

**Istanbul Technical University
Faculty of Computer and Informatics**



BLG468E Object Oriented Modeling and Design

Assignment 1

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Use Case: Using Loan Service With Self-Check Stations	
ID	UC-1
Version	1.0
Scope	Library Automation Software
Primary Actors	Borrowers (Academic personnel or Undergraduate Students)
Stakeholders and Interests	<p>Borrowers: Want fast, easy borrowing operations. Want to perform borrowing in any time of the day</p> <p>Library Circulation Desk: Wants accurate borrowing operations. Wants logs about the borrowing</p>
Preconditions	Borrower has the material
Postconditions	Material is borrowed to borrower Operation is logged
Basic Flow	<ol style="list-style-type: none"> 1. Borrower arrives to the self-check station 2. Borrower reads his/her ID card to station 3. Borrower enters his/her library ID 4. System confirms that borrower can proceed to borrowing operation 5. Borrower reads the barcode of the material to the system 6. System shows information about material (material name, type, year, author...) 7. System shows that material is available 8. System presents two options: borrow – cancel. 9. Borrower selects borrow 10. System logs the operation 11. System shows information about borrowing 12. System prints a receipt which consists borrowing information 13. Borrower leaves with the receipt
Alternative Flows	<ol style="list-style-type: none"> 2a. Card error (invalid, damaged, wrong card...) <ol style="list-style-type: none"> 1. System signals error 2. System cancels the operation 3a. Invalid ID <ol style="list-style-type: none"> 1. System signals ID error 2. Borrower enters pin again <ol style="list-style-type: none"> 2a. Pin is correct <ol style="list-style-type: none"> 1. System continues 3 in basic flow 2b. Pin is incorrect <ol style="list-style-type: none"> 1. System cancels the operation

	<p>4a. System results that borrower cannot proceed (borrower exceeds limits, borrower has an overdue material...)</p> <ol style="list-style-type: none"> 1. System signals borrowing rule error 2. System cancels the operation <p>5a. Barcode error (invalid barcode or cannot read barcode)</p> <ol style="list-style-type: none"> 1. System signals barcode error 2. System cancels the operation <p>7a. System shows that material is unavailable</p> <ol style="list-style-type: none"> 1. System signals material error 2. System cancels the operation <p>9a. Borrower selects cancel</p> <ol style="list-style-type: none"> 1. System cancels the operation <p>10a. System cannot logs the operation</p> <ol style="list-style-type: none"> 1. System signals borrowing error 2. System directs borrower to circulation desk 3. System cancels the operation <p>12a. System is out of paper</p> <ol style="list-style-type: none"> 1. System signals paper error 2. Attendant replaces paper 3. System continues 12 in basic flow
Special Requirements	<p>Touch screen for interactions in user interface</p> <p>RFID card reader for reading ID cards</p> <p>Barcode scanner for reading material barcode</p> <p>Printer for printing receipts</p> <p>Network connection for logging</p>
Technology and Data Variations List	<p>*a. Normal screen for user interface and buttons for borrow – cancel options</p> <p>2a-3a. Borrower card/library ID is entered with keyboard</p> <p>5a. Material barcode number is entered with keyboard</p>