Book Application

Longer exercise

(When ever you have finished other exercises in good time)

Step 1

- Create a new project BookApp
- Add class Book
  - String title
  - String author
  - double price
  - int numCopies
  - YearMonth published
- Ensure that published is in past, if not throw an exception
- Test your class in the main

Step 2, Collections

- Create BookStore -class
  - ArrayList of books
- Methods
  - add(book)
    - If already has the same book should just increase the number of copies
  - showList
    - Prints all books
  - showList(string author)
    - Prints all books of specific author
- Now test your BookStore in your main

Step 3, Interfaces

- Create Customer -interface
  - void buyBook(Book b) -method
- Very simple PersonCustomer-class (Would basically inherit person but not necessary for our purposes)
  - Implements Customer-interface by printing out “Person buys book “+book.getTitle()+” at price “+book.getPrice() + “10% VAT”
- Very simple CompanyCustomer-class (again would inherit Company, but not necessary to implement the base class)
  - Similar printout but without VAT
- Implement bookstore-method, takes book and customer as parameter
  - Pass in different books and customers

Step 4, Streams and Lambdas

- Continue with the BookApp project

- Implement to the BookStore
  - sortByTitle
  - sortByAuthor
  - sort(Comparator comp)
  - print(double minPrice)
    - Only print books more expensive that minPrice, but they should be printed in of their title

- Display store contents after sorting by different criterias to ensure correct funtionality

Step 5, I/O

- When the application launches try to read bookstore.txt
  - It first run it doesn't exist….
- Give user an option to save books to bookstore.txt
  - Use csv-format, individual items separated by semicolons, one book at each line
  - For example: Hobbit;Tolkien;12.40;6;1950/4
- After save, you can complete the function that reads the books
  - Split the lines read at semicolon and create a book based on information you find
  - Save the books to BookStore-object's arraylist

Step 6, JaxB

- Jaxb-serialization is not available in Java SE 11
- With maven it can be enabled

- Google…..

- Try to make JAXB-serialization work for books in the BookApp