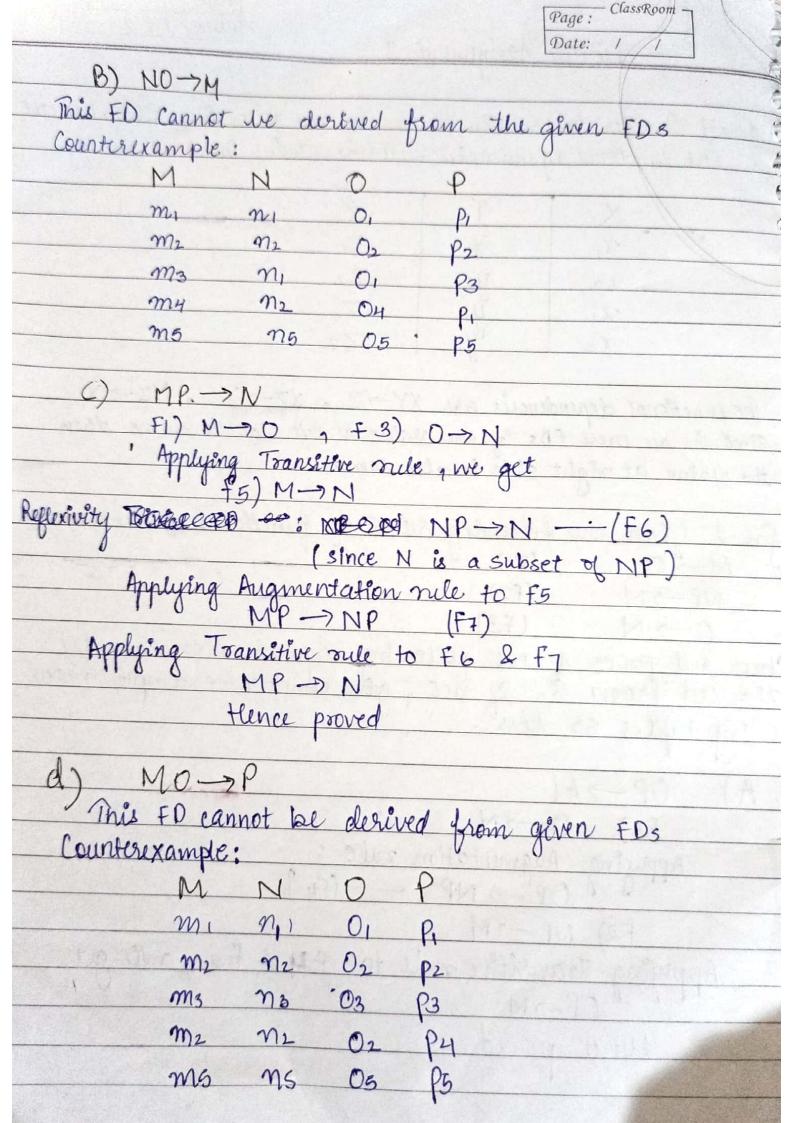
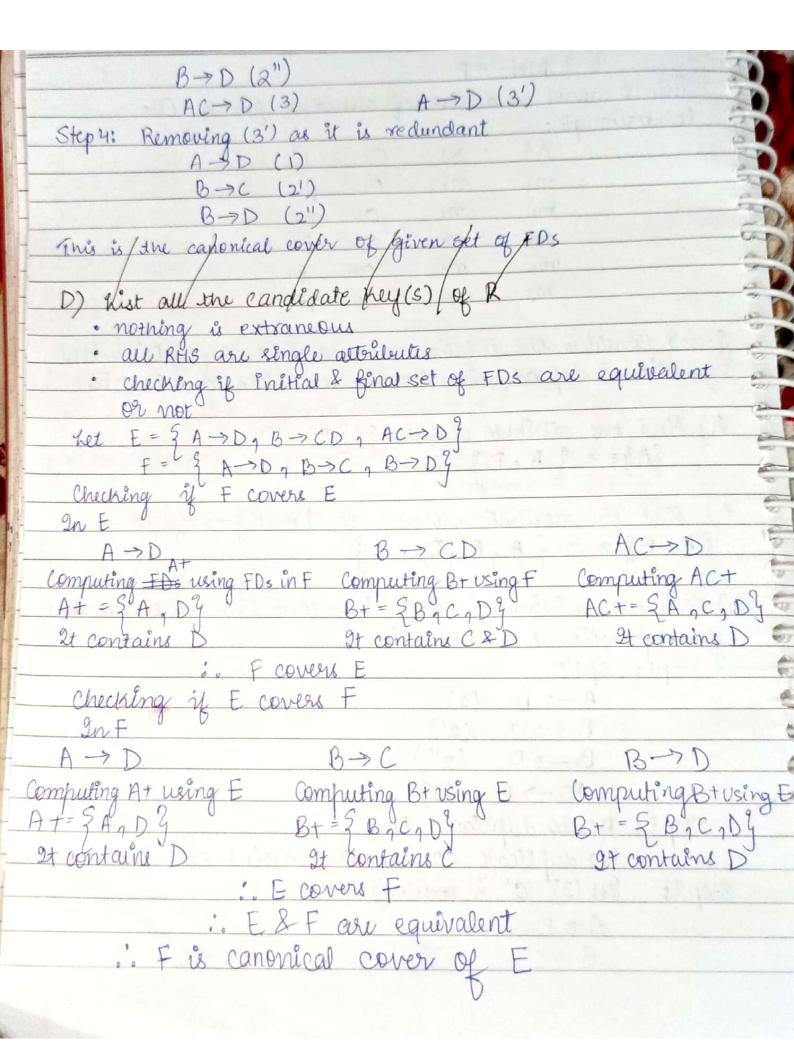
DBMS Assignment - 2

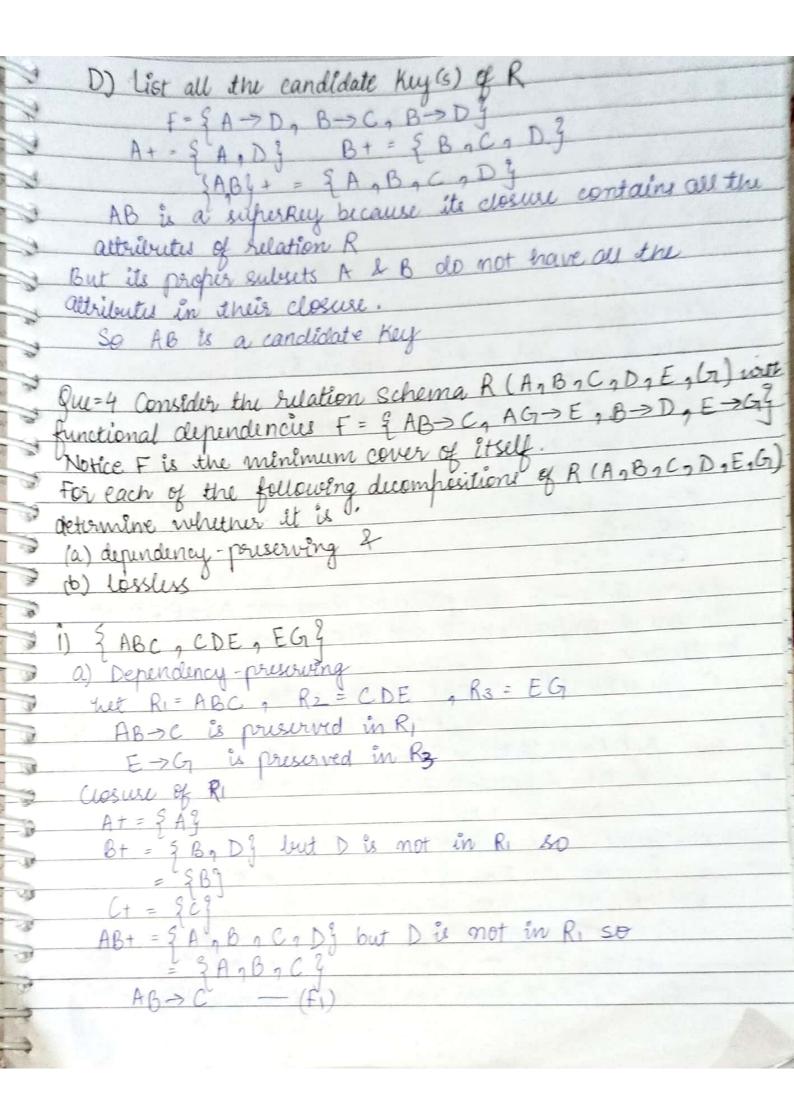
	U	
Snel Consider the s	ulation shu endenciu	ouon in the following table. List all that this relation instances satisfy.
