Chapter 9 - Study Guide

1. Identify how teachers and administration staff would have different uses for the same or similar student information in a high school. Then, describe how the subschema for the teachers and administration staff might differ.

2. Number #13 from end of chapter exercises involving relational operations. (or similar)

3. Number #40 from end of chapter exercises involving reading SQL. (or similar)

4. What would need to be done to analyze [the age group of people who watch HBO's Game of Thrones| that people who bike to work also purchase comfortable shoes]? Defend your answer.

5. Name one shopping store "loyalty" card you may own. These optional cards are used to identify customers and their shopping habits in exchange for a discount. (If you don't own any personally, use the example of the Hy-Vee fuel perks card.) Using data mining association analysis, name two revelations the store may have learned about you based on payment methods, time of purchases, or items purchased together.

6. If you use a credit card, your individual purchases at stores are recorded by your credit card company. Data mining outlier analysis can be used to determine possible credit card theft and dynamically shut down your card. Is it appropriate for the credit card company to shut down your card in the following scenarios? Defend your answers.
    a. A credit card purchase is made in a new country.
    b. A credit card purchases is made in a different country (other than the USA) minutes after a purchase is made in the USA.
    c. You buy a type of product you've never purchased before at a store you typically shop.
    d. You make a series of multiple high cost purchases within minutes of each other.

7. Consider how [a web search engine | a store website such as Target or HyVee] retrieves and displays results for your queries. What kind of database structure (indexed, hashed, etc.) would need to be used to provide such results in a meaningful amount of time? Explain and defend your answer.