Problem 3:

You should determine if the *Student*, *Lender*, and *Institution* tables are in BCNF. In the *Lender* table, *LenderName* is unique. In the *Institution* table, *InstName* is unique. In the *Student* table, *StdEmail* is unique. The primary key of each table is underlined. The primary key of each table is underlined. You should explain your decision and modify the table design by splitting tables or adding constraints if necessary.

Student (StdNo, StdName, StdEmail, StdAddress, StdCity, StdState, StdZip )

Lender(LenderNo, LenderName)

Institution(InstNo, InstName, InstMascot)

Soln:

1.Lender table is in BCNF because LenderNo->LenderName .

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2. Institution table is not in BCNF. Since InstName->InstMascot.

So split table (InstName,InstMascot, InstName NOT NULL)

3. Student table is not in BCNF because StdCity,StdState->StdZip.

So new table(StdCity,StdState,StdZip).