**CMSC/CIS 255 Fall 2016**

**Subqueries Exercise**

Use TSQL2012.

1. Find all countries where there are customers but not employees.

SELECT HR.country

FROM HR.Employees AS HR;

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V

SELECT DISTINCT country

FROM Sales.Customers

WHERE country NOT IN

(SELECT HR.country

FROM HR.Employees AS HR);

1. Find all orders placed by the customer(s) who placed the most orders.

SELECT TOP 1 WITH TIES custid

FROM Sales.Orders

GROUP BY custid

ORDER BY COUNT(custid) DESC;

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SELECT orderid

FROM Sales.Orders

WHERE custid IN (SELECT TOP 1 WITH TIES custid

FROM Sales.Orders

GROUP BY custid

ORDER BY COUNT(custid) DESC);

1. Show the customerID and company name of all customers who ordered product 12.

SELECT orderid

FROM Sales.OrderDetails

WHERE productid = 12;

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SELECT O.custid, C.companyname

FROM Sales.Orders AS O

INNER JOIN Sales.Customers AS C

ON O.custid = C.custid

WHERE O.orderid IN (SELECT OD.orderid

FROM Sales.OrderDetails AS OD

WHERE OD.productid = 12);

1. Find all integers between the minimum and maximum quantities ordered that do not occur as quantities ordered in any order.

SELECT qty

FROM Sales.OrderDetails;

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SELECT n

FROM dbo.Nums

WHERE n NOT IN (SELECT O.qty

FROM Sales.OrderDetails AS O) AND n BETWEEN

(SELECT MIN(OD.qty)

FROM Sales.OrderDetails AS OD)

AND

(SELECT MAX(OD.qty)

FROM Sales.OrderDetails AS OD);

1. Find all orders placed by each customer on their last day of activity in the Sales.Orders table.

SELECT O1.orderid, O1.custid, O1.orderdate

FROM Sales.Orders AS O1

WHERE orderdate = (SELECT MAX(orderdate)

FROM Sales.Orders AS O2

WHERE O1.custid = O2.custid);

1. For each order, show the customer-id together with the previous and next customer-id who ordered from the same employee.

SELECT DISTINCT (SELECT MAX(O2.custid)

FROM Sales.Orders AS O2

WHERE O2.custid < O.custid AND O2.empid = O.empid) AS PreviousOrder,

O.custid, O.empid,

(SELECT MIN(O1.custid)

FROM Sales.Orders AS O1

WHERE O1.custid > O.custid AND O1.empid = O.empid) AS NextOrder

FROM Sales.Orders AS O

ORDER BY O.empid, O.custid;