**Lab 4 – SQL IV**

**Correlated Subqueries with Solutions**

**Exercises**

Load your database with the Pine Valley Furniture Company data and run the following queries:

1. Show customers ID and name for all the customers who have ordered both product IDs 3 and 4 on the same order.

select customerid, customername from customer\_t where customerid in (select customerid from order\_t where orderid in (select orderid from order\_t o where 3 in (select productid from orderline\_t where orderid=o.orderid) and 4 in (select productid from orderline\_t where orderid=o.orderid)));

customerid | customername

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6 | Furniture Gallery

16 | ABC Furniture Co.

(2 rows)

select customerid, customername from customer\_t c natural join order\_t o where 3 in (select productid from orderline\_t where orderid=o.orderid) and 4 in (select productid from orderline\_t where orderid=o.orderid);

customerid | customername

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6 | Furniture Gallery

16 | ABC Furniture Co.

(2 rows)

1. Produce a list of all products (product description) and the number of times each product has been ordered.

select productdescription,productid, (select count(\*) from orderline\_t group by productid having productid=p.productid) from product\_t p;

productdescription | productid | c

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Cherry End Table | 1 | 7

Birch Coffee Tables | 2 | 5

Oak Computer Desk | 3 | 7

Entertainment Center | 4 | 7

Writer's Desk | 5 | 2

8-Drawer Dresser | 6 | 3

48 Bookcase | 7 | 1

48 Bookcase | 8 | 1

96 Bookcase | 9 |

96 Bookcase | 10 | 1

4-Drawer Dresser | 11 |

8-Drawer Dresser | 12 |

Nightstand | 13 | 1

Writer's Desk | 14 | 2

High Back Leather Chair | 17 | 1

6' Grandfather Clock | 18 |

7' Grandfather Clock | 19 |

Amoire | 20 | 1

Pine End Table | 21 |

| 24 |

| 25 |

(21 rows)

1. List the salesperson who has sold the most computer desks.

select salespersonid from salesperson\_t o

where (select sum(orderedquantity) from order\_t natural join orderline\_t where productid=(select productid from product\_t where productdescription like '%Computer Desk%') and

salespersonid=o.salespersonid group by salespersonid) >=all (select sum(orderedquantity) from order\_t natural join orderline\_t where productid=(select productid from product\_t where productdescription like '%Computer Desk%') group by salespersonid);

salespersonid

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3

(1 row)

1. List the product ID and the total amount ordered of that product by the customer who has bought the most of that product.

Select p.productid, o.customerid, sum(orderedquantity) from orderline\_t p natural join order\_t o where o.customerid in (select customerid from customer\_t c where (select sum(orderedquantity) from order\_t natural join orderline\_t where productid= p.productid group by customerid having customerid=c.customerid) >=all (select sum(orderedquantity) from order\_t natural join orderline\_t where productid=p.productid group by customerid)) group by 1,2;

productid | customerid | sum

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1 | 4 | 9

2 | 4 | 26

3 | 3 | 12

4 | 16 | 4

5 | 15 | 10

6 | 4 | 4

7 | 4 | 4

8 | 3 | 2

10 | 4 | 9

13 | 13 | 2

14 | 15 | 10

17 | 1 | 5

20 | 8 | 1

(13 rows)