BLG368E - Object Oriented Modeling and Design
Assignment 1

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Use Case #1: Process Loan for Book

Scope: Library Automation Software

Primary Actor: Undergraduate Student and Academic Personnel

Stakeholders and Interests:
- Student and academic personnel: want fast and error-free borrowing operations.
- University: wants to reduce employee costs.

Preconditions: Primary actor is identified, authenticated, has no hold, and will not exceed the maximum borrowing limits.

Postconditions: Borrowing is saved.

Main Success Scenario:
1. Primary actor inserts the university card to self-check station
2. Station authenticates the card.
3. Station shows the list of operations that primary actor can do.
4. Primary actor selects loan operation for book.
5. Station asks to scan the book via bar code.
6. Primary actor inserts the book to station's laser scanner.
7. Station marks the book as borrowed, shows the due date, and records the operation.
   Primary actor repeats steps 4, 5, 6, 7 until indicates done.
8. Primary actor selects the finish operation.
9. Station returns the university card.

Extensions:

6a. Invalid bar code (not found in system or cannot read by scanner)
   a. Station shows an error and rejects the borrowing.
   b. Primary actor asks for help from library personnel.
   c. Library personnel fixes the problem.
   d. Primary actor repeats the step 4.

8a. Primary actor removes some scanned books.
   a. Station marks the book as not borrowed again, and records the operation.

Special Requirements:
- Screen that users can make their requests.

Technology and Data Variations List:
- Bar code laser scanner to identify the book
- Card reader to identify and authenticate the user

Use Case #2: Process Loan for Multimedia Material
Scope: Library Automation Software
Primary Actor: Undergraduate Student and Academic Personnel
Stakeholders and Interests:
- Student and academic personnel: want fast and error-free borrowing operations.
- University: wants to reduce employee costs.

Preconditions: Primary actor is identified, authenticated, has no hold, and will not exceed the maximum borrowing limits.
Postconditions: Borrowing is saved.
Main Success Scenario:
1. Primary actor inserts the university card to self-check station
2. Station authenticates the card.
3. Station shows the list of operations that primary actor can do.
4. Primary actor selects loan operation for multimedia material.
5. Station displays an explorer to search and find the material by borrower.
6. Primary actor finds and selects the material.
   Primary actor repeats steps 4, 5, 6 until indicates done.
7. Primary actor selects the finish operation.
8. Station sends borrower an e-mail that contains the accessible link for related loan period.
9. Station returns the university card.

Extensions:
7a. Primary actor removes some material before finishing
Special Requirements:
- Screen that users can make their requests.

Technology and Data Variations List:
- Card reader to identify and authenticate the user

Use Case #3: Rejected Process Loan due to Hold

Scope: Library Automation Software

Primary Actor: Undergraduate Student and Academic Personnel

Stakeholders and Interests:
- Student and academic personnel: want fast and error-free borrowing operations.
- University: wants to reduce employee costs.

Preconditions: Primary actor is identified, authenticated, has **hold**.

Postconditions: Borrowing is **rejected**.

Main Success Scenario:
1. Primary actor inserts the university card to self-check station
2. Station authenticates the card.
3. Station shows the list of operations that primary actor can do.
4. Primary actor selects loan operation for book or multimedia material.
5. Station rejects the request and shows an error about hold reason and rules.
6. Primary actor selects the finish operation.
7. Station returns the university card.

Extensions: -

Special Requirements:
- Screen that users can make their requests.

Technology and Data Variations List:
- Card reader to identify and authenticate the user

Use Case #4: Rejected Process Loan due to Borrowing Limits

Scope: Library Automation Software

Primary Actor: Undergraduate Student and Academic Personnel

Stakeholders and Interests:
- Student and academic personnel: want fast and error-free borrowing operations.
- University: wants to reduce employee costs.

Preconditions: Primary actor is identified, authenticated, has no hold, and will **exceed** the maximum borrowing limits.

Postconditions: Borrowing is **rejected**.

Main Success Scenario:
1. Primary actor inserts the university card to self-check station
2. Station authenticates the card.
3. Station shows the list of operations that primary actor can do.
4. Primary actor selects loan operation for book or multimedia material.
5. Station rejects the request and shows an about borrowing limits.
6. Primary actor selects the finish operation.
7. Station returns the university card.

Extensions: -

Special Requirements:
- Screen that users can make their requests.

Technology and Data Variations List:
- Card reader to identify and authenticate the user