**Lab 2 (2) – SQL II**

**Join Queries with Solutions**

**Exercises**

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

1. Write an SQL command that will find any customers who have not placed orders.

select c.customerid from customer\_t c left join order\_t o on c.customerid=o.customerid where o.customerid is null;

customerid

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2

5

7

(3 rows)

List of customers who have placed orders:

select distinct customerid from order\_t;

customerid

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1

3

4

6

8

9

12

13

14

15

16

(11 rows)

1. List the names and number of employee supervised (label this value HeadCount) for each supervisor who supervises more than two employees.

select e1.employeename, count(\*) as HeadCount from employee\_t e1 inner join employee\_t e2 on e1.employeeid=e2.employeesupervisor group by 1 having count(\*)>2;

employeename | headcount

--------------+-----------

Robert Lewis | 3

(1 row)

List of supervisors and the number of employee supervised by them

select e1.employeename, count(\*) as HeadCount from employee\_t e1 inner join employee\_t e2 on e1.employeeid=e2.employeesupervisor group by 1;

employeename|headcount

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Phil Morris|1

Robert Lewis|3

Lawrence Haley|1

(3 rows)

1. Write a query to display the salespersons’ name in alphabetic order and the number of their orders.

select s.salespersonname, count(\*) from salesperson\_t s inner join order\_t o on s.salespersonid=o.salespersonid group by 1 order by 1;

salespersonname | count

-----------------+-------

Fred Flinstone | 1

Jacob Winslow | 5

Julie Dawson | 3

Mary James | 2

Pepe Lepue | 7

Robert Lewis | 7

William Strong | 23

(7 rows)

1. Write a query to display each item ordered in order number 1, its standard price, and total price for each item ordered.

select productdescription,productstandardprice,orderedquantity,orderedquantity\*productstandardprice as total\_price from product\_t natural join orderline\_t where orderid=1;

productdescription | productstandardprice | orderedquantity | total\_price

---------------------+----------------------+-----------------+-------------

Birch Coffee Tables | 200.00 | 18 | 3600.00

8-Drawer Dresser | 750.00 | 2 | 1500.00

96 Bookcase | 200.00 | 9 | 1800.00

(3 rows)

1. Write an SQL command to total the cost of order number 1.

select sum (orderedquantity\*productstandardprice) from product\_t natural join orderline\_t where orderid=1;

sum

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6900.00

(1 row)

1. List product descriptions and the number of raw materials used in them.

select productdescription, count(\*) from product\_t natural join uses\_t group by productdescription;

productdescription | count

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Birch Coffee Tables | 9

Entertainment Center | 6

Oak Computer Desk | 7

Cherry End Table | 8

6' Grandfather Clock | 2

8-Drawer Dresser | 3

(6 rows)

1. Calculate the total raw material cost (lable TotCost) for each product compared to its standard product price. Display product description, standard price and the total cost in the result.

select productdescription, productstandardprice, quantityrequired\*materialstandardprice as TotCost from product\_t p inner join uses\_t u on p.productid=u.productid inner join rawmaterial\_t r on u.materialid=r.materialid;

productdescription | productstandardprice | totcost

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Cherry End Table | 175.00 | 15.00

