Homework 2 E-R Model

1. Design an E-R diagram for keeping track of the exploits of all sports teams in your favorite league.
You should store the matches played, the scores in each match, the players in each match and individual player statistics for each match.

2. Consider a database used to record the marks that students get in different exams of different course offerings.

a. Construct an E-R diagram that models exams as entities, and uses a ternary relationship, for the above database.

b. Construct an alternative E-R diagram that uses only a binary relationship between *students* and *course-offerings*. Make sure that only one relationship exists between a particular student and course-offering pair, yet you can represent the marks that a student gets in different exams of a course offering.

3. Design a generalization–specialization hierarchy for a motor-vehicle sales company.
The company sells motorcycles, passenger cars, vans, and buses. Justify your placement of attributes at each level of the hierarchy. Explain why they should not be placed at a higher or lower level.