Assignment 4
ER Diagram and Normalization
100 points

The Dekalb Area Book Co-op is opening a store front that will sell books to non-members as well as members. They need a database to record customer orders. Customers and employees need to be able to identify a book by ISBN, title or author name(s). Employees can also check when a particular order was placed and when/if it shipped or delivered (if the customer comes in to pick it up). They also to keep track of publisher information.
Details:
1. An order is not shipped/delivered until all the items in it are available (no back orders or partial orders).
2. All addresses are within the US.
3. A book can be written by one or more authors or in the case of anthologies, where there are too many authors to list, a book will have one or more editors.
4. The book store also wants to be able to track the types of books that customers buy and there needs to be a way to contact customers.
5. Books are categorized by genre, publishers usually work with a limited number of genres, but each book is published by only one publisher.

For this assignment you need to do two main things:
1. You must draw an ER diagram including, entities, relationships and cardinalities. Each entity (and relationship that has data associated with it) must have a primary key indicated in the drawing as well as as many of the attributes as is legible. On a second page, list each entity and relationship and all of the attributes for each. Underline primary keys and note which attributes are foreign keys.

2. Take the entities and relationships and write them in the notation that we have used to describe tables. {table_name(attribute1, attribute2, etc) } Underline the primary keys and note the foreign keys and what tables they reference. Your tables must be in 3NF and you must explain why they are.