

Database lab5

1. In BCNF, every non prime attribute should be functionally dependent on any of super key in schema.

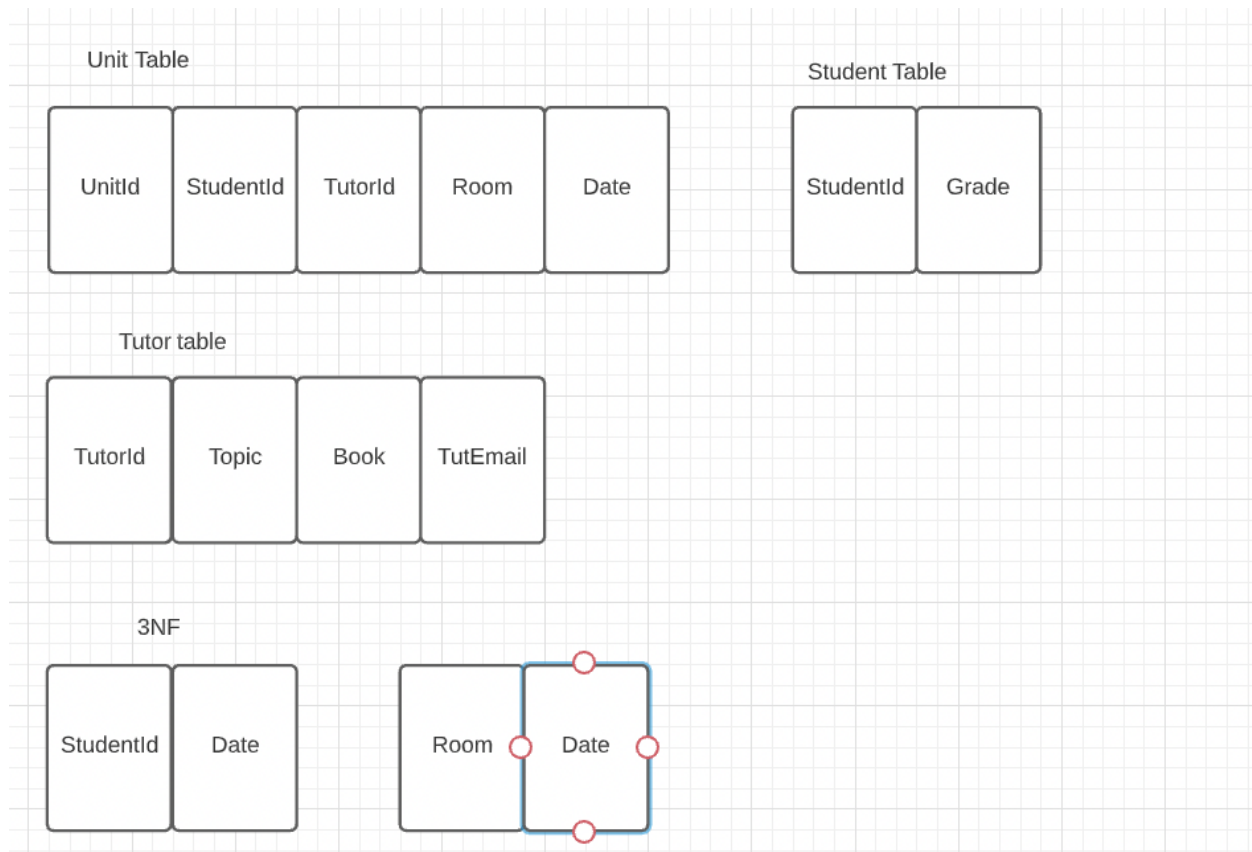
If there exists any FD, which don't follow this, then for that case we have to separate it into new relation. Now if any of other FD uses previous FD, Then this creates non preservation of FD in BCNF.



BCNF and Dependency Preservation

- It is not always possible to achieve both BCNF and dependency preservation
- Consider a schema:
 $dept_advisor(s_ID, i_ID, department_name)$
- With function dependencies:
 $i_ID \rightarrow dept_name$
 $s_ID, dept_name \rightarrow i_ID$
- $dept_advisor$ is not in BCNF
 - i_ID is not a superkey.
- Any decomposition of $dept_advisor$ will not include all the attributes in
 $s_ID, dept_name \rightarrow i_ID$
- Thus, the composition is NOT be dependency preserving

2.



3.

Project Name	Budget	Team Size
Project 1	1 kk	15
Project 2	1.5 kk	12

Project Manajer	Position
Manager 1	CTO1
Manager 2	CTO2

Project Name	Project Manager
Project 1	Manager 1
Project 2	Manager 2

4.

Group	Faculty
g1	f1
g2	f2

3rd Normal Form

Speciality	Faculty
s1	f1
s2	f2

5.

ProjectId	Curator	TeamId
p1	e1	t1
p2	e2	t2

TeamId	TeamSize	ProjectGroupsNumber
g1	f1	5
g2	f2	6

CuratorId	Department
e1	d1
e2	d2