CS157A Project Description

In this project, I wrote a Java code that creates a Database called “books” and populated it with real data and then performed many queries on the database. My Java code consists of 10 Functions that perform queries on the database, and I will be explaining what each of them will do.

Functions/Methods:

createDB() – This function creates a new database called “books” in MySQL and also creates the tables authors, authorISBN, publishers and titles, with authorISBN having the attributes authorID and isbn which are foreign keys that references the keys in the authors and titles table respectively, and the titles table contains a publisherID which is a foreign key referencing the publisher table’s key.

populateDB() –This function populates the tables that were created by createDB() by using the INSERT query, the initial populated data will be included at the back of this description.

getAllAuthors() – This function performs a query on the database to get all the authors information on the authors table and it is ordered alphabetically by last name, first name

getAllpublishers() – This function performs a query on the database to get all the publishers information on the publishers table.

getAllTitlesFromPublishers() – This function finds all titles published by a specific publisher, in this function I chose to find all titles published by “Pearson Prentice Hall”.

addNewAuthor() – This function first prints out all the authors currently on the authors table and then adds a new author (William Shakespeare), and prints out the table after the query.

editAuthor() – This function first prints out all the authors currently on the authors table and then Updates an author’s information (Michael Sipser -> Michael Jordan), and prints out the table after the query.

addNewTitle() – This function first prints out all the title names currently on the titles table and then adds a new title (Object-Oriented Design and Patterns), and prints out the table after the query. After adding the new title, it first prints out the contents in the authorISBN table and then adds the new isbn and its respective authorID into the table and prints out the table after the query.

addNewPublisher () – This function first prints out all the publishers currently on the publishers table and then adds a new publisher (Cambridge University Press), and prints out the table after the query.

editPublisher() – This function first prints out all the publishers currently on the publishers table and then Updates a publisher’s information (Pearson Prentice Hall -> Prentice Hall), and prints out the table after the query.

Each of these functions are ran by the main method in the Java code and each of these functions will print out information to proof the result of the query.