**Task 1.**

It is not possible to achieve both BCNF and dependency preservation.

Consider a schema:

dept\_advisor(student\_id, advisor\_ID, dept\_name)

With function dependencies:

advisor\_ID—>t\_name

student\_ID, dept\_name —> advisor\_ID

dept\_advisor is not in BCNF

advisor\_ID is not a superkey.

Any decomposition of dept\_advisor will not include all the attributes in

student\_ID, dept\_name—>advisor\_ID

Thus, the composition is NOT be dependency preserving

**Task 2.**



Partial dependency:

TutorID —> TutEmail;

Topic —> Room;

Topic —> Book;

Topic —> Grade;

Topic ­­—> Date;



**Task 3.**



ProjectName —> Position;

ProjectName —> Budget;



**Task 4.**



**Task 5.** 

ProjectID -> Curator;

Department -> Curator;

ProjectID -> TeamSize;

TeamSize -> ProjectGroupsNumber;

