

CS 5300 Programming Project 1

An Antiquarian book dealer approaches you about creating a database for their collection of rare books. For each book they would like to record the book title, the author or author's, the publication date, the language the book was published in, if the book is translation or original language, who performed the translation if it was a translation, the edition, the publisher, the type of binding, the grade of the book, a brief synopsis of the book, information about the country the book originated in, and anything else you can think of that they might be interesting to note. The collector is very proud of the collection and gladly talks about it in detail. They show you multiple translations of *Le Morte d'Arthur* and different editions of a few Mark Twain books from their collection. She would like to store in the database notes about author's, and locations the books come from.

Propose an Initial Conceptual Design for the database to show the entity and attributes that will be used. For inspiration, look at Figure 3.7 and Figure 3.8 in the textbook (20 pts).

Using the Initial Conceptual Design, create an ER Diagram. For inspiration look to chapter 3.7 and 3.9 of the textbook. (20 pts).

Using the ER Diagram and the steps from Chapter 9, create a Relational Database Schema similar to the one found in Figure 9.2 of the textbook (20 pts).

Be sure to include selection of Primary Keys and Foreign Keys. Also include a small writeup to accompany the Relational Database Schema about assumptions that were made during the design process, proposed domains for selected attributes, and discussion on reasons for any design decisions made (20 pts).