

## Library System (Continued) - Server/Client (Part 2)

1. Create a database named “arlibrary” and a table named “book” that contains ISBN and title fields.

## Structure of “book” table

```
MariaDB [arlibrary]> describe book;
```

Field	Type	Null	Key	Default	Extra
isbn	char(9)	NO	PRI	NULL	
title	varchar(50)	YES		NULL	

2 rows in set (0.33 sec)

Submit the commands you use to create database and table by using Notepad or MS Words or type the commands in the email you send for submission of this assignment.

2. Insert a book with the following information directly into the “arlibrary” database using **MySQL command**.

ISBN: 123456780

Title: Absolute Java

**Note:** This is not mulibrary, so you must **NOT** use the GUI to insert. Just run an insert command directly in MySQL database.

```
MariaDB [arlibrary]> select * from book;
```

isbn	title
123456780	Absolute java

1 row in set (0.00 sec)

Submit the commands you use to insert data into the book table by using Notepad or MS Words or type the commands in the email you send for submission of this assignment.

3. Create a Java program called “ARLibraryServer.java” which will perform as the Arlington library server. Develop the server program that waits to receive a message (ISBN) from MU Library system.

## Sample run:

```
> run ARLibraryServer
Arlington Library Server is running...
```

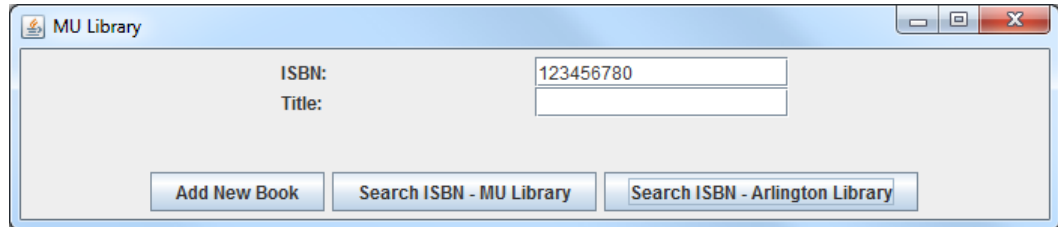
4. Modify “MULibrary.java” from the first part so that when the “Search ISBN – Arlington Library” button is clicked, it sends the ISBN to the “ARLibraryServer”. The server will then search for the book in “arlibrary” database using ISBN received from MULibrary and return the title to MULibrary if the book is found. If it is not found then return a different message such as “No” or “Not Found”.

**Sample run:**

- a. Run "ARLibraryServer", if you haven't done so.

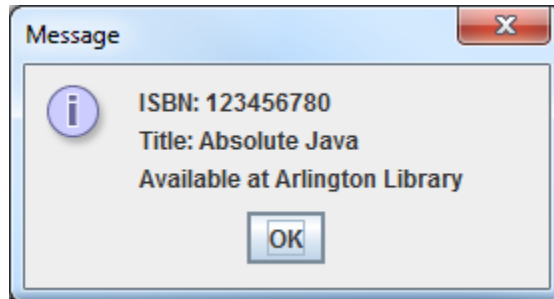
```
> run ARLibraryServer  
Arlington Library Server is running...
```

- b. Run "MULibrary" and enter an ISBN to search.

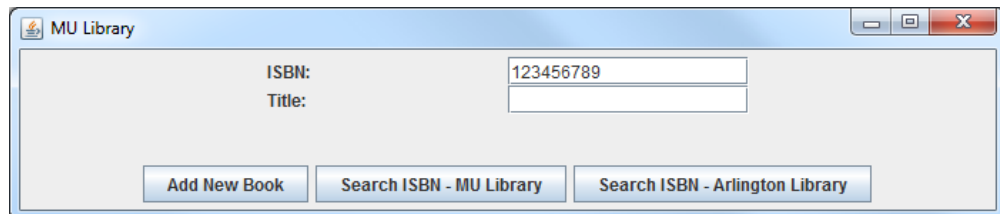


The screenshot shows the MU Library application window. It has a title bar with the text "MU Library". Inside the window, there are two input fields: "ISBN:" with the value "123456780" and "Title:". Below the input fields, there are three buttons: "Add New Book", "Search ISBN - MU Library", and "Search ISBN - Arlington Library".

- c. When "Search ISBN – Arlington Library" is clicked, the ISBN entered is sent to ARLibraryServer to perform a search, then return the title to MULibrary if the book is found. The MULibrary then displays the following message.



- d. If the book is not found, the following message is displayed by MULibrary.



The screenshot shows the MU Library application window. The "ISBN:" field now contains the value "123456789". The "Title:" field is empty. The buttons remain the same: "Add New Book", "Search ISBN - MU Library", and "Search ISBN - Arlington Library".

