	01234567898	bob.thornberry@heatmail.com	sr01
c00101	John	Doe	03216547808	unknown@here.com	sr01
c01986	Maria	Galant	01442736589	margal87@delphiview.com	sr03

SALES_REP_FIRST_NAME	SALES_REP_LAST_NAME	SALES_REP_EMAIL
Charles	Raymond	chray@obl.com
Charles	Raymond	chray@obl.com
Barry	Speed	bspeed@obl.com

Part 4:

CTR_NUMBER	CUSTOMER_NAME	PHONE_NUMBER	TEAM_NAME	SALES_REP_NAME
c00001	Robert Thornberry	01234567898	Rockets	Charles Raymond
c00101	John Doe	03216547808	Celtics	Charles Raymond
c01986	Maria Galant	01442736589	Rovers	Barry Speed

Part 5:

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01

SRE_EMAIL	SRE_FIRST_NAME	SRE_LAST_NAME	TEM_ID	TEM_NAME	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	ZIP_CODE
chray@obl.com	Charles	Raymond	t001	Rockets	83 Barrhill Drive	-	Liverpool	LP79HJK
chray@obl.com	Charles	Raymond	t001	Rockets	17 Gartsquare Road	Starford	Liverpool	LP89JHK
chray@obl.com	Charles	Raymond	t001	Rockets	63 Acacia Drive	Skins	Liverpool	LP83JHR

Part 6:

ITEM_NAME	COST
under shirt (im01101045)	14.99

PART 2

Part 1:

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

Part 2:

TEAM_ID	TEAM_NAME	NUMBER_OF_PLAYERS	TEAM_DISCOUNT	CTR_NUMBER	CUSTOMER_EMAIL
t001	Rockets	25	10	c00001	bob.thornberry@heatmail.com
t002	Celtics	42	20	c00101	unknown@here.com
t003	Rovers	8	-	c01986	margal87@delphiview.com

CUSTOMER_FIRST_NAME	CUSTOMER_LAST_NAME	CUSTOMER_PHONE_NUMBER	CUSTOMER_CURRENT_BALANCE
Robert	Thornberry	01234567898	150
John	Doe	03216547808	987.5
Maria	Galant	01442736589	125.65

Part 3:

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01	t001	-
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598	0	-	-	lc1015
c00101	unknown@here.com	John	Doe	03216547808	987.5	sr01	t002	-
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85	-	-	lc2341
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	-
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01	t001	-
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598	0	-	-	lc1015
c00101	unknown@here.com	John	Doe	03216547808	987.5	sr01	t002	-
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	-
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01	t001	-
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598	0	-	-	lc1015
c00101	unknown@here.com	John	Doe	03216547808	987.5	sr01	t002	-
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85	-	-	lc2341
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	-

ID	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	COMMISSION_RATE	SUPERVISOR_ID
sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01
sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01
sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01
sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01
sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01
sr03	bspeed@obl.com	Barry	Speed	0134598763	5	sr01
sr03	bspeed@obl.com	Barry	Speed	0134598763	5	sr01
sr03	bspeed@obl.com	Barry	Speed	0134598763	5	sr01
sr03	bspeed@obl.com	Barry	Speed	0134598763	5	sr01
sr03	bspeed@obl.com	Barry	Speed	0134598763	5	sr01