

## PART I

### Part 1: Retrieving all columns from a table

#### 1. SELECT \* FROM customers;

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER
1 c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01	t001	(null)
2 c00012	Jjones@freemail.com	Jennifer	Jones	01505214598	0	(null)	(null)	lc1015
3 c00101	unknown@here.com	John	Doe	03216547808	987.5	sr01	t002	(null)
4 c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85	(null)	(null)	lc2341
5 c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	(null)
6 c02001	brianrog@hootech.com	Brian	Rogers	01654564898	50	(null)	(null)	lc4587

#### 2. 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. SELECT \* FROM items;

ITM_NUMBER	NAME	DESCRIPTION	CATEGORY	COLOR	Size	ILT_ID
1 im01101044	gloves	catcher mitt	clothing	brown	m	i1010230124
2 im01101045	under shirt top	worn under the game top	clothing	white	s	i1010230125
3 im01101046	socks	team socks with emblem	clothing	range	l	i1010230126
4 im01101047	game top	team shirt with emblem	clothing	range	m	i1010230127
5 im01101048	premium bat	high quaitly baseball bat	equipment	(null)	(null)	i1010230128

## 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	Rogers	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 2

## Part 1: Using Arithmetic Operators

```
1. SELECT FIRST_NAME, LAST_NAME , CURRENT_BALANCE,CURRENT_BALANCE /12  
      FROM customers;
```

2. SELECT FIRST\_NAME, LAST\_NAME, CTR\_NUMBER , CURRENT\_BALANCE,  
CURRENT\_BALANCE - 5.00  
FROM customers;

FIRST_NAME	LAST_NAME	CTR_NUMBER	CURRENT_BALANCE	CURRENT_BALANCE-5.00
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	Rogers	c02001	50	45

3. Because one of the customer have - 5.

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## Part 2: Using Column Aliases

1. SELECT FIRST\_NAME "First Name", LAST\_NAME "Last Name", CURRENT\_BALANCE "Balance",  
CURRENT\_BALANCE / 12 "Monthly Repayments"  
FROM customers;

## 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 Rocketsteam has 25 players and receives a discount of 10 percent
2	The Celticsteam has 42 players and receives a discount of 20 percent
3	The Roversteam has 8 players and receives a discount of percent
4	The Jetsteam has 10 players and receives a discount of 5 percent

2. Because the discount value is NULL.



## 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	ITEM_ID	LOYALTY_CARD_NUMBER
1 c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	(null)

2. `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
1 Robert	Thornberry	c00001
2 John	Doe	c00101
3 Maria	Galant	c01986

3. SELECT ID "Order ID", ODR-DATE "Date", ODR-TIME "Time"

FROM orders

WHERE ODR-DATE < TO\_DATE ('28-05-2019', 'DD-MM-YYYY');

Order ID	Date	Time
1 or0101250	17/04/2017	17/04/2017
2 or0101350	24/05/2017	24/05/2017
3 or0101425	28/05/2017	28/05/2017
4 or0101681	02/06/2017	02/06/2017
5 or0101750	18/06/2017	18/06/2017

### Part 2: Range Conditions : BETWEEN Operator

1. SELECT ID "Inventory ID", COST "Cost", UNITS "Units"

FROM INVENTORY\_LIST

WHERE COST BETWEEN 3.00 AND 15.00;

Inventory ID	Cost	Units
1 il010230125	7.99	250
2 il010230126	5.24	87

### Part 3: Membership Conditions: IN Operator

1. SELECT ID "Inventory ID", COST "Cost", UNITS "Units"

FROM INVENTORY\_LIST

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

Inventory ID	Cost	Units
1 il010230124	2.5	100

## Part 4: Membership Conditions :NOT IN Operator

1. SELECT ID "Inventory ID", COST "Cost", UNITS "Units"  
 FROM INVENTORY\_LIST  
 WHERE UNITS NOT IN (50,100,150,200);

Inventory ID	Cost	Units
1 il010230125	7.99	250
2 il010230126	5.24	87
3 il010230127	18.95	65
4 il010230128	97.46	8

## Part 5: Pattern Matching: LIKE Operator

1. SELECT ITEM-NUMBER "Item Number", NAME "Name"  
 FROM ITEMS  
 WHERE NAME LIKE 'g %';

Item Number	Name
1 im01101044	gloves
2 im01101047	game top

## Part 6: Pattern Matching: Combining Wildcard Characters with the LIKE operator

1. SELECT ITEM-NUMBER "Item Number", NAME "Name"  
 FROM ITEMS  
 WHERE NAME LIKE '% o %';

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

## PART 4

### Part 1: Using the NULL Conditions

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;

Team Information	
1	The Roversteam has 8 players and does not receive a discount

2. SELECT 'The' || NAME || 'team has' || NUMBER\_OF\_PLAYERS || 'players and receive a discount of ' || DISCOUNT || 'percent.'  
AS "Team Information"  
FROM TEAMS  
WHERE DISCOUNT IS NOT NULL;

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

### Part 2: Logical Operators: AND

1. SELECT CTR\_NUMBER "Customer Number", ADDRESS\_LINE\_1 "Street Address", ZIP\_CODE  
"Postal Code"  
FROM CUSTOMERS\_ADDRESSES  
WHERE CITY = 'Liverpool'  
AND ADDRESS\_LINE\_2 = 'Starford';

Customer Number	Street Address	Postal Code
1 c00001	17 Gartsquare Road	LP89JHK

### Part 3: Logical Operators : OR

1. SELECT CTR\_NUMBER "Customer Number", ADDRESS\_LINE\_1 "Street Address", ZIP\_CODE  
"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 "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
1 c00101	54 Ropehill Crescent	ST45AGV
2 c01986	36 Watercress Lane	JP23YTH

## PART 5: ORDER BY Clause

1. SELECT NAME "Team Name",  
NUMBER\_OF\_PLAYERS "Number of Players"  
FROM teams  
ORDER BY NAME;

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

2. SELECT NAME "Team Name",  
NUMBER\_OF\_PLAYERS "Number of Players"  
FROM teams  
ORDER BY NUMBER\_OF\_PLAYERS DESC;

NAME	Number of Player
1 Celtics	42
2 Rockets	25
3 Jets	10
4 Rovers	8

3. SELECT NAME "Team Name",  
NUMBER\_OF\_PLAYERS "Players"  
FROM teams  
ORDER BY NAME DESC;

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

## PART 6: ORDER BY

### Part 1: TOP-N-ANALYSIS

1. SELECT ROWNUM AS "Oldest Customer Number", FIRST\_NAME || ' ' || LAST\_NAME "Customer Name"  
 FROM  
 (SELECT FIRST\_NAME, LAST\_NAME  
 FROM CUSTOMERS  
 ORDER BY CTR\_NUMBER)  
 WHERE ROWNUM <=3;

Oldest Customer		Customer Name
1		Robert Thornberry
2		Jennifer Jones
3		John Doe

### Part 2: Using Substitution Variable

2. SELECT FIRST\_NAME "First Name", LAST\_NAME "Last Name", COMMISSION-RATE "Commission Rate"  
 FROM sales-representatives  
 WHERE COMMISSION-RATE = :COM\_RATE  
 ORDER BY LAST-NAME;

	First Name	Last Name	Commission Rate
1	Barry	Speed	5
2	Victoria	Wright	5