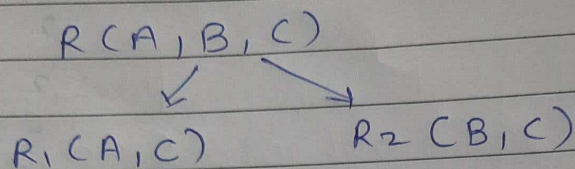


② lossless / lossy decomposition.

Ex. Consider the relation $R(A, B, C)$.

⇒ Consider this relation is decomposed into sub relations as $R_1(A, C)$ and $R_2(B, C)$



A	B	C
1	2	1
2	3	3
3	3	3

$R(A, B, C)$

A	B
1	2
2	3
3	3

R_1

B	C
2	1
3	3
3	3

R_2

If we perform the (A) natural join of the sub relations R_1 and R_2 we get -

A	B	B	C	
1	2	2	1	✓
1	2	3	3	
1	2	3	3	
2	3	2	1	
2	3	3	3	✓
2	3	3	3	✓
3	3	2	1	
3	3	3	3	✓
3	3	3	3	✓

check for common attributes
consider row where ~~same~~
value of common attributes
are same

⇓

A	B	B	C
1	2	2	1
2	3	3	3
2	3	3	3
3	3	3	3
3	3	3	3

original Relation R is

↓

A	B	C
1	2	1
2	3	3
3	3	3

Relation after join R1R2

↓

A	B	C
1	2	1
2	3	3
2	3	3
3	3	3
3	3	3

Both relations are not equal.

Hence, the given relation is lossy relation.