

# CSCI 3901 ASSIGNMENT 5 -1 – EXTERNAL DOCUMENTATION

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## Problem 1:

- a) `SELECT c.customerName FROM customers c  
INNER JOIN employees e ON c.salesRepEmployeeNumber = e.employeeNumber  
INNER JOIN offices o ON o.officeCode = e.officeCode AND c.city!=o.city;`
- b) `SELECT od.orderNumber FROM orderdetails od INNER JOIN products p ON  
p.productCode=od.productCode AND od.priceEach<p.MSRP GROUP BY  
od.orderNumber;`
- c) `SELECT p.productLine FROM products p  
INNER JOIN (SELECT od.productCode, sum(od.priceEach*od.quantityOrdered) saleValue,  
sum(od.quantityOrdered) totalValue FROM orderdetails od  
INNER JOIN orders o ON o.orderNumber = od.orderNumber WHERE o.orderDate  
BETWEEN '2003-01-01' AND '2003-12-31' GROUP BY od.productCode) t  
on p.productCode = t.productCode ORDER BY (saleValue-  
(t.totalValue*p.buyPrice))/(t.totalValue*p.buyPrice) DESC LIMIT 1;`
- d) `SELECT e.employeeNumber, e.firstName, e.lastName FROM customers c  
INNER JOIN employees e ON c.salesRepEmployeeNumber = e.employeeNumber  
INNER JOIN orders o ON o.customerNumber = c.customerNumber  
INNER JOIN orderdetails od ON o.orderNumber = od.orderNumber AND  
YEAR(o.orderDate) = '2004'  
GROUP BY employeeNumber  
ORDER BY sum(od.quantityOrdered*od.priceEach) DESC LIMIT 5;`
- e) `SELECT e.employeeNumber, e.firstName, e.lastName FROM employees e  
INNER JOIN (SELECT c.salesRepEmployeeNumber salesRep,  
sum(od.quantityOrdered*od.priceEach) sales2003 from customers c  
INNER JOIN orders o ON c.customerNumber=o.customerNumber  
INNER JOIN orderdetails od ON o.orderNumber=od.orderNumber  
AND YEAR(o.orderDate) = '2003' GROUP BY c.salesRepEmployeeNumber) s1 ON  
s1.salesRep = e.employeeNumber  
INNER JOIN (SELECT c.salesRepEmployeeNumber salesRep,  
SUM(od.quantityOrdered*od.priceEach) sales2004 FROM customers c  
INNER JOIN orders o ON c.customerNumber=o.customerNumber  
INNER JOIN orderdetails od ON o.orderNumber=od.orderNumber`

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AND YEAR(o.orderDate) = '2004' GROUP BY c.salesRepEmployeeNumber) s2 ON  
s1.salesRep = s2.salesRep  
AND s1.sales2003 < s2.sales2004;
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