SECD2523-05 DATABASE

SEMESTER 1

SESSION 2023/2024

LAB 3 – DML1 (Part 1 – 6)

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Lesson 6 Exercise 1

Part 1

1. SELECT * FROM customers;

```
SELECT * FROM customers
```

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	-
c02001	brianrog@hootech.com	Brian	Rogers	01654564898	50	-	-	lc4587

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6 rows selected.

2. SELECT * FROM teams;

```
SELECT * FROM teams
```

ID	NAME	NUMBER_OF_PLAYERS	DISCOUNT
t001	Rockets	25	10
t002	Celtics	42	20
t003	Rovers	8	-
t004	Jets	10	5

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4 rows selected.

3. SELECT * FROM items;

```
SELECT * FROM items
```

ITM_NUMBER	NAME	DESCRIPTION	CATEGORY	COLOR	Size	ILT_ID
im01101044	gloves	catcher mitt	clothing	brown	m	il010230124
im01101045	under shirt	top worn under the game top	clothing	white	s	il010230125
im01101046	socks	team socks with emblem	clothing	range	l	il010230126
im01101047	game top	team shirt with emblem	clothing	range	m	il010230127
im01101048	premium bat	high quaity basball bat	equipment	-	-	il010230128

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Part 2

1. SELECT ctr_number, first_name, last_name, email, phone_number

   FROM customers;

```
SELECT ctr_number, first_name, last_name, email, phone_number
    FROM customers
```

CTR_NUMBER	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER
c00001	Robert	Thornberry	bob.thornberry@heatmail.com	01234567898
c00012	Jennifer	Jones	Jjones@freemail.com	01505214598
c00101	John	Doe	unknown@here.com	03216547808
c00103	Andrew	Murcia	MurciaA@globaltech.com	07715246890
c01986	Maria	Galant	margal87@delphiview.com	01442736589
c02001	Brian	Rogers	brianrog@hootech.com	01654564898

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6 rows selected.

2. SELECT name, number_of_players

   FROM teams;

```
SELECT name, number_of_players
     FROM teams
```

NAME	NUMBER_OF_PLAYERS
Rockets	25
Celtics	42
Rovers	8
Jets	10

Download CSV

4 rows selected.

3. SELECT name, description, category

   FROM items;

```
SELECT name, description, category
     FROM items
```

NAME	DESCRIPTION	CATEGORY
gloves	catcher mitt	clothing
under shirt	top worn under the game top	clothing
socks	team socks with emblem	clothing
game top	team shirt with emblem	clothing
premium bat	high quaity basball bat	equipment

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Lesson 6 Exercise 2

Part 1

1. SELECT first_name, last_name, current_balance, current_balance/12

    FROM customers;

```
SELECT first_name, last_name, current_balance, current_balance/12
    FROM customers
```

FIRST_NAME	LAST_NAME	CURRENT_BALANCE	CURRENT_BALANCE/12
Robert	Thornberry	150	12.5
Jennifer	Jones	0	0
John	Doe	987.5	82.2916666666666666666666666666666666667
Andrew	Murcia	85	7.0833333333333333333333333333333333333
Maria	Galant	125.65	10.4708333333333333333333333333333333333
Brian	Rogers	50	4.1666666666666666666666666666666666667

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6 rows selected.

2. SELECT first_name, last_name, ctr_number "CUSTOMER_NUMBER", current_balance, current_balance-5

    FROM customers;

```
SELECT first_name, last_name, ctr_number "CUSTOMER_NUMBER", current_balance, current_balance-5
    FROM customers
```

FIRST_NAME	LAST_NAME	CUSTOMER_NUMBER	CURRENT_BALANCE	CURRENT_BALANCE-5
Robert	Thornberry	c00001	150	145
Jennifer	Jones	c00012	0	-5
John	Doe	c00101	987.5	982.5
Andrew	Murcia	c00103	85	80
Maria	Galant	c01986	125.65	120.65
Brian	Rogers	c02001	50	45

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6 rows selected.

3. When we see the result from above table its shows that even though Jennifer have 0 current balance but it still minus her balance with gift card value and now it shows the new balance is -5.

Part 2

1. SELECT first_name "First Name", last_name "Last Name", current_balance "Balance", current_balance/12 "Monthly Repayments"

   FROM customers;

```
SELECT first_name "First Name", last_name "Last Name", current_balance "Balance", current_balance/12 "Monthly Repayments"
    FROM customers
```

First Name	Last Name	Balance	Monthly Repayments
Robert	Thornberry	150	12.5
Jennifer	Jones	0	0
John	Doe	987.5	82.2916666666666666666666666666666666667
Andrew	Murcia	85	7.08333333333333333333333333333333333333
Maria	Galant	125.65	10.4708333333333333333333333333333333333
Brian	Rogers	50	4.16666666666666666666666666666666666667

Download CSV

6 rows selected.

