

CMSC 508 Homework 3

Due: February 23

Consider the Supplier-Parts database (a classic example from Date's book):

S

S#	SNAME	STATUS	CITY
S1	Smith	20	London
S2	Jones	10	Paris
S3	Blake	30	Paris
S4	Clark	20	London
S5	Adams	30	Athens

P

P#	PNAME	COLOR	WEIGHT	CITY
P1	Nut	Red	12.0	London
P2	Bolt	Green	17.0	Paris
P3	Screw	Blue	17.0	Oslo
P4	Screw	Red	14.0	London
P5	Cam	Blue	12.0	Paris
P6	Cog	Red	19.0	London

SP

S#	P#	QTY
S1	P1	300
S1	P2	200
S1	P3	400
S1	P4	200
S1	P5	100
S1	P6	100
S2	P1	300
S2	P2	400
S3	P2	200
S4	P2	200
S4	P4	300
S4	P5	400

1. What is the cardinality of SP?
2. What is the degree of P?
3. What is the active domain of PNAME?
4. How many tuples would be in the active complement of P? (Do not give me the active complement – just tell me how many tuples it would contain)
5. What is the difference between these terms: table, relvar, relation?
6. If S represents the entity set Suppliers, and P represents the entity set Parts, what does SP represent?
7. Draw an E/R diagram that corresponds to these tables.