

Advanced Programming  
Project: Library (Book borrow system)  
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By:  
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Develop a public library system (book borrowing model) in which you can borrow books. In this model a costumer is able to do the following:

1. Sea the available books on the library (the books are ordered alphabetically). Hint: You can use a simple database like SQL to manage the book list.
2. Borrow up to **three** books for the duration of **maximum two weeks** with the possibility of **one week extension**.
3. Request a **"reserve"** ticket for a book which is already borrowed by another costumer.
4. See the history of his orders with the exact order date.

In this model, the library officer is able to do the following:

1. Issue a **receipt** upon returning the books by the costumers
2. Issue the bill for **penalty** when the costumer does not return the book(s) on time (the amount of penalty is 2\$ per day up to a week and 5\$ afterwards).
3. See the status of the available books and books which are lent.
4. Accept the request from costumers and giving the book or put the book on hold (for a "reserve" request)

**In this project:**

- Please use OOP style and create at least two classes as "costumer" and "library"

- Please write a test script to test your code with different types of request.
- Please put sufficient comments for each step of your code.