

Construct Use case Diagram, Activity diagram and Swimlane diagram based on the following scenario:

Scenario: Smart Library Self-Checkout & Return (SL-SCR)

Actor: Library Member

The Flow of Events

When a library member arrives at the self-service kiosk, they begin by scanning their digital membership card via their smartphone. The system prompts the member to enter a 4-digit security PIN. Once the system validates the credentials, the main dashboard appears with two primary options: **"Borrow Items"** or **"Return Items."**

- **To Borrow:** The member selects "Borrow Items" and places their stack of books on the RFID scanning pad. The system identifies all books simultaneously and displays a list on the screen. The member reviews the list and selects "Confirm." If any book has a "Hold" for another user or the member has unpaid fines over \$10, the system flags the item and instructs the member to see a librarian. Otherwise, the system updates the database and prints a receipt with the due dates.
- **To Return:** The member selects "Return Items" and slides the books into the smart drop-box one by one. As each book passes the internal sensor, the system marks it as "Returned" and removes it from the member's active loans.

Once the session is complete, the member selects "Logout," and the kiosk resets for the next user.