Info 5100, Application Engineering and Development

Mid-Term Exam Preparations

University Model

1. How would you extract a list of all the courses students took so far? Assume you just has the student id to start with.
2. How would you model the degree requirements for a program? Would the degree requirements link to course or course offer? Why?
3. Explain the steps to verify if a student fulfilled the core and elective requirements
4. What is the procedure for calculating the student gpa? There is no need for code and only the steps and classes involved. Again assume you start with the student id.
5. Where in the university model would you capture the teacher evaluation score (attribute)? This would be a number between 1-5 that represent the students’ evaluations of the teacher.
6. How would you calculate the total number of seats available for a department for one semester? This includes empty and occupied seats.
7. We calculated the total reviews for a department. How would you calculate the number of lost revenues from the empty seats?
8. How would you calculate the most popular courses? The most popular class is the one attended by more students than others. This could involve more than one section of the same class over one semester

Pricing Model

1. How would you calculate the total review for Xerox given the model we discussed in class. There is no need for code but you are required to explain what methods you need and where put to provide the total revenue.
2. How would you calculate total revenue by customer, sales person, and product?
3. Define loses to be all the revenue that was lost when products are sold below target price. How would you calculate lost revenue by product, customer, and sales person. In plain English explain all the new methods and attributes you need to add do these calculations.
4. For each sales person, calculate how many items that where sold below target price
5. For each product, calculate how many times the product was sold below target price
6. For each Customer, calculate how many time the product was sold above target
7. For each sales person, calculate how many items that where sold above target price
8. For each product, calculate how many times the product was sold above target price
9. For each Customer, calculate how many time the product was sold below target
10. How many orders where below the target: consider the sum of actual prices for all items in the order compared to the sum of target prices for all products in the order