

# **Use Case Document**

## **Use Case 1: Login**

**Use Case Name: User Login**

**Primary Actor: User (Student or Faculty Member)**

**Preconditions:**

- **User has an existing account.**
- **User is not currently logged in.**
- **System and authentication server are available.**

**Trigger: User clicks the LOGIN button.**

**Main Success Flow:**

- 1. User enters their username and password.**
- 2. User clicks the LOGIN button.**
- 3. System sends login credentials to the server for verification.**
- 4. Server verifies that the login information is correct.**
- 5. System logs the user into their account.**
- 6. User is redirected to the Home page.**

**Alternate Flow:**

- **2a: Invalid Login**

1. **Server responds that the login information is incorrect.**
2. **System displays an error message informing the user.**
3. **User remains on the Login page and may retry.**

## **Use Case 2: Signup**

**Use Case Name: User Signup / Account Registration**

**Primary Actor: User (Student or Faculty Member)**

**Preconditions:**

- **User does not already have an account.**
- **User is not logged in.**
- **System and database are available.**

**Trigger: User clicks the Sign Up button.**

**Main Success Flow:**

1. **User navigates to the Signup page.**
2. **User enters the following information:**
  - **Full name**
  - **Username**
  - **Email**
  - **Password**

- **Account type (Student or Faculty)**

- 3. User clicks the Sign Up button.**
- 4. System validates the entered information.**
- 5. System creates a new user account in the database.**
- 6. System displays a success message.**
- 7. User is redirected to the Login page or automatically logged in and sent to the Home page.**

**Alternate Flows:**

- **4a: Invalid or Missing Information**

- 1. System detects missing fields or invalid input.**
- 2. System displays an error message explaining the issue.**
- 3. User corrects the information and resubmits.**

- **4b: Username or Email Already Exists**

- 1. System rejects the signup.**
- 2. User is informed that the username or email is already in use.**

## **Use Case 3: Book an Item**

**Use Case Name: Book Item**

**Primary Actor: User (Student or Faculty Member)**

**Preconditions:**

- **User is logged into their account.**
- **Items exist in the system.**  
**Trigger: User selects the Items tab.**  
**Main Success Flow:**

- 1. User clicks the Items tab in the page header.**
- 2. User selects the desired booking date and time range.**
- 3. System displays items available during the selected time.**
- 4. User selects an item.**
- 5. User enters the reason for borrowing the item.**
- 6. User adds the request to the shopping cart.**
- 7. User either continues booking more items or proceeds to checkout.**
- 8. System sends booking request(s) to the server.**
- 9. Faculty member reviews the request.**
- 10. Faculty member approves the request.**

11. System sends an email notification confirming approval.  
Alternate Flow:

- 10a: Request Rejected

1. Faculty member denies the request.
2. System notifies the user with the rejection reason.
3. User may choose a different time or item and try again.

## **Use Case 4: Faculty Member Reviews Booking Requests**

**Use Case Name:** Review Item Requests

**Primary Actor:** Faculty Member

**Preconditions:**

- Faculty member is logged in.
- One or more booking requests exist.  
Trigger: Faculty member accesses their dashboard.  
Main Success Flow:

1. Faculty member logs into their account.
2. Faculty member views pending booking requests for their items.
3. Faculty member reviews the reason for each request.
4. Faculty member approves or denies each request.
5. System updates the request status and notifies the user.

## **Use Case 5: Faculty Member Checks Item Status**

**Use Case Name: View Item Status**

**Primary Actor: Faculty Member**

**Preconditions:**

- **Faculty member is logged in.**
- **Items exist that belong to the faculty member.**  
**Trigger: Faculty member views their dashboard.**  
**Main Success Flow:**

- 1. Faculty member logs into their account.**
- 2. Faculty member sees currently borrowed items and their return dates.**
- 3. System highlights overdue items in red.**
- 4. Faculty member may message users to request item return.**

## **Use Case 6: Add Item**

**Use Case Name: Add Item**

**Primary Actor: Faculty Member**

**Preconditions: Faculty member is logged in.**

**Trigger: Faculty member clicks Add Item.**

**Main Success Flow:**

- 1. Faculty member clicks the Add Item button.**

2. Faculty member enters item name, description, and image.
3. Faculty member clicks Add Item.
4. System saves the item to the server.
5. Item becomes available in the system.

Alternate Flow:

- 6a: Invalid Item Information
  1. System detects missing or invalid input.
  2. System displays an error message.
  3. Faculty member corrects the information and retries.

