

## Database Design – 2023S

Student ID :

Student Name :

### Practical Activity#8 – Sub Queries / Multiple Table Queries using Where

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Perform the following operations using ORACLE /ORACLE live and provide relevant screen shots in each case

Login Name / Connection Must Be visible in all screens

Create the tables and populate with data using the script

But modify all the tables with your student number last 3 digits

e.g Customer → Customer\_697 (replace 697 with your student number)

Change the date format according to the using alter session command

Use Column alias for first column e.g order\_id -> order\_id\_697 in all SQL statements

Explain the SQL Statement in your own words

### Practical Activity#1

1. For each order, list the order number and order date along with the number and name of the customer that placed the order.

Connections: Oracle Connections, SagaraDB, Database Schema Service Connections

Worksheet: Query Builder

--SQL Statement--

Script Output x Query Result x

SQL | All Rows Fetched: 7 in 0.005 seconds

	ORDER_NUM_697	ORDER_DATE	CUSTOMER_NUM	CUSTOMER_NAME
1	21608	20-OCT-2010	148	Al's Appliance and Sport
2	21619	23-OCT-2010	148	Al's Appliance and Sport
3	21614	21-OCT-2010	282	Brookings Direct
4	21610	20-OCT-2010	356	Ferguson's
5	21613	21-OCT-2010	408	The Everything Shop
6	21617	23-OCT-2010	608	Johnson's Department Store
7	21623	23-OCT-2010	608	Johnson's Department Store

Reports: All Reports, Analytic View Reports

2. For each order placed on October 23, 2010, list the order number along with the number and name of the customer that placed the order.

Connections: Oracle Connections, SagaraDB, Database Schema Service Connections

Worksheet: Query Builder

--SQL Statement--

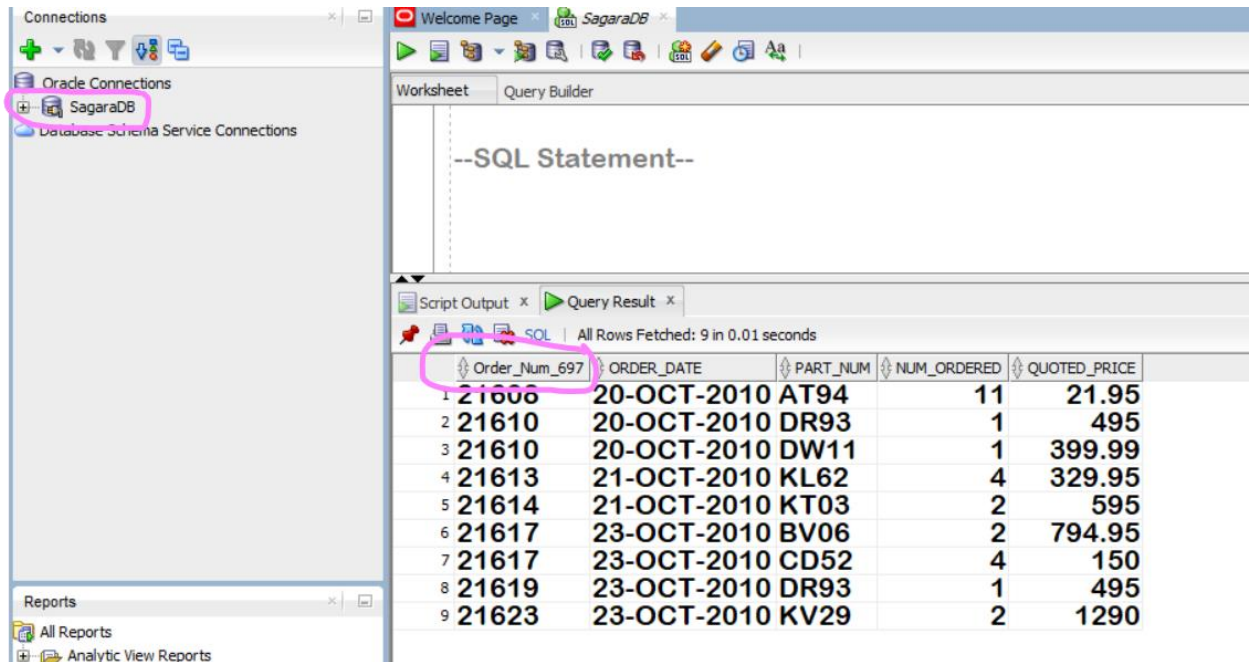
Script Output x Query Result x

SQL | All Rows Fetched: 3 in 0.005 seconds

	ORDER_NUM_697	CUSTOMER_NUM	CUSTOMER_NAME
1	21619	148	Al's Appliance and Sport
2	21617	608	Johnson's Department Store
3	21623	608	Johnson's Department Store

