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CSC 84

1. Given F = {a→b, b→c c→ {de}. What is the closure of b

a → b
b → c
c → d
c → e

B+
B, C, D, E

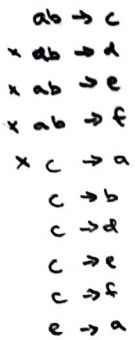
2. Given R(a,b,c,d,e,f). Given the following functional dependency:
F = { ab→ cdef, c → abdef}.
Identify the L M R, candidate keys, prime/non prime and normal form using the table below

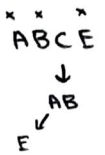
ab → c
× ab → d
× db → e
× ab → f
c → a
c → b
c → d
c → e
c → f

L	M	R		Candidate Keys		prime	Non prime		Normal Form
	C	D		C		C	D		BCNF
	A	E		AB		A	E		
	B	F				B	F		

× ×
A B C
↓
AB

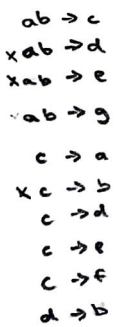
3. Given R(a,b,c,d,e,f). Given the following functional dependency:
F = { ab→cdef c →abdef e→ a}.
Identify the L M R, candidate keys, prime/non prime and normal form using the table below

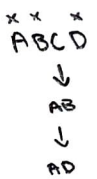




L	M	R	Candidate Keys	prime	Non prime	Normal Form
	A	D	C	A	D	3rd
	B	F	AB	B	F	
	C		EB	C		
	E			E		

4. Given R(a,b,c,d,e,f,g). Given the following functional dependency:
F = { ab → {cdeg, c → abdef, d→ b}
Identify the L M R, candidate keys, prime/non prime and normal form using the table below





L	M	R	Candidate Keys	prime	Non prime	Normal Form
	A	E	C	A	E	3rd
	B	F	AB	B	F	
	C	G	AD	C	G	
	D			D		