Part 3

1. SELECT 'The ' || name || ' team has ' || number_of_players ||

   ' players and receives a discount of ' || discount || ' percent.' AS "Team Information"

   FROM teams;

```
SELECT 'The ' || name || ' team has ' || number_of_players ||
    ' players and receives a discount of ' || discount || ' percent.' AS "Team Information"
FROM teams
```

Team Information
The Rockets team has 25 players and receives a discount of 10 percent.
The Celtics team has 42 players and receives a discount of 20 percent.
The Rovers team has 8 players and receives a discount of percent.
The Jets team has 10 players and receives a discount of 5 percent.

Download CSV

4 rows selected.

2. Because the Rovers team's discount value is a NULL value.

Lesson 7 Exercise 1

Part 1

1. SELECT * FROM customers

   WHERE ctr_number = 'c01986';

```
SELECT * FROM customers
WHERE ctr_number = 'c01986'
```

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER
c01986	marga187@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	-

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2. SELECT first_name "First Name", last_name "Last Name", ctr_number "Customer Number"

   FROM customers

   WHERE current_balance > 100;

```
SELECT first_name "First Name", last_name "Last Name", ctr_number "Customer Number"
FROM customers
WHERE current_balance > 100
```

First Name	Last Name	Customer Number
Robert	Thornberry	c00001
John	Doe	c00101
Maria	Galant	c01986

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3. SELECT id "Order ID", odr_date "Order Date", odr_time "Order Time"

   FROM orders

   WHERE odr_date < '28-May-2019';

```
SELECT id "Order ID", odr_date "Order Date", odr_time "Order Time"
FROM orders
WHERE odr_date < '28-May-2019'
```

Order ID	Order Date	Order Time
or0101250	17-APR-17	17-APR-17
or0101350	24-MAY-17	24-MAY-17
or0101425	28-MAY-17	28-MAY-17
or0101681	02-JUN-17	02-JUN-17
or0101750	18-JUN-17	18-JUN-17

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5 rows selected.

Part 2

1. SELECT id "Inventory ID", cost "Cost", units "Number of units"

   FROM inventory_list

   WHERE cost BETWEEN 3 AND 15;

```
SELECT id "Inventory ID", cost "Cost", units "Number of units"
FROM inventory_list
WHERE cost BETWEEN 3 AND 15
```

Inventory ID	Cost	Number of units
i1010230125	7.99	250
i1010230126	5.24	87

Download CSV

2 rows selected.

Part 3

1. SELECT id "Inventory ID", cost "Cost", units "Number of units"

   FROM inventory_list

   WHERE units IN (50, 100, 150, 200);

```
SELECT id "Inventory ID", cost "Cost", units "Number of units"
FROM inventory_list
WHERE units IN (50, 100, 150, 200)
```

Inventory ID	Cost	Number of units
i1010230124	2.5	100

Download CSV

Part 4

1. SELECT id "Inventory ID", cost "Cost", units "Number of units"

   FROM inventory_list

   WHERE units NOT IN (50, 100, 150, 200);

```
SELECT id "Inventory ID", cost "Cost", units "Number of units"
FROM inventory_list
WHERE units NOT IN (50, 100, 150, 200)
```

Inventory ID	Cost	Number of units
i1010230125	7.99	250
i1010230126	5.24	87
i1010230127	18.95	65
i1010230128	97.46	8

Download CSV

4 rows selected.

Part 5

1. SELECT itm_number "Item Number", name "Item Name"

   FROM items

   WHERE name LIKE 'g%';

```
SELECT itm_number "Item Number", name "Item Name"
FROM items
WHERE name LIKE 'g%'
```

Item Number	Item Name
im01101044	gloves
im01101047	game top

Download CSV

2 rows selected.

Part 6

1. SELECT itm_number "Item Number", name "Item Name"

   FROM items

   WHERE name LIKE '%_o_%';

```
SELECT itm_number "Item Number", name "Item Name"
FROM items
WHERE name LIKE '%_o_%'
```

Item Number	Item Name
im01101044	gloves
im01101046	socks
im01101047	game top

Download CSV

3 rows selected.

Lesson 7 Exercise 2

Part 1

1. SELECT 'The ' || name || ' team has ' || number_of_players ||

   ' players and does not receive a discount.' AS "Team Information"

   FROM teams

   WHERE discount IS NULL;

```
SELECT 'The ' || name || ' team has ' || number_of_players ||
    ' players and does not receive a discount.' AS "Team Information"
    FROM teams
    WHERE discount IS NULL
```

Team Information
The Rovers team has 8 players and does not receive a discount.