Reports

3. For each order, list the order number, order date, part number, number of units ordered, and quoted price for each order line that makes up the order. (Hint :order , orderline)

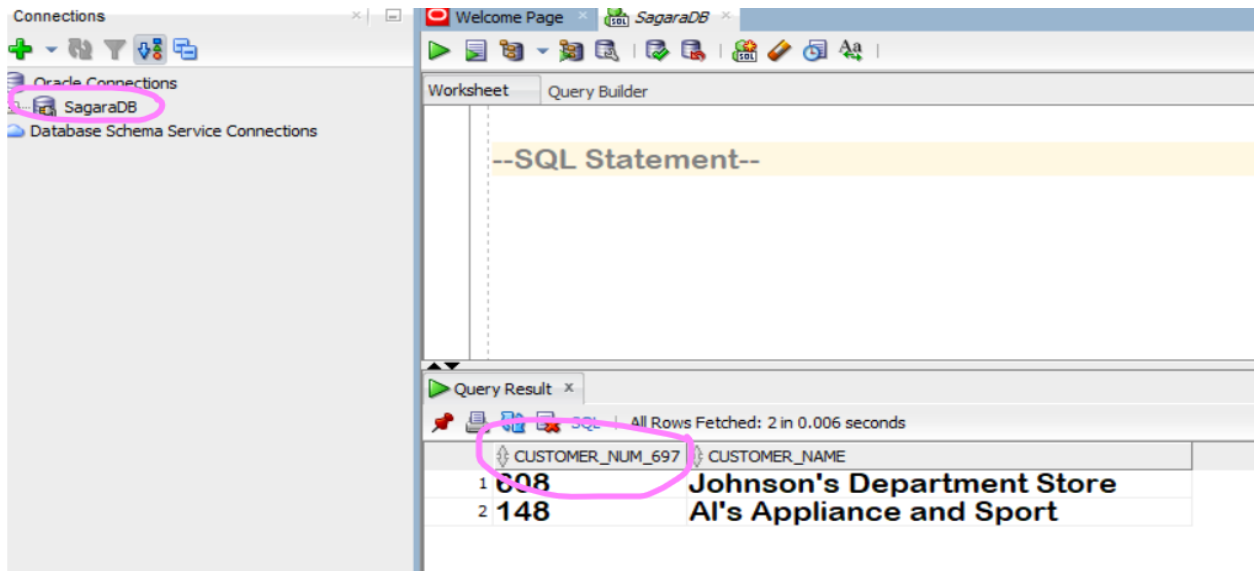


The screenshot shows the Oracle SQL Developer interface. On the left, the 'Connections' pane shows 'SagaraDB' selected. The main window displays a 'Query Result' tab with a table of 9 rows. The first row is circled in pink, and the column header 'Order\_Num\_697' is also circled in pink.

