



TEAM BEANS

Use Case Scenarios

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1 Top 3 Use Case

1.1 Use-Case Name: Customer Borrows Audiobook

Use Case Goal: Allow customers to place reservations of audiobooks at desired kiosks through the GreenBox web interface and borrow books at kiosks.

Actors: Customer, Main Library Kiosk Authentication System, Main Library Account Status Management System

Pre-Conditions: Customer must hold a lending account for which there are no outstanding fines for any borrowed materials.

Post-Conditions: Reservation initiated by customer will be fulfilled, the audiobook inventory system will be updated, and customer lending accounts status will be updated.

Trigger: Customer logs on to the library website and redirects to the GreenBox web interface.

Main Success Scenario:

1. System displays a search bar that allows multiple input fields for searching.
 2. Customer enters keywords into the input field and clicks the 'Search' button.
 3. System does the following:
 - 3A. Display loading page while retrieving search results based on the keyword.
 - 3B. Display the search bar again with the search results beneath it including book information, and copies available at any particular kiosk location.
- Steps 2-3 repeated until customer finds the desired title.
4. Customer clicks on the desired kiosk from the results of the search to reserve a title.
 5. Customer leaves the GreenBox web page.
 6. Customer arrives at the kiosk.
 7. Customer leaves the kiosk.

Alternate Scenario:

- 4A. Copies of the title are available at the desired kiosk.

Description: This scenario describes when customer reserves an available title at a particular kiosk location.

- 4A1. System does the following:

- a) Displays a successful reservation message that contains customer name, book title, kiosk location, and reservation expiration date.
- b) Update inventory of that title of book.

4B. No copies of the title are available at the desired kiosk.

Description: This scenario describes when customer requests a title with no available copies at a particular kiosk location.

4B1. Customer clicks “Request” button to place a request for the title at that kiosk.

4B2. System displays a successful reservation message that contains customer name, book title, kiosk location, and reservation expiration date.

4B3. System updates inventory of that title of book.

6A. System receives successful authentication result from the Main Library Kiosk Authentication System. Customer is authenticated into the kiosk.

Description: This scenario describes when customer is authenticated into a particular kiosk location.

6A1. Customer picks up the audiobook reserved.

6A2. System sets loan expiration date and informs the Main Library Account Status Management system to record all information of the borrowing action of the customer.

6B. System receives failed authentication result from the Main Library Kiosk Authentication System. Customer is not authenticated in the kiosk.

Description: This scenario describes when customer is not authenticated into a particular kiosk location.

6B1. System displays error signal to customer.

1.2 Use-Case Name: Customer Returns Audiobook

Use Case Goal: To update inventory of the returned audiobooks and to create reservations for that audiobook if there are pending requests for that title of book.

Actors: Customer, Main Library Kiosk Authentication System, Main Library Account Status Management System, Main Library Accounting System

Pre-Conditions: Customer must have a lending account and a checked-out audiobook.

Post-Conditions: Audiobook inventory is updated.

Main Success Scenario:

1. Customer authenticates at kiosk.
2. Customer chooses option to return borrowed audiobook.
3. Customer returns audiobook to kiosk.
4. Kiosk checks for lateness of audiobook, not late.
5. Kiosk updates inventory.
6. Kiosk checks for open requests for returned audiobook, none found.
7. Customer leaves the system.

Alternate Scenario:

- 3A. Customer returns audiobook late.

Description: This scenario describes when the customer returns an audiobook after the allowed period and must be fined.

3A1. Fine issued via Library Accounting System.

3A2. Message regarding fine displayed to customer Scenario then returns to Main Success Scenario.

- 6A. Another customer requested audiobook.

Description: This scenario describes when reservations must be automatically created for customers who requested an unavailable audiobook that has been returned.

6A1. Customer reserves book

6A2. Customer notified of new reservation. Scenario then returns to Main Success Scenario.

