Project - 2
Part -2 Design of questions (Experiments)

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We have designed a set of 5 complex questions which require 2 Mappers and 2 Reducers. You can find MR source code, output files and appropriate jar files in zip file that we have submitted. Below are the questions and explanations about how we incorporated them into solving using MR code.

We have focused on "trends over the years" and have come up with following questions:

Question1:
This Question depicts difference between Seats Utilization (Current No. of Student / Max No. of Students) for a particular CourseID of 2 consecutive years. We have used 2 Mappers and 2 Reducers, where 1st reducer gives output about each year's Seats Utilization, which is the input of 2nd Mapper and 2nd Reducer gives the Original output of the question.

Question2:
This Question is about change in Number of Students between 2 consecutive years, who have enrolled for a particular course. We have used 2 Mappers and 2 Reducers, where 1st Reducer gives the output of number of students who have enrolled for a particular course in particular year. 2nd Reducer gives the answer of the question.

Question3:
This question gives the change in number of classes held between 2 consecutive years on a particular Day of Week at a particular Location (Building). We have used 2 Mappers and 2 Reducers, where 1st Reducer gives the output of number of classes held on a particular day at particular building for a given year. 2nd Reducer gives output of the question.

Question4:
The output of this question suggests difference between number of students those would be there at a particular building either in the Morning, Afternoon or Evening. We have used 2 Mappers and 2 Reducers, where 1st Reducer gives the number of students who would be there on a particular building on particular time of the day for a given year. 2nd Reducer gives the answer of the question.

Question5:
This question gives an idea about change in number of courses offered by a particular Department over 2 consecutive years. This question uses the data of Department given in the new csv file. We have used 2 Mappers and 2 Reducers, where 1st Reducer gives output of number of courses offered by a particular department for a given year. 2nd Reducer gives the output of the question.