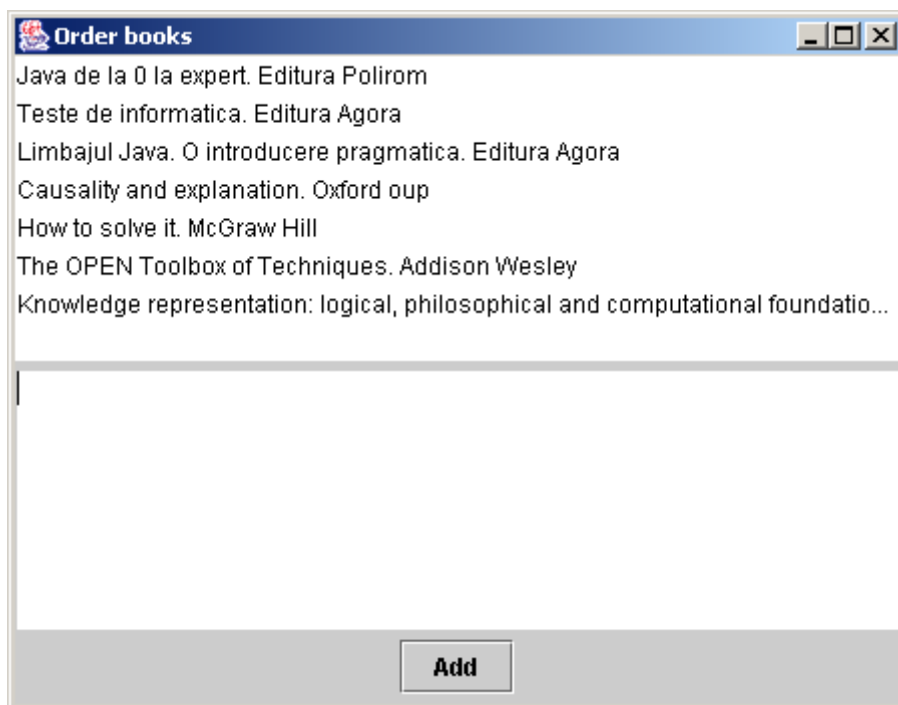


## Lab 11. Object Collections. I/O from Files

### Problem 1.

A. Design and implement a frame called “Order books” that can be used to order books on-line. In the north of the frame we have a list of books, like in the next figure:

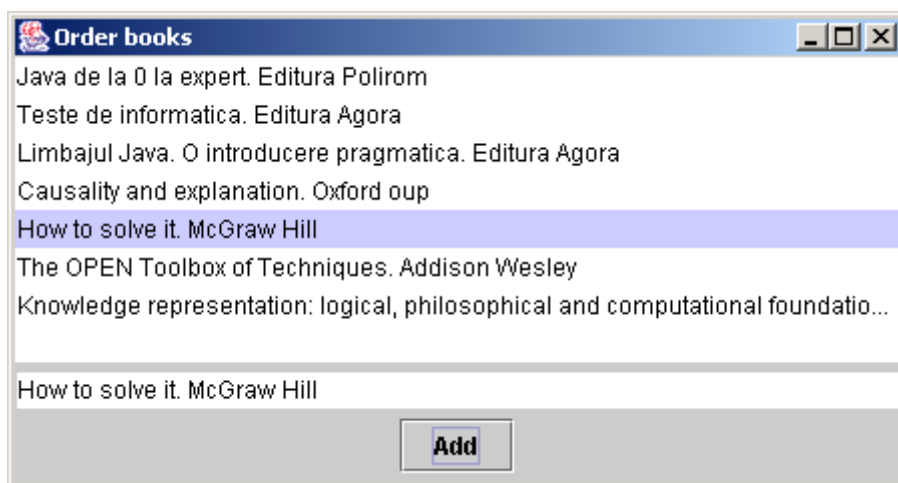


The books list is loaded from the file books.txt, stored in a collection by type `ArrayList<Book>` and displayed in graphical component by type `JList`.

Hint. Use an object by type `ArrayList<Book>` books memorized in an instance variable in the frame. In the constructor of the frame read (using the method `readLine()`) the content of the file books.txt and add to the `ArrayList` with `books.add(book)`. Finally, create the graphical component list transmitting the array list (as an array) to the constructor, like this:

```
list = new JList(books.toArray());
```

B. Add events by `ActionEvent` type to the panel from the above frame, such that the user can choose a book from the list and click the button `Add`. In this moment that book will appear in the text area, like in the following figure:



Hint. You can obtain the index of the selected item from list, using the instance method `getSelectedIndex()` of the class `JList`. After that, you can get the book object from the collection `books`, using the method: `get(int index)` and can add it (like a `String`) to the text area.