Books (Again)

A library has a number of rooms (at most 20) organized in 4 areas (E, W, N, S), with the front desk in the middle.
Each room has a unique 4 symbols alphanumeric identification, and contains a number of bookshelves (at most 10).
Each bookshelf has a numeric identification, and can accommodate a limited number of books (between 20 and 40).
Books are identified by their ISBN (13 digit unique number), author, title, year, and publisher. There are books which are lent, and thus they are not on any shelf. When a book is returned, it should be placed on the shelf where it was located before lending.

Two static methods are provided, in the package **`library,`** class **`Useful`**:

`generateBookInfo:` which generates information on a new book, and returns an array of strings with ISBN, author, title, year and publisher, in this order, and has no arguments.

`generateRoomInfo`: which generates info for a room, and returns and array of strings, i.e. identification and number of shelves stored in this order

Develop a stand-alone application which supports the following operations:

1. Populate the library with books
2. Lend a number of books (at random)
3. Lend a specific book (identified by ISBN)
4. List all the books of an author, complete with location and number of samples
5. List all the books located in a given room, on a certain shelf
6. List all the books which are lent
7. Insert a book in the first available slot (remember there are lent books), as close as possible to the other books written by the same author
8. Find a book in the library indicating the room and shelf (note that it might be lent)