## **Use Case 7: Duplicate Item**

**Use Case Name:** Duplicate Item

**Primary Actor:** Faculty Member

**Preconditions:**

- Faculty member is logged in.
- At least one item already exists.

Trigger: Faculty member clicks the + icon on an item card.

**Main Success Flow:**

1. Faculty member navigates to their Items tab.
2. Faculty member clicks the + icon on an item card.

3. System opens the Add Item page with fields pre-filled.
  4. Faculty member enters missing information (e.g., serial number).
  5. Faculty member clicks Add Item.
  6. System adds the new item copy to the server.
- Alternate Flow:

- 7a: Error While Adding Item

1. System displays an error message.
2. Faculty member corrects the mistake and resubmits.

## **Use Case 8: Logout**

**Use Case Name:** User Logout

**Primary Actor:** User (Student or Faculty Member)

**Preconditions:** User is logged into the system.

**Trigger:** User clicks the Logout button.

**Main Success Flow:**

1. User clicks the Logout button.
2. System terminates the user session.
3. System redirects the user to the Login page.



## **Use Case 9: Forgot / Reset Password**

**Use Case Name: Reset Password**

**Primary Actor: User (Student or Faculty Member)**

**Preconditions:**

- **User has a registered email address.**
- **User is not logged in.**  
**Trigger: User clicks Forgot Password.**  
**Main Success Flow:**

- 1. User clicks Forgot Password on the Login page.**
- 2. User enters their registered email address.**
- 3. System sends a password reset link to the user's email.**
- 4. User clicks the reset link.**
- 5. User enters a new password.**
- 6. System updates the password.**
- 7. User is redirected to the Login page.**

**Alternate Flow:**

- **3a: Email Not Found**
  - 1. System displays an error message indicating the email is not registered.**

## **Use Case 10: Cancel Booking Request**

**Use Case Name:** Cancel Booking Request

**Primary Actor:** User (Student or Faculty Member)

**Preconditions:**

- User is logged in.
- Booking request exists and is in Pending status.  
Trigger: User selects Cancel Request.  
Main Success Flow:

1. User navigates to their booking requests.
2. User selects a pending request.
3. User clicks Cancel Request.
4. System updates the request status to Cancelled.
5. System notifies the item owner.

## **Use Case 11: View Booking History**

**Use Case Name:** View Booking History

**Primary Actor:** User (Student or Faculty Member)

**Preconditions:** User is logged in.

**Trigger:** User navigates to My Bookings.

**Main Success Flow:**

1. User opens the booking history page.
2. System displays past and current booking requests.

3. System shows booking statuses (Pending, Approved, Rejected, Completed).

## **Use Case 12: Edit Item Details**

**Use Case Name: Edit Item**

**Primary Actor: Faculty Member**

**Preconditions:**

- Faculty member is logged in.
- Item exists and belongs to the faculty member.  
Trigger: Faculty member selects Edit Item.  
Main Success Flow:

1. Faculty member navigates to their Items page.
2. Faculty member selects an item.
3. Faculty member edits item information (name, description, image).
4. Faculty member clicks Save Changes.
5. System updates the item details.

**Alternate Flow:**

- 12a: Invalid Information
  1. System displays an error message.
  2. Faculty member corrects the information and retries.

## **Use Case 13: Remove / Archive Item**

**Use Case Name: Remove Item**

**Primary Actor: Faculty Member**

**Preconditions:**

- Faculty member is logged in.
- Item belongs to the faculty member.  
Trigger: Faculty member selects Remove Item.  
Main Success Flow:

1. Faculty member navigates to their Items page.
2. Faculty member selects an item.
3. Faculty member clicks Remove Item.
4. System removes the item from active listings.
5. Existing booking records are preserved.

## **Use Case 14: Mark Item as Returned (Faculty Override)**

**Use Case Name: Mark Item Returned**

**Primary Actor: Faculty Member**

**Preconditions:**

- Faculty member is logged in.
- Item is currently booked out.  
Trigger: Faculty member selects Mark as Returned.  
Main Success Flow:

1. Faculty member navigates to booked items.
2. Faculty member selects an item.
3. Faculty member marks the item as returned.
4. System updates item availability.

## **Use Case 15: Receive Notifications**

**Use Case Name: Receive Notifications**

**Primary Actor: User (Student or Faculty Member)**

**Preconditions:**

- User has a valid account.
- Notifications are enabled.  
Trigger: System event occurs (approval, rejection, overdue notice).

**Main Success Flow:**

1. System generates a notification.
2. System sends an email or in-app message to the user.
3. User receives the notification.