Problem description:

Mrs. Page owns a private mathematics tutoring business. She tutors mathematics to junior high school students to help them improve their grades and/or to train them to compete in mathematics contests. These students are usually in 7th grade to 9th grade and 11 to 15 years old.

The students are charged by the number of classes they register and usually pay the tuition when they register the class (not always). If the payment for the class is not made upon registration, then the student can carry a balance for any classes owed.

Currently Mrs. Page has about 60 students in total and 8 classes to teach on a regular basis. Right now, Mrs. Page does everything manually on paper. Some of the tasks she performs are, scheduling of new classes, record student class registrations, and charge parents for student balances accordingly.

Information is kept about a student’s parents. She records the parent’s first name, last name, phone number and email address, in order to communicate with parents about their children’s performance or to notify any change of class. A parent can have many children enrolled and the student can have many parents associated with them. A student must have at least 1 associated parent. If there is a balance on the account payments are made towards the student’s balance but the parents are the ones who make those payments. A class can have many exams throughout the course. She also needs to keep track of each student’s grades in exams to evaluate class performance.

In a one-hour long interview with Mrs. Page, she has said that she has been using a paper-based system for years and has been spending a half hour every day to retrieve and update information back and forth in different notebooks. Scheduling classes in the beginning of a new semester is also becoming really time consuming. If a database management system is implemented, we can increase work efficiency, reduce human errors and eliminate confusion for both Mrs. Page and her students.

Imagine you are hired by Mrs. Page to create a database to maintain the records relevant to her tutoring business. Your goal is to design a fully attributed data model with clear identification of the primary keys and foreign keys, and make sure the data model conforms to 3NF.

1. Instructions
   1. Design a database for a small tutoring business
2. Deliverables
   1. Visio ERD
   2. Access DB