X	Y	Z
χ_{i}	yı	7
22	41	7,
21	42	Z_2
×2	ye yı	· Z2
The functional dependence street in all these FD the value at right	ncies are s "y the r side is al	XY-72, XZ-7Y, YZ-7X Value at lift side & same dhen so same.
gre-2 given the f	ollowing s	set S of functional dependencies:
Check and prove of deduced from S. 5 top types or	the foll	owing dependencies can be give counter-example with
A) OP->M		
(F3) 0	→ N	NUMBER OF THE PROPERTY OF THE
		n rule: — (fy)
., 0 0 0	P-> NP	— (fy)
F2) N	PM	
Applying Toa	nsittre nu om	le to fy & fe, we get.
Huna	proved	



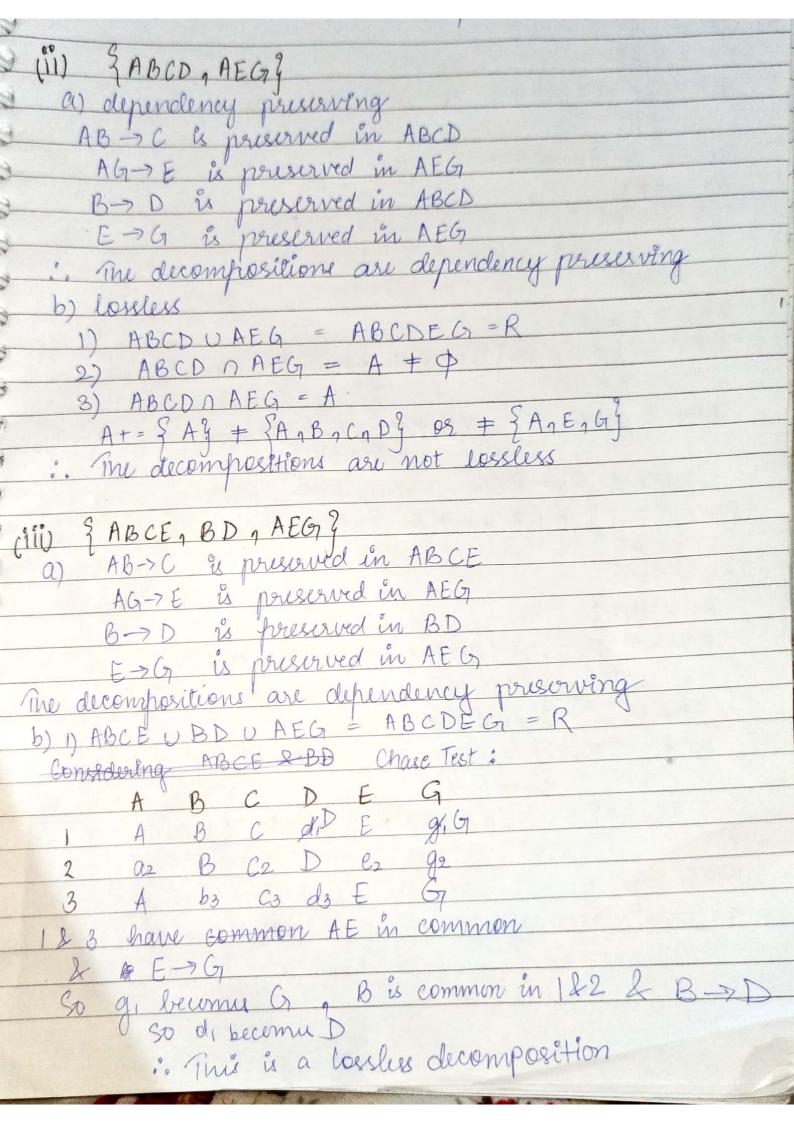
9	E) MN.	→P						
This FD co	annot du	derêveo	1 knom	the	give	n fo	le	
Counterexa	mple:		U		0			
3	M	N	0	P				
3	mı	ni	01	PI				
3	mı	nz	02	P2				E A
3	ms	773	03	PI				
3	mr	M2	02	P4			To the lot	
*	M5	<i>M</i> 5	05	P5				
7 0 0 1		1 1 10	2 1-2112	2 R()	4 8	CD) with	
gne 3 Consid	ler the	relation	->D. B	->(1) 100	1 AC	→D	
