**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 | Borrowers:  Want fast, easy borrowing operations.  Want to perfom borrowing in any time of the day  Library Circulation Desk:  Wants accurate borrowing operations.  Wants logs about the borrowing |
| Preconditions | Borrower has the material |
| Postconditions | Material is borrowed to borrower  Operation is logged |
| Basic Flow | 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 avaible 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 | 2a. Card error (invalid, damaged, wrong card...)   1. System signals error 2. System cancels the operation   3a. Invalid lD   1. System signals ID error 2. Borrower enters pin again   2a. Pin is correct   1. System continues 3 in basic flow   2b. Pin is incorrect   1. System cancels the operation   4a. System results that borrower cannot proceed (borrower exceeds limits, borrower has an overdue material...)   1. System signals borrowing rule error 2. System cancels the operation   5a. Barcode error (invalid barcode or cannot read barcode)   1. System signals barcode error 2. System cancels the operation   7a. System shows that material is unavaible   1. System signals material error 2. System cancels the operation   9a. Borrower selects cancel   1. System cancels the operation   10a. System cannot logs the operation   1. System signals borrowing error 2. System directs borrower to circulation desk 3. System cancels the operation   12a. System is out of paper   1. System signals paper error 2. Attendant replaces paper 3. System continues 12 in basic flow |
| Special Requirements | Touch screen for interactions in user interface  RFID card reader for reading ID cards  Barcode scanner for reading material barcode  Printer for printing receipts  Network connection for logging |
| Technology and Data Variations List | \*a. Normal screen for user interface and buttons for borrow – cancel options  2a-3a. Borrower card/library ID is entered with keyboard  5a. Material barcode number is entered with keyboard |