Short essay: Data vs. Information - Select a database in use today (real or imagined) and identify the elements of "data" stored therein and describe how the database organizes the "data" into "information". Give contrasting examples of "data" and "information" that illustrate the meaninglessness of "data" without context and organization. Talk about the value the "information" provides once the component data is given context.

A database in use today is Marist's database which holds data such as all of the students' and professors' names, CWIDs, address, etc.. It also stores what classes the students are taking and what students each professor has. The component data found in the database may include a students name in a row with a class number. The information we get from that data is what class the student is taking.

Short Essay: Data Models - Briefly describe the hierarchical and network prerelational data models. Explain their shortcomings in relation to the relational model. Considering this, what do you think of XML as a model for data storage?

The hierarchical data model organizes data in a tree structure with child nodes and parent nodes. Each child node will only have a single parent node. In a network model, a child node can have more than one parent node, creating a network of data. The relational model organizes data in tables, and it's the most widely used model for databases today. Relational databases are much more efficient for organizing large amounts of data, finding it fast, and finding exactly the data you need. XML is considered a bad model for data storage because it has a nested tag structure that is inefficient for finding data quickly and efficiently. It also lacks efficient methods for editing, removing, and adding data.

