

SQL 3 PART 1

Part 1: Retrieving all columns from a table

1. Customers

SELECT * FROM customers;

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER	MOBILE_PHONE_NUMBER
1 c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150 sr01	t001	(null)	(null)	(null)
2 c00012	Jjones@freemail.com	Jennifer	Jones	01505214598	0 (null)	(null)	1c1015	(null)	(null)
3 c00101	unknown@here.com	John	Doe	03216547808	987.5 sr01	t002	(null)	(null)	(null)
4 c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85 (null)	(null)	1c2341	(null)	(null)
5 c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65 sr03	t003	(null)	(null)	(null)
6 c02001	brianrog@hootech.com	Brian	Roger	01654564898	50 (null)	(null)	1c4587	(null)	(null)

2. Teams

SELECT *FROM teams;

ID	NAME	NUMBER_OF_PLAYERS	DISCOUNT
1 t001	Rockets	25	10
2 t002	Celtics	42	20
3 t003	Rovers	8	(null)
4 t004	Jets	10	5

3. items

SELECT *FROM items;

ITM_NUMBER	NAME	DESCRIPTION	CATEGORY	COLOR	Size	ILT_ID
1 im01101044	gloves	catcher mitt	clothing	brown	m	11010230124
2 im01101045	under shirt	top worn under the game top	clothing	white	s	11010230125
3 im01101046	socks	team socks with emblem	clothing	range	l	11010230126
4 im01101047	game top	team shirt with emblem	clothing	range	m	11010230127
5 im01101048	premium bat	high quaity baseball bat	equipment	(null)	(null)	11010230128

Part 2: Selecting Specific Columns

1. SELECT ctr_number, first_name, last_name, email, phone_number FROM customers;

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

2. SELECT name, number_of_players FROM teams;

	NAME	NUMBER_OF_PLAYERS
1	Rockets	25
2	Celtics	42
3	Rovers	8
4	Jets	10

3. SELECT name, description, category FROM items;

	NAME	DESCRIPTION	CATEGORY
1	gloves	catcher mitt	clothing
2	under shirt	top worn under the game top	clothing
3	socks	team socks with emblem	clothing
4	game top	team shirt with emblem	clothing
5	premium bat	high quality baseball bat	equipment

Part 1: Using Arithmetic Operators

```
first_name,  
last_name,  
current_balance,  
current_balance / 12 AS monthly_payment
```

[illegible]

SELECT

FROM customers;

	⚡ FIRST_NAME	⚡ LAST_NAME	⚡ CTR_NUMBER	⚡ CURRENT_BALANCE	⚡ ADJUSTED_BALANCE
1	Robert	Thornberry	c00001	150	145
2	Jennifer	Jones	c00012	0	-5
3	John	Doe	c00101	987.5	982.5
4	Andrew	Murcia	c00103	85	80
5	Maria	Galant	c01986	125.65	120.65
6	Brian	Roger	c02001	50	45

3. When current balance is zero, the 'current balance -5' becomes -5 which is illogical in real world.

Part 2 : Using Column Aliases

1.

SELECT

```
first_name AS "First Name",
```

```
last_name AS "Last Name",
```

current_balance AS "Balance",

current_balance / 12 AS "Monthly Repayments"

FROM customers;

[illegible]

Part 3: Using Literal Character Strings

1.

SELECT

'The ' || name || ' team has ' || number_of_players || ' players and receives a discount of

```
' || discount || ' percent.' AS "Team Information"
```

FROM teams;

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

2. It appears that the last team in the data has a null value in the discount column. When concatenating the string in the query, the null value is treated as unknown, and it does not display a specific discount in the result.

SQL 3 PART 3 Part 1: Using the WHERE Clause

1.

```
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	MOBILE_PHONE_NUMBER
1 c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	(null)	(null)

2.