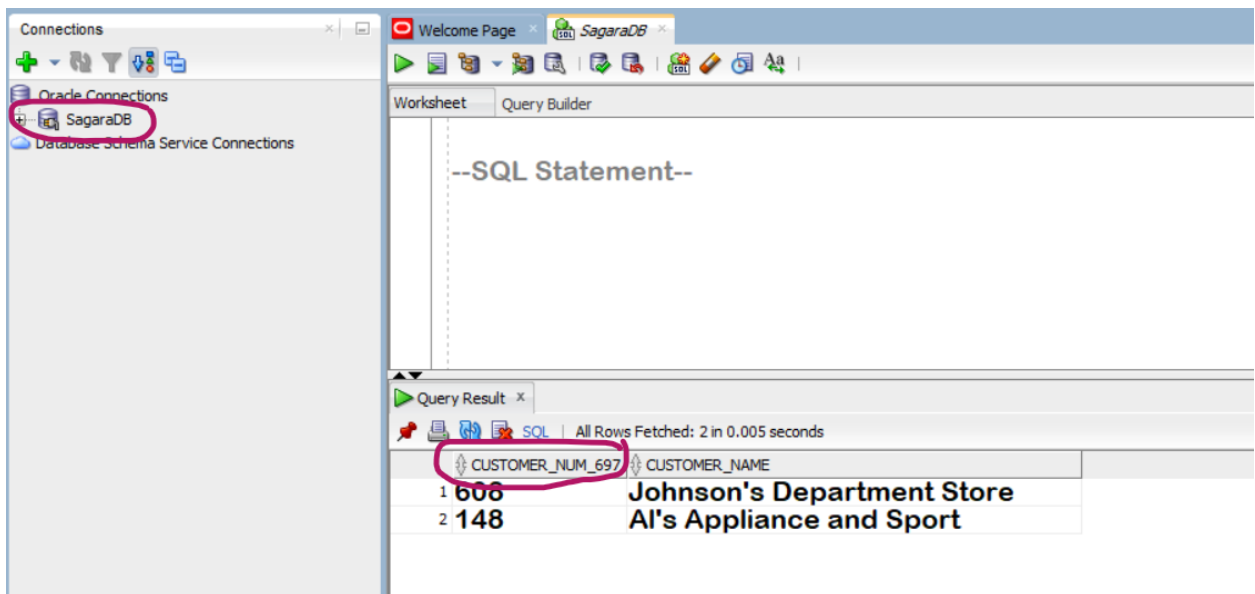
	Order_Num_697	ORDER_DATE	PART_NUM	NUM_ORDERED	QUOTED_PRICE
1	21606	20-OCT-2010	AT94	11	21.95
2	21610	20-OCT-2010	DR93	1	495
3	21610	20-OCT-2010	DW11	1	399.99
4	21613	21-OCT-2010	KL62	4	329.95
5	21614	21-OCT-2010	KT03	2	595
6	21617	23-OCT-2010	BV06	2	794.95
7	21617	23-OCT-2010	CD52	4	150
8	21619	23-OCT-2010	DR93	1	495
9	21623	23-OCT-2010	KV29	2	1290

## Practical Activity#2

4. Use the IN operator to find the number and name of each customer that placed an order on October 23, 2010.



5. Repeat Exercise 4, but this time use the EXISTS operator in your answer.



6. Find the number and name of each customer that did not place an order on October 23, 2010.

The screenshot displays a database management application. On the left, a 'Connections' pane lists 'Oracle Connections', 'SagaraDB' (highlighted with a green circle), and 'Database Schema Service Connections'. The main area is divided into a 'Worksheet' and a 'Query Builder' section, with the latter containing the text '--SQL Statement--'. Below this, a 'Query Result' pane shows a table with two columns: 'CUSTOMER\_NUM\_697' and 'CUSTOMER\_NAME'. The first row of data is highlighted with a green circle. The 'Reports' pane at the bottom left lists 'All Reports', 'Analytic View Reports', 'Data Dictionary Reports', and 'Data Modeler Reports'.

	CUSTOMER_NUM_697	CUSTOMER_NAME
1	408	The Everything Shop
2	462	Bargains Galore
3	842	All Season
4	282	Brookings Direct
5	687	Lee's Sport and Appliance
6	356	Ferguson's
7	524	Kline's
8	725	Deerfield's Four Seasons

### Practical Activity#3

7. For each order, list the order number, order date, part number, part description, and item class for each part that makes up the order.

Connections

Oracle Connections

SagaraDB

Database Schema Service Connections

Worksheet

Query Builder

--SQL Statement--

Query Result

All Rows Fetched: 9 in 0.026 seconds

	ORDER_NUM_697	ORDER_DATE	PART_NUM	DESCRIPTION	CLASS
1	21608	20-OCT-2010	AT94	Iron	HW
2	21610	20-OCT-2010	DR93	Gas Range	AP
3	21610	20-OCT-2010	DW11	Washer	AP
4	21613	21-OCT-2010	KL62	Dryer	AP
5	21614	21-OCT-2010	KT03	Dishwasher	AP
6	21617	23-OCT-2010	BV06	Home Gym	SG
7	21617	23-OCT-2010	CD52	Microwave Oven	AP
8	21619	23-OCT-2010	DR93	Gas Range	AP
9	21623	23-OCT-2010	KV29	Treadmill	SG

