Subquery Examples 1 – Non-Correlated Subqueries

List all those restaurants whose sales > the avg sales, and list the AVG also

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| Natural thinking: | Solution: Use Subq |
| SELECT RestaurantID, Annualsales, AVG(Annualsales) – can’t mix row & set values  FROM Restaurants  WHERE Annualsales > AVG(Annualsales) – can’t use aggregate func in WHERE | SELECT RestaurantID, Annualsales,  (SELECT AVG(Annualsales) FROM Restaurants) AS AVG\_Sales  FROM Restaurants  WHERE Annualsales >  (SELECT AVG(Annualsales) FROM Restaurants) |

Notes:

1. The above example shows subq in SELECT and in WHERE
2. Shows the effects of the placement of column alias w/in or outside the subquery

Example 2:

List the restaurant (ID, Sales) who has the max sales,

AMONG the restaurants

whose franchisees have credit ratings of “A” or “AA”.

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| Natural thinking: | Solution: Use Subq |
| SELECT RestaurantID, Annualsales  FROM Restaurants  WHERE Annualsales =  MAX(AnnualSales)    “among” restaurants  “whose” Franchisee CreditRating is  “among” A or AA | SELECT RestaurantID, Annualsales  FROM Restaurants  WHERE Annualsales =  (SELECT MAX(AnnualSales) FROM Restaurants  WHERE RestaurantID  IN (SELECT RestaurantID FROM  Restaurants, Franchisees  WHERE Restaurants.franchiseeid=Franchisees.franchiseeID  AND CreditRating IN (“A”, “AA”)  )  ) |

SELECT RestaurantID, AnnualSales, City,

(SELECT AVG(AnnualSales) FROM Restaurants

GROUP BY City HAVING City=O.City) AS CityAVG

Not any city, but the city in processing

in the outer query

FROM Restaurants O

“My city”

WHERE AnnualSales >

(SELECT AVG(AnnualSales) FROM Restaurants

GROUP BY City HAVING City=O.City)

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List SqFt of restaurants whose SqFt is GREATER than the AVG SqFt of its ownTypeOfService.

SELECT RestaurantID, Squarefootage, TypeOfService,

(SELECT AVG(Squarefootage) FROM Restaurants

WHERE TypeOfService=S.TypeOfService

GROUP BY TypeOfService) AS TypeAVG

FROM Restaurants AS S

WHERE Squarefootage >

(SELECT AVG(Squarefootage) FROM Restaurants

WHERE TypeOfService=S.TypeOfService

GROUP BY TypeOfService)