```
SELECT
```

```
first_name AS "First Name",
```

```
last_name AS "Last Name",
```

```
ctr_number AS "Customer Number"
```

```
FROM customers
```

```
WHERE current_balance > 100;
```

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

Part 2: Range Conditions: BETWEEN Operator

```
SELECT  
il.id AS "Inventory ID",  
il.cost AS "Trade Cost",  
il.units AS "Number of Units"  
FROM inventory_list il  
WHERE il.cost BETWEEN 3.00 AND 15.00;
```

	Inventory ID	Trade Cost	Number of Units
1	i1010230125	7.99	250
2	i1010230126	5.24	87

Part 3: Membership Conditions: IN Operator

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

	Inventory ID	Trad...	Number of Units
1	i1010230124	2.5	100

Part 4: Membership Conditions: NOT IN Operator

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

	Inventory ID	Trade Cost	Number of Units
1	11010230125	7.99	250
2	11010230126	5.24	87
3	11010230127	18.95	65
4	11010230128	97.46	8

Part 5: Patern Matching: LIKE Operator

1.

SELECT

itm_number AS "Item Number",

name AS "Item Name"

FROM items

WHERE name LIKE 'g%';

	Item Number	Item Name
1	im01101044	gloves
2	im01101047	game top

Part 6 : Pattern Matching: Combining Wildcard Characters with the LIKE Operator

1.

SELECT

itm_number AS "Item Number",

name AS "Item Name"

FROM items

WHERE name LIKE '%o%';

	Item Number	Item Name
1	im01101044	gloves
2	im01101046	socks
3	im01101047	game top

SQL 3 PART 4

Part 1: Using the NULL Conditions

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

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;

SQL All Rows Fetched: 1 in 0.016 seconds		
Customer N...	Street Address	Postal Code
1 c00001	17 Gartsquare Road	LP89JHK

Part 3: Logical Operators: OR

1.

SELECT

ctr_number AS "Customer Number",

address_line_1 AS "Street Address",

zip_code AS "Postal Code"

FROM customers_addresses

WHERE city = 'Liverpool' OR address_line_2 = 'Starford';

	Customer Number	Street Address	Postal Code
1	c00001	17 Gartsquare Road	LP89JHK
2	c00001	63 Acacia Drive	LP83JHR

Part 4: Logical Operators: NOT Equal To

1.

SELECT

ctr_number AS "Customer Number",

address_line_1 AS "Street Address",

zip_code AS "Postal Code"

FROM customers_addresses

WHERE city NOT LIKE 'Liverpool';

	Customer N...	Street Address	Postal Code
1	c00101	54 Ropehill Crescent	ST45AGV
2	c01986	36 Watercress Lane	JP23YTH

SQL 3 PART 5

Use the ORDER BY Clause to Sort SQL Results

1.

SELECT

name AS "Team Name",

number_of_players AS "Number of Players"

FROM teams

ORDER BY "Team Name" ASC;

	Team Name	Number of Players
1	Celtics	42
2	Jets	10
3	Rockets	25
4	Rovers	8

2.

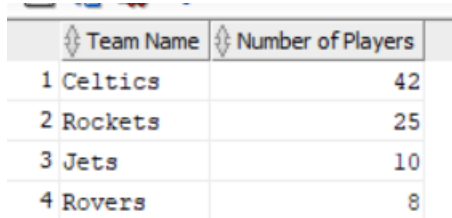
SELECT

name AS "Team Name",

number_of_players AS "Number of Players"

FROM teams

ORDER BY "Number of Players" DESC;



	Team Name	Number of Players
1	Celtics	42
2	Rockets	25
3	Jets	10
4	Rovers	8

3.

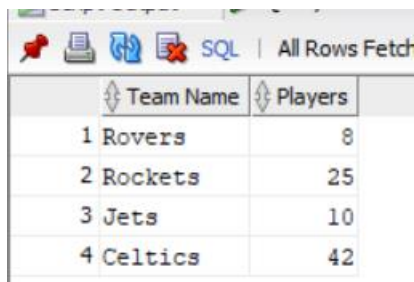
SELECT

name AS "Team Name",

number_of_players AS "Players"

FROM teams

ORDER BY "Team Name" DESC;



	Team Name	Players
1	Rovers	8
2	Rockets	25
3	Jets	10
4	Celtics	42

SQL 3 PART 6

Part 1 : TOP-N-ANALYSIS (S6L8 Objective 3)

SELECT

first_name || ' ' || last_name AS "Customer Name"

FROM (

SELECT

first_name,

last_name,

ROWNUM AS rnum

FROM customers

ORDER BY ctr_number

)

WHERE rnum <= 3;

	Customer Name
1	Robert Thornberry
2	Jennifer Jones
3	John Doe

Part 2 : Using a Substitution Variable (S6L8 Objective 4)

SELECT

first_name AS "First Name",

last_name AS "Last Name"

FROM sales_representatives

WHERE commission_rate = :input_commission_rate

ORDER BY last_name;

For the input = 5

	First Name	Last Name
1	Barry	Speed
2	Victoria	Wright