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Ex1)

Boyce–Codd normal form it is required to do a decomposition. Decomposition is splitting a table into parts. A requirement for this normal form: Key attributes of a composite key must not depend on non-key attributes. Thus, some dependencies are not preserved during decompositions.

ex)2

StudentID	Date	UnitID	Grade
St1	23.02.03	U1	4.7
St1	18.11.02	U2	5.1
St4	23.02.03	U1	4.3
St2	05.05.03	U5	4.9
St2	04.07.03	U4	5.0

UnitID	Topic	Book	Tutor ID	Room
U1	GMT	Deumlich	Tut1	629
U2	Gln	Zehnder	Tut3	631
U1	GMT	Deumlich	Tut1	629
U5	PhF	Dummlers	Tut3	632
U4	AVQ	SwissTopo	Tut5	621

Tutor ID	TutEmail
Tut1	Tut1@fhbb.ch
Tut3	Tut3@fhbb.ch
Tut1	Tut1@fhbb.ch
Tut3	Tut3@fhbb.ch
Tut5	Tut5@fhbb.ch

Ex3)

ProjectID	ProjectName	Budget
1	Project1	1 kk $
2	Project2	1.5 kk $

ManagerID	ManagerName	TeamSize
1	Manager1	15
2	Manager2	12

ProjectID	ManagerID
1	1
2	2

Ex)4

Curator_ID	CuratorName	Department
1	E1	D1
2	E2	D2

ProjectID	TeamSize	ProjectGroupsNumber	Curator_ID
P1	100	5	1
P2	120	6	2

Ex5)

Curator_ID	CuratorName	Department
1	E1	D1
2	E2	D2

ProjectID	TeamSize	ProjectGroupsNumber	Curator_ID
P1	100	5	1
P2	120	6	2

Ex6)

The main goal of designing a database is to reduce the redundancy of stored data, therefore, to save used memory, reduce the cost of multiple operations of redundant copies and eliminate the possibility of inconsistencies due to storing information about the same object in different places.