Cherry End Table | 175.00 | 20.00

Cherry End Table | 175.00 | 21.00

Cherry End Table | 175.00 | 0.50

Cherry End Table | 175.00 | 3.20

Cherry End Table | 175.00 | 14.00

Cherry End Table | 175.00 | 24.00

Cherry End Table | 175.00 | 2.00

Birch Coffee Tables | 200.00 | 35.00

Birch Coffee Tables | 200.00 | 14.40

Birch Coffee Tables | 200.00 | 12.00

Birch Coffee Tables | 200.00 | 28.80

Birch Coffee Tables | 200.00 | 1.00

Birch Coffee Tables | 200.00 | 3.20

Birch Coffee Tables | 200.00 | 14.00

Birch Coffee Tables | 200.00 | 24.00

Birch Coffee Tables | 200.00 | 3.00

Oak Computer Desk | 750.00 | 120.00

Oak Computer Desk | 750.00 | 3.00

Oak Computer Desk | 750.00 | 9.60

Oak Computer Desk | 750.00 | 56.00

Oak Computer Desk | 750.00 | 160.00

Oak Computer Desk | 750.00 | 3.00

Oak Computer Desk | 750.00 | 1.60

Entertainment Center | 1650.00 | 600.00

Entertainment Center | 1650.00 | 9.60

Entertainment Center | 1650.00 | 56.00

Entertainment Center | 1650.00 | 256.00

Entertainment Center | 1650.00 | 10.00

Entertainment Center | 1650.00 |

8-Drawer Dresser | 750.00 | 210.00

8-Drawer Dresser | 750.00 | 1.25

8-Drawer Dresser | 750.00 | 20.00

6' Grandfather Clock | 890.00 | 60.00

6' Grandfather Clock | 890.00 | 48.00

(35 rows)

1. For every order that has been received, display the order ID, the total dollar amount owed on that order, and the amount received in payments on that order. List the results in decreasing order of the difference between total due and amount paid.

select t.orderid,sum (orderedquantity\*productstandardprice) as TotalOwed, paymentamount, sum(orderedquantity\*productstandardprice)-paymentamount as Difference from product\_t p,orderline\_t l, order\_t o, payment\_t t where p.productid=l.productid and l.orderid=o.orderid and o.orderid=t.orderid group by t.orderid, paymentamount order by Difference desc;

orderid | totalowed | paymentamount | difference

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1 | 6900.00 | 1000.00 | 5900.00

32 | 6250.00 | 3000.00 | 3250.00

51 | 3150.00 | 150.00 | 3000.00

48 | 1810.00 | 1000.00 | 810.00

26 | 875.00 | 222.00 | 653.00

69 | 600.00 | 200.00 | 400.00

28 | 350.00 | 25.00 | 325.00

39 | 600.00 | 600.00 | 0.00

54 | 2650.00 | 2650.00 | 0.00

24 | 0.00 | 25.00 | -25.00

(10 rows)

1. Display the salesperson name, product finish, and total quantity sold for each finish by each salesperson.

select salespersonname, productfinish, sum(orderedquantity) from salesperson\_t s, order\_t o, orderline\_t l, product\_t p where s.salespersonid=o.salespersonid and o.orderid=l.orderid and l.productid=p.productid group by salespersonname, productfinish;

salespersonname | productfinish | sum

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Jacob Winslow | Birch | 3

Mary James | Oak | 3

Pepe Lepue | Oak | 5

Jacob Winslow | Oak | 5

Robert Lewis | Cherry | 1

Mary James | Birch | 2

Robert Lewis | Leather | 5

William Strong | Cherry | 9

Fred Flinstone | Cherry | 2

William Strong | Birch | 32

Julie Dawson | Oak | 10

Pepe Lepue | Cherry | 0

Robert Lewis | Birch | 2

Jacob Winslow | Cherry | 1

William Strong | Oak | 23

Julie Dawson | Birch | 10

Robert Lewis | Walnut | 4

(17 rows)

1. Write a query to list the number of products produced in each work center. If a work center does not produce and products, display the result with a total of 0.

select k.workcenterid, count(productid) from workcenter\_t k left join producedin\_t p on k.workcenterid=p.workcenterid group by k.workcenterid;

workcenterid | count

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SM1 | 0

Tampa1 | 14

WR1 | 0

(3 rows)

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

select p.productid, productdescription, count(o.productid) from product\_t p left outer join orderline\_t o on p.productid=o.productid group by p.productid, p.productdescription;

productid | productdescription | count

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1 | Cherry End Table | 7

2 | Birch Coffee Tables | 5

3 | Oak Computer Desk | 7

4 | Entertainment Center | 7

5 | Writer's Desk | 2

6 | 8-Drawer Dresser | 3

7 | 48 Bookcase | 1

8 | 48 Bookcase | 1

9 | 96 Bookcase | 0

10 | 96 Bookcase | 1

11 | 4-Drawer Dresser | 0

12 | 8-Drawer Dresser | 0

13 | Nightstand | 1

14 | Writer's Desk | 2

17 | High Back Leather Chair | 1

18 | 6' Grandfather Clock | 0

19 | 7' Grandfather Clock | 0

20 | Amoire | 1

21 | Pine End Table | 0

24 | | 0

25 | | 0

(21 rows)