

**Assignment 1 (5 points)**

**Due 12.07.2010**

**Java RMI: Virtual Bookshelf**

In this exercise, you are to provide a simple virtual bookshelf service remotely accessible through RMI. There should be two remote objects implemented: `Book` and `VirtualBookShelf`.

- Every book in the shelf has a title, author, isbn, the name of the book's owner and the name of the person who is currently reading it. The user of the bookshelf can obtain the name of the book's owner, the author, title, isbn and current reader of the book. Thus, the book object should implement `getOwner()`, `getTitle()`, `getAuthor()`, `getReader()`, `setReader()`, `getISBN()` methods.
- The bookshelf allows the following operations: retrieve the book based on its isbn, retrieve the list of isbn's of all books currently registered at the bookshelf, add a new book, borrow the book, and return the book after reading. *You may want to use a `Hashtable` to store the list of books registered at the bookshelf.* During the opening of the virtual bookshelf service, 10 books are added to the shelf.  
 To summarize, the bookshelf must implement the following methods `getBooks(long isbn)`, `getAllBooks()`, `addBook(Book newBook)`, `borrowBook(Book book, String readerName)`, `returnBook(Book book)` .

Implement the `Book` and `VirtualBookShelf` remote objects. You will also need a `Server` process to host the virtual bookshelf service and a `Client` process to test the bookshelf. The client should try to obtain the list of book titles available at the bookshelf, add a new book, and borrow a book.

For the assignment it is enough to run the client and the server processes on the same machine.

**Submission instructions**

The assignment must be submitted to me before Wednesday 12th, 10.00 by e-mail at [vaide.narvaez@gmail.com](mailto:vaide.narvaez@gmail.com) and [vaide\\_n@payap.ac.th](mailto:vaide_n@payap.ac.th). You have to submit one zip file that contains all your java source files. Late submissions are penalized 5% of the final grade each late day!

This is an individual assignment, plagiarism is not tolerated.