**Software Structure**

A typical library provides an access to a variety of materials, including books, magazines, music CDs, movie DVDs, and movie VHS tapes

Each customer has a unique number. The looking-up of the borrowing history of the customer

* List or dictionary of customers with ID as key
* Make class for customer with attributes relating to charges, items checked out, duration etc...

Only materials that are available in the inventory may be borrowed

* Create data structure for available inventory

reservations for future borrowing are allowed

* Create data structure for borrowed inventory

Customers are charged late fees for materials not returned by the due date, at the rate of $0.05 for each day the items are late. Unpaid charges that exceed $5.00 will prevent a customer from borrowing anything else until the charges are paid.

* obtain a printed copy of the statement of charges for each customer

customers may only borrow up to 3 books, 2 magazines, and 2 movies at a time. Customers may borrow DVDs or VHS tapes but not both at the same time.

The software should allow to librarian to check what items are currently borrowed by a customer, their expected return date, whether there are any charges on the customer account, as well as access a history of materials borrowed by a customer

The system should produce a report that lists all materials and their whereabouts (e.g., available in the library, or borrowed by customers), outstanding charges (by customer), and a total of charges.

Aunt Bea expects she will be able to enroll other retirees to volunteer

Materials are borrowed for a period of two weeks. Only materials that are available in the inventory may be borrowed, yet reservations for future borrowing are allowed

**Additional Requirements**

* Determine if customer and library (book, DVD, CD inventory etc...) data is provided
* Determine if there is a limitation on reservations for customers?
* Set milestones for project
* Can DVD and VHS be reserved at the same time?
* Grant different privileges for access
* Set the date for replacement cost
* How should report be structured, what information to show and how is it displayed
* If VHS tapes are not rewind before being returned, is there a fee charged to the customer?
* What will the maintenance by management interface look like?