Download CSV

2. SELECT 'The ' || name || ' team has ' || number_of_players ||

   ' players and receives a discount of ' || discount || ' percent.' AS "Team Information"

   FROM teams

   WHERE discount IS NOT NULL;

```
SELECT 'The ' || name || ' team has ' || number_of_players ||
    ' players and receives a discount of ' || discount || ' percent.' AS "Team Information"
    FROM teams
    WHERE discount IS NOT NULL
```

Team Information
The Rockets team has 25 players and receives a discount of 10 percent.
The Celtics team has 42 players and receives a discount of 20 percent.
The Jets team has 10 players and receives a discount of 5 percent.

Download CSV

3 rows selected.

Part 2

1. SELECT id "Customer Number", address_line_1 "Street Address", zip_code "Postal code"

   FROM customers_addresses

   WHERE address_line_2 = 'Starford'

   AND city = 'Liverpool';

```
SELECT id "Customer Number", address_line_1 "Street Address", zip_code "Postal code"
    FROM customers_addresses
    WHERE address_line_2 = 'Starford'
    AND city = 'Liverpool'
```

Customer Number	Street Address	Postal code
ca0102	17 Gartsquare Road	LP89JHK

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Part 3

1. SELECT id "Customer Number", address_line_1 "Street Address", zip_code "Postal code"

   FROM customers_addresses

   WHERE address_line_2 = 'Starford'

   OR city = 'Liverpool';

```
SELECT id "Customer Number", address_line_1 "Street Address", zip_code "Postal code"
    FROM customers_addresses
    WHERE address_line_2 = 'Starford'
    OR city = 'Liverpool'
```

Customer Number	Street Address	Postal code
ca0102	17 Gartsquare Road	LP89JHK
ca0105	63 Acacia Drive	LP83JHR

Download CSV

2 rows selected.

Part 4

1. SELECT id "Customer Number", address_line_1 "Street Address", zip_code "Postal code"

   FROM customers_addresses

   WHERE city NOT IN ('Liverpool');

```
SELECT id "Customer Number", address_line_1 "Street Address", zip_code "Postal code"
    FROM customers_addresses
    WHERE city NOT IN ('Liverpool')
```

Customer Number	Street Address	Postal code
ca0103	54 Ropehill Crescent	ST45AGV
ca0104	36 Watercress Lane	JP23YTH

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2 rows selected.

Lesson 8 Exercise 1

1. SELECT name "Team Name", number_of_players "Number of Players"

   FROM teams

   ORDER BY name;

```
SELECT name "Team Name", number_of_players "Number of Players"
    FROM teams
    ORDER BY name
```

Team Name	Number of Players
Celtics	42
Jets	10
Rockets	25
Rovers	8

Download CSV

4 rows selected.

2. SELECT name "Team Name", number_of_players "Number of Players"

FROM teams

ORDER BY number_of_players DESC;

```
SELECT name "Team Name", number_of_players "Number of Players"
    FROM teams
    ORDER BY number_of_players DESC
```

Team Name	Number of Players
Celtics	42
Rockets	25
Jets	10
Rovers	8

Download CSV

4 rows selected.

3. SELECT name "Team Name", number_of_players "Players"

FROM teams

ORDER BY "Team Name" DESC;

```
SELECT name "Team Name", number_of_players "Players"
    FROM teams
    ORDER BY "Team Name" DESC
```

Team Name	Players
Rovers	8
Rockets	25
Jets	10
Celtics	42

Download CSV

4 rows selected.

Lesson 8 Exercise 2

Part 1

SELECT ROWNUM As "Higher Customer Number", first_name || ' ' ||last_name AS "Customer Name"

FROM

      (SELECT first_name, last_name

       FROM customers

       ORDER BY ctr_number)

WHERE ROWNUM <= 3;

```
SELECT ROWNUM As "Higher Customer Number", first_name || ' ' ||last_name AS "Customer Name"
      FROM
      (SELECT first_name, last_name
   FROM customers
   ORDER BY ctr_number)
      WHERE ROWNUM <= 3
```

Higher Customer Number	Customer Name
1	Robert Thornberry
2	Jennifer Jones
3	John Doe

Download CSV

3 rows selected.

Part 2

SELECT first_name||' '||last_name AS "Sales Representatives"

FROM SALES_REPRESENTATIVES

WHERE commission_rate = :commission_rate;

ORDER BY last_name;