Project: Training Center

A training center would like to have a system to Automate its work by creating a system that save all information of its customers. The following data model is designed to hold information about Students, Student Courses and Tutors who deal with these students. For this scenario we need to define the following facts:

These facts define the requirements which the Database must meet and should be agreed between the Database User and the Database Designer prior to physical creation.

The Entities required should include:

- Student Information (Student_id, First Name, Last Name, Birth Date, Address, City, Zip Code, Country)
- Courses (Course_id, Course Name, Course Level, Course Price)
- Student Courses (Course_id, Tutor_id, Class_id, Time_zone)
- Employees (Tutors) (Tutor_id, First Name, Last Name, Age, Salary)
- Class(Class_id, Class_Number)

The Entities are related as follows:

- One Student can enroll on One or Many Courses
- One Course can have One or Many Students enrolled on it.
- One Employee (Tutor) can deal with many Courses but not at the same time zone
- One Class rooms may have several courses per day , but not in same time.

The design allows a Student to enroll on multiple Courses, with a Course having many Students enrolled upon it but not greater than 20. The Student may be in different courses but not in the same time_zone, and Tutor has many course.

Part1 1: The System will answer the following questions (Uses any dummy information you would like to uses):

1. How many Students are enrolled on a particular Course?
2. The list of Students in each course and it Tutor and Course information (Level and Room)
3. The total expensive of the center which will include:
    1. Tutors salary + benefit (Extra hours) + Tax.
    2. Renting of the training center.
    3. Management expensive.
    4. Other Expensive (Travel cost and Advertisement cost);
4. The total income include all (the students incoment price + 19% Tax)
5. The profit or lost per year.
6. How many Students the center must have at least in each course in order to be the center profitable.
7.

Create a program using OOP methods:

1- Create the following class: Students, Tutors, Class rooms, Courses.
2- Use arryList or List to save all the objects.
3- Uses methods and static methods to add and remove students.
4- Uses Constructors to add initialize informations.
5- Uses methods and Static methods to calculate the profit, and print the results

Part 2: Create a MySQL database and Create only Table for the Students:

1- Using Java connect to the database using jdbs driver
2- Add and the students list to database.
3- read the student list from the database.