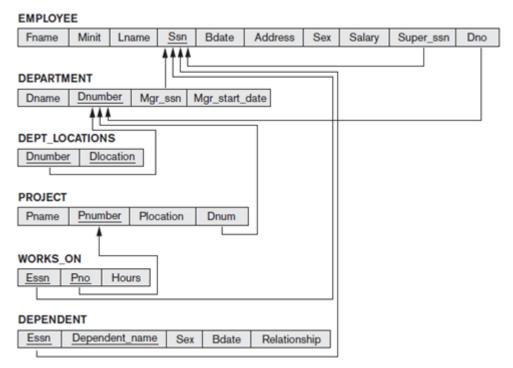
CS3402 Tutorial 5:

1. Consider the two tables T1 and T2 shown below; show the results of the following operations.

T1				
P	Q	R		
10	a	5		
15	b	8		
25	a	6		

T2				
	A	В	R	
	10	b	6	
	25	c	3	
	10	b	5	

- (a) $T1 \times T2$
- (b) T1 $\bowtie_{T1.P=T2.A}$ T2
- (c) T1 $\bowtie_{T1.0=T2.B}$ T2
- (d) T1 $\bowtie_{T1.R > T2.R}$ T2
- (e) T1 * T2
- 2. Consider the COMPANY relational schema shown below; specify the following queries in relational algebra.



- (a) Find the SSn (social security number) of all employees who are not supervisors
- (b) Find the SSn of all employees who either work in department 5 or directly supervise an employee who works in department 5
- (c) List the names and numbers of all departments locating in 'Houston'
- (d) List the first names of all employees who have a dependent with the same first name as themselves
- (e) Retrieve the salary of all employees in department 5 who work more than 10 hours on the project named 'ProjectX'