Jue 3 Consid	ayunden	cell A	1010) _,	2000	Allen	676	
						A H	1 144	-
A) find the	S A o I	3	lJ	4 47	LA.			-
)''J'	l '	J					ALTERNATION OF THE PARTY OF THE	
B) find the	attribut	e closu	re	SAN	34+		The All	_
¿A, Bg+	= 5 A	BD	, e 9°		0			
				40.3	Camic.		+ 1	-
C) Find the	minimur	n cove	r (i.e.	canon	ical c	over) of the	
given funct	ional dej	rendenc	ies			Januari d		_
given funct Step1: St	ilit			Burah r				
f	1->0	(1)		187,134			ALCO DE LA COLOR D	-
	$3 \rightarrow c$							
	3->D							
	AC -> D	/						
Step 2: De	lete dup	icate F	D5					
No	duplicat	e FDs	n set	semai	ns e	ame		-
Step3: 2n (3) C' is meditindani extraneous								
	>D	(1)						
(3 → C	(2)						bre.

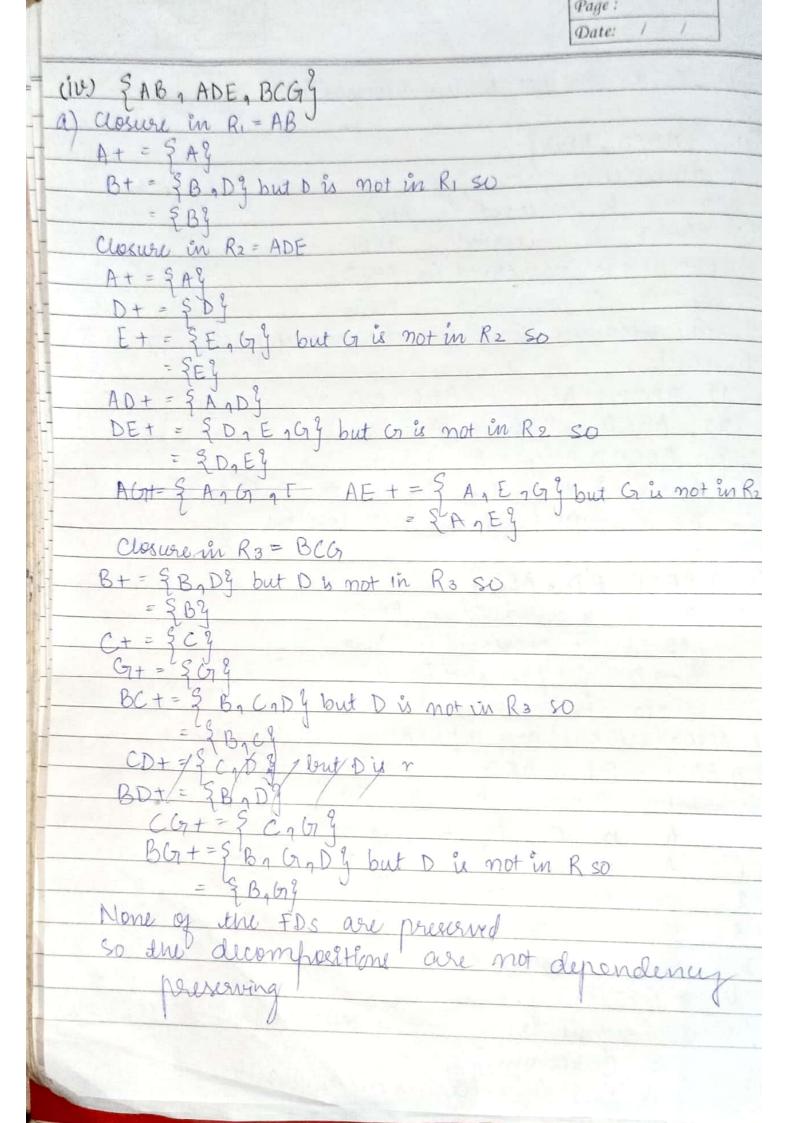
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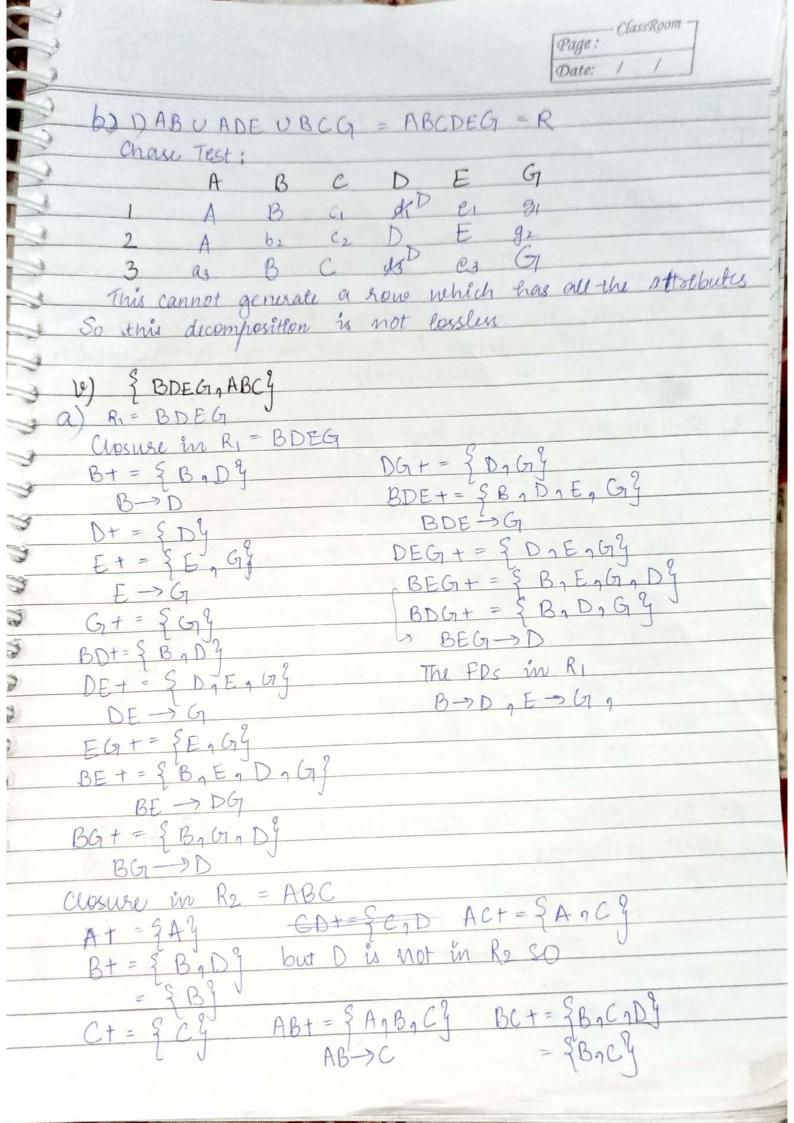


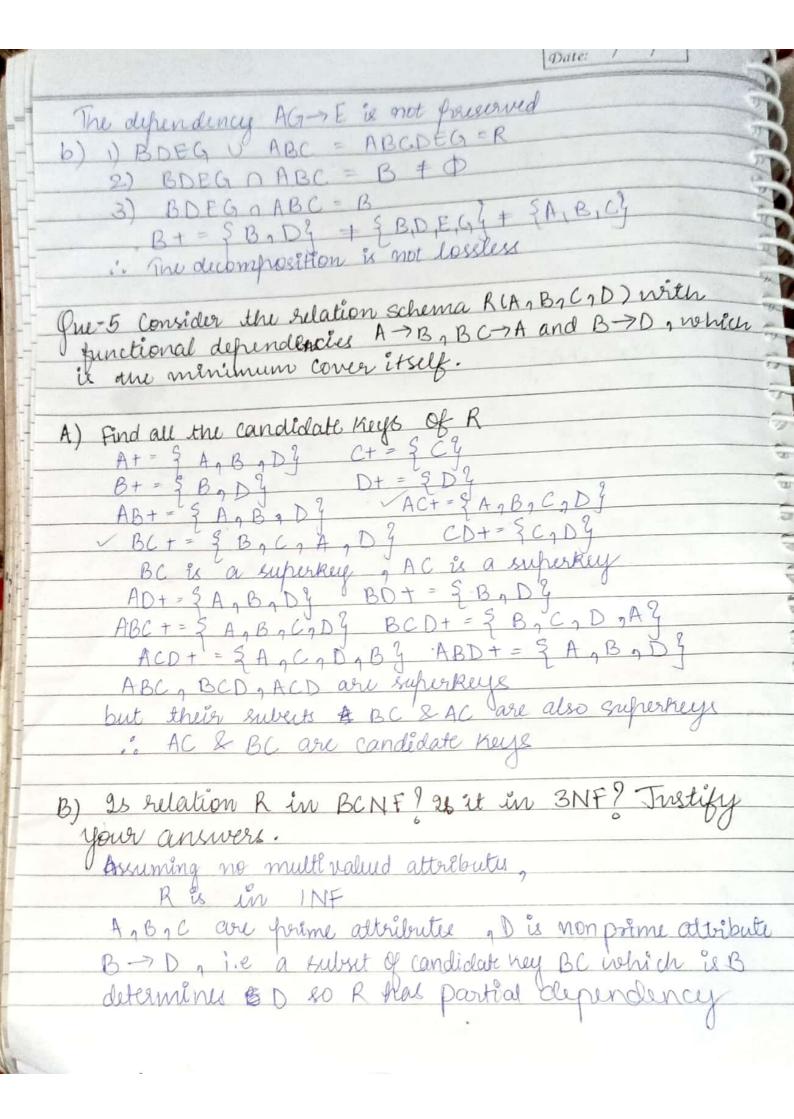


