



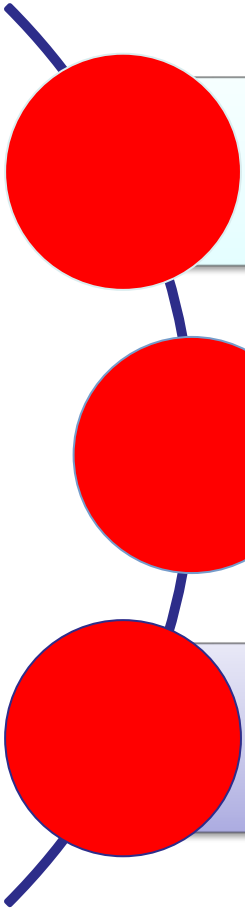
Module 12

Advanced Query Formulation with SQL

Lesson 4 (Part 1): Relational Division Operator



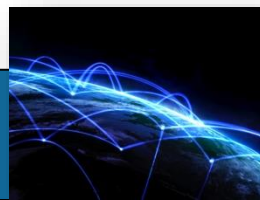
Lesson Objectives



Explain subset matching using the relational division operator

Demonstrate a simple division operation using small sample tables

Explain lack of commutativity for the relational division operator



Relational Division Overview

Specialized but important operator

Match on a subset of values such as faculty teaching a subset of courses

Somewhat analogous to numerical division

Typically applied to a parent table and a child table representing a M-N relationship

Not commutative



Relational Division Demonstration I

SuppPart

SuppNo	PartNo
S2	P3
S3	P1
S1	P1
S2	P1
S1	P3
S2	P2

Part

PartNo
P1
P2
P3



Relational Division Demonstration II

SuppPart		Part	
SuppNo	PartNo	PartNo	
S1	P1	P1	
S1	P3	P2	
S2	P1	P3	
S2	P2		
S2	P3		
S3	P1		

Sort SuppPart by SuppNo, PartNo



Relational Division Demonstration III

{	SuppPart	
	SuppNo	PartNo
	S1	P1
	S1	P3
	S2	P1
	S2	P2
	S2	P3
	S3	P1

Part	
PartNo	
P1	
P2	
P3	

SuppPart DIVIDE BY Part

SuppNo

S1 {P1, P3} does not contain {P1, P2, P3}.



Relational Division Demonstration IV

{	SuppPart		Part	
	SuppNo	PartNo	PartNo	
	S1	P1	P1	
	S1	P3	P2	
	S2	P1	P3	
	S2	P2	SuppPart DIVIDE BY Part	
	S2	P3		
	S3	P1		
			SuppNo	
			S2	

S2 {P1, P2, P3} contains {P1, P2, P3}.



Relational Division Demonstration V

SuppPart		Part	
SuppNo	PartNo	PartNo	
S1	P1	P1	
S1	P3	P2	
S2	P1	P3	
S2	P2		
S2	P3		
{ S3	P1		

SuppPart DIVIDE BY Part

SuppNo
S2

S3 {P1} does not contain {P1, P2, P3}.



Summary

Subset matching using the relational division operator

Specialized operator important when needed

Small sample tables to trace results

Part 2 of lesson 4 with SELECT statement practice

