CS 2500
Elementary School Candy Sales
Database Design Problem

The following table is an attempt to track the sale of candy by elementary school students. The sale is to raise money for a school trip. Each class could have several students attempting to sell candy they have received. Each student is given several units of candy (QtyR), and the amount of each that they have sold is recorded (QtyS). The system is to track the running total of candy received and sold. Individual allocations and sales of candy do not need to be recorded. Note that the sample data within the table shown below is an un-normalized, flat-file system.

Student	Class	Candy1	QtyR1	QtyS1	Candy2	QtyR2	QtyS2	Candy3	QtyR3	QtyS3
Smith, Joe	5th-A	Almond Chocolate	5	5	Crisp Chocolate	5	5	Sour Worms	4	2
Blaha, Mike	5th-A	Milk Chocolate	6	3	Crisp Chocolate	8	6			
Edwards, Linda	5th-A	Almond Chocolate	5	4	Crisp Chocolate	5	5	Sour Worms	4	1
Parks, Ann	5th-B	Crisp Chocolate	3	3	Sour Worms	11	4			
Frankin, Al	5th-B	Almond Chocolate	5	5	Milk Chocolate	4	4	Crisp Chocolate	5	5
Bell, Carol	6th-A	Milk Chocolate	14	7						

Final Project will consist of the following:

1. An Entity Relationship diagram representing the database design showing all necessary entities and their relationships
2. Conversion of E-R diagram into table structures with appropriate fields, primary and foreign keys and field types. This will be turned in as data definition statements using data definition language (DDL)
3. Data manipulation statements using data manipulation language (DML) to populate tables with data from the case study.
4. All tables normalized in third normal form
5. Two examples of SQL statements to retrieve data from related tables