Reports

All Reports

Analytic View Reports

Data Dictionary Reports

Data Modeler Reports

OLAP Reports

TimesTen Reports

User Defined Reports

8. Repeat Exercise 7, but this time order the rows by item class and then by order number.

Connections

Oracle Connections

SagaraDB

Database Schema Service Connections

Worksheet

Query Builder

--SQL Statement--

Query Result

All Rows Fetched: 9 in 0.009 seconds

	ORDER_NUM_697	ORDER_DATE	PART_NUM	DESCRIPTION	CLASS
1	21610	20-OCT-2010	DR93	Gas Range	AP
2	21610	20-OCT-2010	DW11	Washer	AP
3	21613	21-OCT-2010	KL62	Dryer	AP
4	21614	21-OCT-2010	KT03	Dishwasher	AP
5	21617	23-OCT-2010	CD52	Microwave Oven	AP
6	21619	23-OCT-2010	DR93	Gas Range	AP
7	21608	20-OCT-2010	AT94	Iron	HW
8	21617	23-OCT-2010	BV06	Home Gym	SG
9	21623	23-OCT-2010	KV29	Treadmill	SG

Reports

All Reports

Analytic View Reports

Data Dictionary Reports

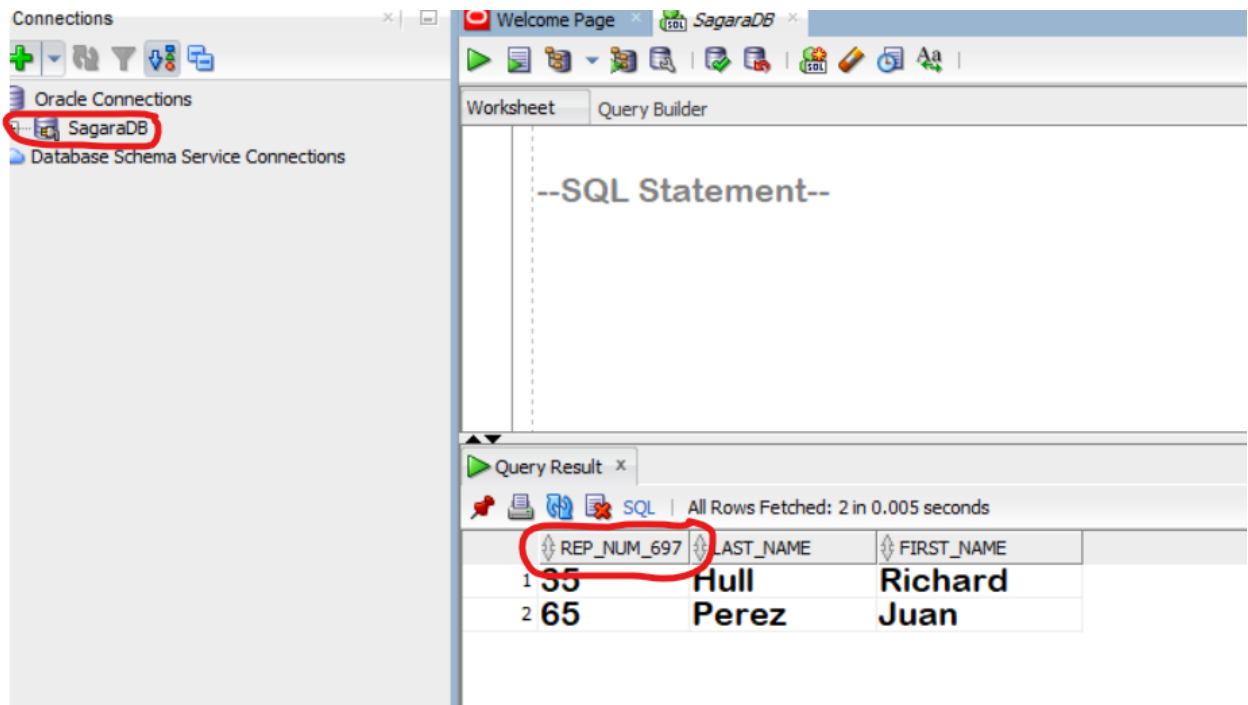
Data Modeler Reports

OLAP Reports

TimesTen Reports

## Practical Activity#4

9. Use a subquery to find the rep number, last name, and first name of each sales rep who represents at least one customer with a credit limit of \$10,000. List each sales rep only once in the results.



