			Lecture No.
	Topic :		Lecture No.
	Re	lational Alge	bra
->	It is developed by	Dr. E.F. Code	(Father of DBMS)
-7			guage means what to
->			Query longuage.
-	AU SOL Command	based on	Relational Algebra.
	operation 8		The same of the sa
	- yellollip		
1	The second second		> 101
	Basic operation		eaired operation
	A C L prigu		
	projection (TT)		L. Join (M)
	- selection (0)	annit()	Intersect (n)
	- cross product (x)		> Division (/-)
	mim (v)	I - I The Const	
	Rename (f)		
	- Set Difference (-)	- Land	

Name of Lecturer :

TT (projection operation):

columns (attributes) that we wish to appear in the result.

Rest of the attributes Colymns) gre eliminated from the table

It is denoted by TT.

This operation arways display distinct result/output. Example:

Student

1000	Rall_NO	Name	Address	Age	
	101	A	Jaipyr	2.3	
	102	B	Jaip48 Jaip48	3]	
1	103	С	Tonk	26	
	104	P	kota	30	

TT Address (Student) TT ROY-NO, Name (Student)

Address	ROY-NO	Name	
Jaipyr	101	A	
Tonk	102	В	
Kota	103	c	
	104	D	

Syntax:

TT column 1, column 2, ... (table name)



			Le			
o - (select	in opera	tim):				
TH is	denoted	by o	(sigma).			
The sel	satisfy	operation a giv	select ion cond	records	stuples dicate).	(Joons
Syr	+4×.	o Condi	tim (table	name)		
	7	W. 1971				
Example:	sty	dent	11 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Rall	NO N	19me	Address	Age		
16)		A	Taipur	23		
102		B	Kota	3 \		
10 3	Male 1/4.4	c	Tonk	26		
104		D	Jaipyr	30		
			deprivation of			
Retaine -		cody of	Student	table	whose	Addres
is kot	a,					

ROY-NO	Name	Address	Age
102	В	kota	31

2) Retrive the record of student table whose Address = Jaipyr.

or Address = Jaipyor (Student)

Ray-No	Name	Address	Me
101	A A	Jaipyr	23
104	D	Jaipyr	30

Note - After selection, projection operation com be performed but selection operation Comit be performed after projection

TT Name (or Age > 23 (Student))

Name B C D

ARYA COLLEGE OF ENGINEERING & RESEARCH CENTRE, KUKAS, Jaipur Lecture Notes Subject: Topic: Cross product unit 2 Lecture No
Cross product(X):
The cross product is used to combine each row in other table.
The is also known as captesian product. It is denoted by X.
Syntax: RIX R2
where RI is first rolation. R2 is Second rolation.

A	RYA COLLEGE OF			RE, KUKAS, Jaipur
		Sem. :		st:
	(Rename):-		Lecture No	
7	Rename oper	coupur)	nges the :	name of colymn
	Rename oper	ration nev-	es remmes	the columns
			No. Dispus Barby Till	n names are
	The Column Changed			
•	In sol, I by 4sing	he name of the As	f the colyn	m is changed
Ev	ample:	Shident	information	
	HIVATE	A ALL	A Series	
	Rall-No	Ngme	Address	Age
	101	Α	Jaipyr Kota	23
	102	B	Kpt9	3 [

103

109

c

Þ

26

30

PEnsoll-No, Full-Name, city, Age (Student)

display lought table

En	rell_NO	Full-Name	city	Age
	101	A	Jaipys	23
	102	B	Kota	31
	103	С	Tonk	2-6
	104	7	Jaipys	30

In SQL:

> select Ray-No As Envey-No,
Name As Full-Name,
Address As City,
Age As Age from Stydent-information

ARYA COLLEGE OF ENGINEERING & RESEARCH CENTRE, KUKAS, Jaipur Lecture Notes
Branch :Subject : Topic :UnitLecture No
Set Difference (-):
R S S-P
(2, 5, 2) (2, a, b) (1)
R-S S-R ab
S-R+R-S
The set difference operation takes two tuples and returns the value there as in first table but not in the second table.
The set difference operation is not commutative, that means.
R-S # S-P

Name of Lecturer :

-	1.	1		
1	tu	d	on	t

Employee

ROU_NO	Name
101	Α
102	B
103	c
104	D

Name
A
F

Student - Employee

ROU-NO	Name
102	B
103	c
104	7
108	F

A STATE OF THE STA	ARYA	COLLEGE OF ENGINEER	ING & RESEARCH	CENTRE, KUKAS	, Jaipur
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		el Lin		dan.	Tyn	Carrie de la carri
		X	<u> </u>	Y		and the state of t
	- /		<u> </u>	/		XUY
		06, 9, 2		(2,0,	b)	
						(2, 2, 3, 9, 6)
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-14		X		Y	12.10	
-	R	1	R	t		it , helf l
+	3	2	A	5		
	U	3	B	9	100	
		71		1 -		
		V V	UY			What What is
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		5	2		8	
		T	3			
		U	4		.8	Lasten de la companya
		4	5		<u> </u>	
		B	9			
		T	7		- N	

By Union operation, we display the records of two tables in a single table and display the columnan record in both tables at a single time.

in union operation, only the column name of first table are displayed in the display table.

In mion operation, field value must be same in both tables.

Example: Student

Ray_NO	Name	Address	Age	
101	A	Jaipyr	23	
102	B	Jaipur Taipur Tonk	31	
103	C	Tonk	26	
104	Z	kota	30	

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	101	A	Tajour	23
	102	B	Jaipyr Taipyr	31
	103	C	Tonk	26
1	104	7	kita	30

Employee

	E-id	Name	city	Ago.	
	104	D	kota	30	
	101	F	Jaipyo	31	
	103	C	Jaip40 Tonk	26	
	110	K	Tonk	23	V
El land					-

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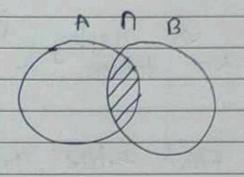
Lecture Notes

Topic: ______ Sem _____ Lecture No.

Student U Employee

		Contract Con		The second secon	
1	Ray-No	Name	Address	Age	
	[0]	A	Jajour	23	
	102	В	Jaipur Jaipur	3)	
	103	C	Tonk	2.6	1
	104	D	Kota	30	1
	101	F	Jaipyr	31	1
	110	K	Jaipur Tonk	23	1
40					

Intersection operation (n):



	R	3	
A		A	1
B	2	B	8
C	3	C	5
D	4	4	10

RAS

I A

0.7	udent		Employ	yee
Lall	Name		C-NO	Name
101	A	MA	101	A
102	B		105	4
103	C		109	8
	Rall	Name		
	101	A		MARTINE
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J A	10346710	10 perconn	top III	to bland in the
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