ACT = 3 A 1 C x 9 -= { B, C, D, g but D is not in R, so - 3 B , C g Closure in R2 Et = & E & Cog but G & not in R2 so CrEncry Sout G is not in R2 SD DE+ = {D, E, G, y but G, is not in Re so = {D, E, G, y} but G, is not in Re so Closure in R3 AB -> C & E -> Gr are preserved but not AG -> E, B->D So the dicomposition is not dependency preserving b) lossless









	Page: ClassRoom -			
	Date: / /			
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
13	Consequently R is not in 3NF OR BCNF			
3	consequently k is not an SNI SO DET			
7	Decomposition RIABBOCAN into a collection of BCNF			
3	Selatione, so that the decomposition is lossless. Is the			
3	decomposition debandences breezewing?			
3	decomposition dependency priserving?			
73	ACT BC, ABC, BCD, ALD are superkeys in R			
3	for A-B A is not a superkey but A-B & a FABR .			
7	R and in BCM			
7	Acc. to Algorithm :			
3	S= S R4			
7	Pidring A > B			
3	=) S= {AB ACD }			
3				
3 1	The decomposition is SAB, ACD9			
7	1) ABUACD = ABCD=R			
2	2) AB nACD = A + 0			
3	3) ARACO - A AO->:			
7	At = SA g Bg (and D which is not in AB)			
3	i A -> AB			
	SAB, ACDY is bulles decomposition			
	BC>A is not preserved in this decomposition			
	So it is not dependency preserving			
de	D) Decompose the relation R(A,B,C,B) into a collection of			
3NF relations so that the decomposition is both lossless				
and dependency preserving				
Let us consider the decomposition 3 ABC BED9				
Fit is consider the decomposition of ABC BEDI It privares all the dependencies so it is dependency				
pricering				
- 1				

	Page: ClassRoom -
	Date: / /
1) ABC UBED = ABED = R	
2) ABC NBED = BE + 0	
3) ABCOBED = BENRY OF RO.	B-> R2 (BD)
BCT = SABOCOD	LE GAY DOMESTING
- The decomposition is locales	C on Hann
1) Both decomposed relations are in IN	f as there are no
2) There is no fastial dependency so	linergare in 32 NF
2) There is no fartial dependency so = 3) There is no transitive dependency 3NF	so they are in
3N+ 0	0