The screenshot shows the Oracle SQL Developer interface. On the left, the 'Connections' pane lists 'SagaraDB' under 'Oracle Connections', which is highlighted with a red circle. The main window displays the 'Query Result' tab, showing a table with 2 rows and 3 columns: 'REP\_NUM\_697', 'LAST\_NAME', and 'FIRST\_NAME'. The first row contains '35', 'Hull', and 'Richard'. The second row contains '65', 'Perez', and 'Juan'. The column header 'REP\_NUM\_697' is also highlighted with a red circle. The status bar indicates 'All Rows Fetched: 2 in 0.005 seconds'.

	REP_NUM_697	LAST_NAME	FIRST_NAME
1	35	Hull	Richard
2	65	Perez	Juan

10. Repeat Exercise 9, but this time do not use a subquery.

Connections

Oracle Connections

SagaraDB

Database Schema Service Connections

Welcome Page

SagaraDB

Worksheet

Query Builder

--SQL Statement--

Query Result

SQL | All Rows Fetched: 2 in 0.005 seconds

	REP_NUM_697	LAST_NAME	FIRST_NAME
1	35	Hull	Richard
2	65	Perez	Juan

Database Structure



## REP

REP_NUM	LAST_NAME	FIRST_NAME	STREET	CITY	STATE	ZIP	COMMISSION	RATE
20	Kaiser	Valerie	624 Randall	Grove	FL	33321	\$20,542.50	0.05
35	Hull	Richard	532 Jackson	Sheldon	FL	33553	\$39,216.00	0.07
65	Perez	Juan	1626 Taylor	Fillmore	FL	33336	\$23,487.00	0.05

## CUSTOMER

CUSTOMER_NUM	CUSTOMER_NAME	STREET	CITY	STATE	ZIP	BALANCE	CREDIT_LIMIT	REP_NUM
148	Al's Appliance and Sport	2837 Greenway	Fillmore	FL	33336	\$6,550.00	\$7,500.00	20
282	Brookings Direct	3827 Devon	Grove	FL	33321	\$431.50	\$10,000.00	35
356	Ferguson's	382 Wildwood	Northfield	FL	33146	\$5,785.00	\$7,500.00	65
408	The Everything Shop	1828 Raven	Crystal	FL	33503	\$5,285.25	\$5,000.00	35
462	Bargains Galore	3829 Central	Grove	FL	33321	\$3,412.00	\$10,000.00	65
524	Kline's	838 Ridgeland	Fillmore	FL	33336	\$12,762.00	\$15,000.00	20
608	Johnson's Department Store	372 Oxford	Sheldon	FL	33553	\$2,106.00	\$10,000.00	65
687	Lee's Sport and Appliance	282 Evergreen	Altonville	FL	32543	\$2,851.00	\$5,000.00	35
725	Deerfield's Four Seasons	282 Columbia	Sheldon	FL	33553	\$248.00	\$7,500.00	35
842	All Season	28 Lakeview	Grove	FL	33321	\$8,221.00	\$7,500.00	20

## ORDERS

ORDER_NUM	ORDER_DATE	CUSTOMER_NUM
21608	10/20/2010	148
21610	10/20/2010	356
21613	10/21/2010	408
21614	10/21/2010	282
21617	10/23/2010	608
21619	10/23/2010	148
21623	10/23/2010	608

## ORDER\_LINE

ORDER_NUM	PART_NUM	NUM_ORDERED	QUOTED_PRICE
21608	AT94	11	\$21.95
21610	DR93	1	\$495.00
21610	DW11	1	\$399.99
21613	KL62	4	\$329.95
21614	KT03	2	\$595.00
21617	BV06	2	\$794.95
21617	CD52	4	\$150.00
21619	DR93	1	\$495.00
21623	KV29	2	\$1,290.00

## PART

PART_NUM	DESCRIPTION	ON_HAND	CLASS	WAREHOUSE	PRICE
AT94	Iron	50	HW	3	\$24.95
BV06	Home Gym	45	SG	2	\$794.95
CD52	Microwave Oven	32	AP	1	\$165.00
DL71	Cordless Drill	21	HW	3	\$129.95
DR93	Gas Range	8	AP	2	\$495.00
DW11	Washer	12	AP	3	\$399.99
FD21	Stand Mixer	22	HW	3	\$159.95
KL62	Dryer	12	AP	1	\$349.95
KT03	Dishwasher	8	AP	3	\$595.00
KV29	Treadmill	9	SG	2	\$1,390.00