1.3 Use-Case Name: Library Employee Updates Kiosk Inventory

Use Case Goal: To rebalance the distribution of audiobooks among the kiosks.

Actors: Library Employee

Pre-Conditions: Kiosks are operational.

Post-Conditions: Kiosk inventory is updated.

Trigger: Regular inventory updates.

Main Success Scenario:

1. Library employee authenticates themselves into a kiosk using their special card.
2. Library employee inspects the contents of a kiosk.

3. The contents indicate a lack of or a surplus of audiobooks.
4. Library employee determines which audiobooks are required to rebalance the distribution.
5. Library employee adds or removes the set number of audiobooks to the kiosk.
6. Library employee verifies the updated contents of the kiosk.
7. Library employee logs out of the kiosk.

Alternate Scenario:

- 3A. The contents do not indicate any need for updates.

Description: This scenario describes when there are no updates necessary to the inventory of a kiosk.

3A1. Library employee logs out of the kiosk.

- 3B. The contents indicate a need for an inventory reset due to maintenance.

Description: This scenario describes when the inventory must be emptied regardless of a lack or surplus of audiobooks.

3B1. Library employee selects all the audiobooks in the kiosk.

3B2. Library employee removes all the selected audiobooks from the kiosk.

3B3. Library employees store the set of audiobooks in a temporary storage location.

3B4. Library employee verifies the updated contents of the kiosk.

3B5. Library employee logs out of the kiosk.

- 3C. The contents do not indicate any need for updates.

Description: The contents indicate completion of maintenance, and the inventory may be restored.

3C1. Library employee retrieves the set of audiobooks previously removed from the kiosk from a designated storage location.

3C2. Library employee selects all the audiobooks previously removed from the kiosk.

3C3. Library employee manually adds back all the selected audiobooks to the kiosk.

3C4. Library employee verifies the updated contents of the kiosk.

3C5. Library employee logs out of the kiosk

2 Complete Use Case List

Use Case Name	Use Case Goal	Primary Actor
Customer searches book	To search for a book using keywords to filter for the result.	Customer
Customer reserves book	To place a book on hold for 3 days for the customer to pick up.	Customer
Customer requests book	To place a customer in a queue to reserve a particular book once it becomes available	Customer
Customer cancels reservation	To make a copy of a book that was previously reserved available again.	Customer
Time cancels reservation	To automatically make a copy of a reserved book available again if it is not picked up after 3 days.	Time
Customer cancels request	To remove a customer from the queue to reserve a particular book once it becomes available.	Customer
Customer borrows books at kiosk	To fulfill reservations of books.	Customer
Customer returns books at kiosk	To update the inventory of the returned books. To create reservations for that audiobook if there are pending requests for that title of book.	Customer
System administrator requests reports	To list book distribution status at kiosks.	System Administrator
System administrator adds new titles to inventory	To add new titles of books to the inventory.	System Administrator
System administrator adds book copy to inventory	To replenish the inventory of that book.	System Administrator
System administrator removes book copy from inventory	To update inventory when a copy has been damaged or gone missing.	System Administrator
Library employee adds or removes audiobooks from kiosks	To rebalance the distribution of books among kiosks.	Library Employee

3 Actor Glossary

Actor Name	Description
Customer	The customers interact with the GBALS web interface and kiosks to search, reserve, and borrow the audiobooks available at the local branch.
System administrator	The system administrators with sufficient technical background to generate various reports and manage inventory via the GBALS kiosks.
Library employee	The staff employed by the Library with prior experience in tasks similar to the features provided by the GBALS kiosks.
Time	The passage of time can trigger certain scheduled/automated processes.
Library Accounting System	The system that handles financial interactions with customers, such as the issuing and paying of late fees
Main Library Kiosk Authentication System	The system authenticates users to allow them access to the library kiosks, and therefore the GreenBox system.
Main Library Account Status Management System	The system manages user accounts, tracking what books they have checked out and their respective return dates.