# IS/MSA 5400 Individual Project – Fall 2021

(Max: 150 points)

You have been deputized by the President of Catskill University to develop a library database. The library database must be able to store and track data regarding books in the library, the authors of those books, and the publishers of those books. Students at Catskill University can borrow books from the library – their data too need to be stored in the database. The operating environment of the library is as follows:

- A book can be authored at the most by many authors and at the least by one author. An author at the most can author many books and at the least can author one book.
- A book can at the most be published by one publisher and at the least be published by one publisher (meaning, a book is published by exactly one publisher). A publisher can publish at the most many books and at the least one book.
- A student at the most can borrow many books and at the least zero books (this is because some students never borrow books). A book at the most is borrowed by one student and at the least by one student (meaning, a book is borrowed by exactly one student).
- An employee can at the most borrow one book and at the least zero books (this is because some employees never borrow books). A book at the most is borrowed by one employee and at the least by one employee (meaning, a book is borrowed by exactly one employee).

Based on your analysis, you have identified the following entities for your database: **BOOK, AUTHOR, PUBLISHER, STUDENT, EMPLOYEE.** The data design is shown below:
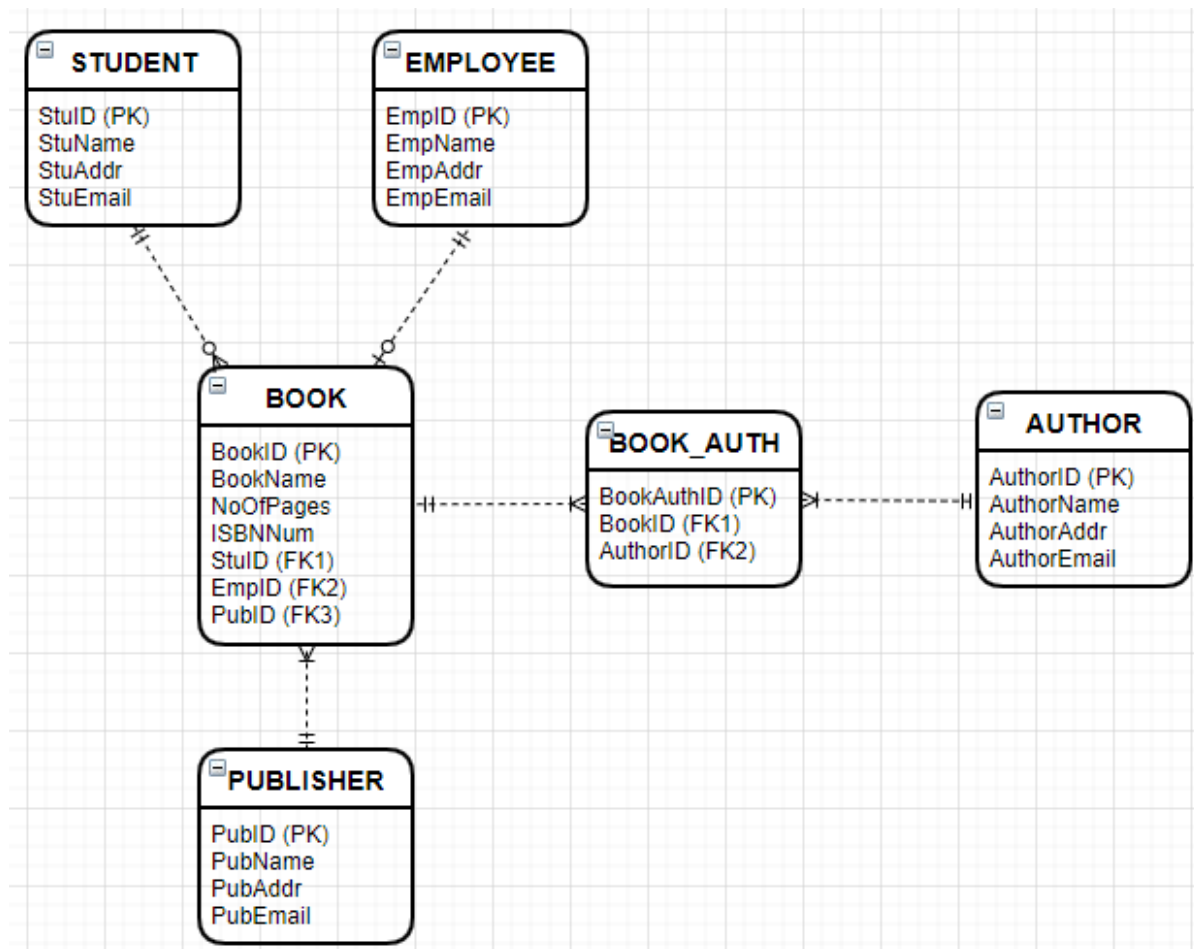
Questions:

1. Code the SQL statements to create all six tables with their PK and FK(s). You can choose appropriate data types and null status for the table attributes/columns based on the operational context and data design. (100 pts)

2. Code the SQL statements to insert five "dummy" records into each of the tables. (50 pts)

Copy the code into a Notepad file and upload it to Canvas. Please ensure that your code is in sequential order, I should be able to run the code with a single click of the "Run" button.

Please upload your submission to Canvas on or before 12/12/2021.