DB Project 1 Book Manager

# Requirements of Book Manager

* The system shall allow user to add a new publisher (name, phone and city).
* The system shall allow user to add a new book (ISBN, title, year, published\_by, previous edition and price).
* The system shall allow user to edit an existing book.
* The system shall allow user to delete a book.
* The system shall allow user to search books based on criteria.
  1. All books.
  2. Based on title. Zero or more books shall be returned.
  3. Based on ISBN. One or zero book shall be returned.
  4. Based on publisher. Zero or more shall be returned.
  5. Based on price range. Zero or more shall be returned.
  6. Based on year. Zero or more shall be returned.
  7. Based on title and publisher. Zero or more shall be returned.

This is the schema of the database.

Publisher (name, phone, city), PK: name.

Book (ISBN, title, year, published\_by, previous\_edition, price), PK: ISBN, FK: published\_by refs Publisher, previous\_edition refs Book.

# Some Special Requirements About the Project.

1. Your text UI should present all the functionalities to the user.

--------------------------------------------Book Manager Software-------------------------------------------

1.Add a Publisher 2.Add a Book 3.Edit a Book 4.Delete a Book. 5.Search Books 6.Exit

Please select the function, type [1 - 6] and press enter:

1. Every step needs to print clear instructions so that a user knows what to type and what format. When you finish the program, ask a friend who is not taking this class to test your program to see if you program is user friendly and easy to use.
2. Class names should be nouns in UpperCamelCase followed by the purpose of the class: View, Controller, Service, DAO. E.g. BookDAO, BookController.
3. Method names, parameter names, member variable names, and local variable names should be written in lowerCamelCase.
4. Comments are required. Imagine this, I am going to post your program to GitHub (which I will not, LOL), some other programmers in a software company, who want to learn DBUtils and MVC find your program on GitHub, can they understand each class, each method you wrote without any problem?

The project will be graded based on this rubric:

|  |  |
| --- | --- |
| Functionality | 70% (7 pts each requirement) |
| Usability (UI, prompts) | 10% |
| Coding standards | 10% |
| Comments | 10% |

Remember to change package names if you are using my project directly.

# Create Database First

In your MySQL workbench

|  |
| --- |
| DROP DATABASE IF EXISTS bookmanager;  CREATE DATABASE bookmanager;  USE bookmanager;  CREATE TABLE Publisher(  name VARCHAR(25) PRIMARY KEY,  phone VARCHAR(10),  city VARCHAR(20)  );  CREATE TABLE Book(  ISBN VARCHAR(10) PRIMARY KEY,  title VARCHAR(50),  year INTEGER(4),  published\_by VARCHAR(25),  previous\_edition VARCHAR(10),  price DECIMAL(10,2),  FOREIGN KEY(published\_by) REFERENCES Publisher(name),  FOREIGN KEY(previous\_edition) REFERENCES Book(ISBN)  );  INSERT INTO Publisher(name, phone, city) VALUES  ('McGraw Hill', '8175689542', 'Fort Worth'),  ('Pearson', '8175689666', 'OKC'),  ('Addison Wesley', '8175689789', 'Dallas'),  ('O Reiley', '8885961258', 'Chicago'),  ('Oxford Press', '123456789', 'London'),  ('ABC', '123456789', 'Wichita Falls'),  ('Springer', '9852365', 'New York');  INSERT INTO Book(ISBN, title, year, published\_by, previous\_edition, price) VALUES  ('9780073376', 'OO Software Engineering', 2014, 'McGraw Hill', NULL, 102.5),  ('0806666666', 'Fundamentals of DB 1', 1992, 'ABC', NULL, 82.5),  ('0805317481', 'Fundamentals of DB 2', 1994, 'ABC', '0806666666', 87.5),  ('0805317554', 'Fundamentals of DB 3', 1999, 'ABC', '0805317481', 12.5),  ('0321122267', 'Fundamentals of DB 4', 2003, 'Addison Wesley', '0805317554', 15.5),  ('0321369572', 'Fundamentals of DB 5', 2008, 'Addison Wesley', '0321122267', 162.5),  ('0136086209', 'Fundamentals of DB 6', 2009, 'Pearson', '0321369572', 172.5),  ('0133970779', 'Fundamentals of DB 7', 2015, 'Pearson', '0136086209', 98.3),  ('0806666611', 'Software Requirements', 2013, 'Springer', NULL, 99.5),  ('0806666612', 'UML Modeling', 2000, 'O Reiley', NULL, 89.5),  ('0806666614', 'Machine Learning 1', 2000, 'Addison Wesley', NULL, 109.5),  ('0806666613', 'Machine Learning 2', 2008, 'Addison Wesley', '0806666614', 109.5),  ('0806666620', 'Big Bang Theory', 1975, 'Oxford Press', NULL, 19.5),  ('0806666622', 'Java Programming', 2008, 'Pearson', NULL, 59.5),  ('9806667755', 'Java Programming', 2007, 'O Reiley', NULL, 29.5),  ('9897756820', 'UML Modeling', 2018, 'ABC', NULL, 289.5); |

Test Cases:

Add a new book:

('0133970799', 'Fundamentals of DB 8', 2018, 'Pearson', ''0133970797'', 198.3)

('5246000000', 'Python Programming', 2018, 'ABC', null, 18.3)