**INFO8240**

**Task 1: Use Case Description with Activity Diagram and SSD**

**1A. Fully Developed Use Case Description**

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| --- | --- | --- |
| **Use Case ID** | UC01 | |
| **Use Case Name** | Add a new library patron. | |
| **Scenario** | Add a patron account for a full-time student. | |
| **Triggering Event** | A student borrows an item from the library for the first time. | |
| **Brief Description** | A new library account must be created when a full-time student borrows a book for the first time. | |
| **Actor(s)** | Librarian. | |
| **Related Use Cases** | Invoked by *UC02 – Borrow a library item.* | |
| **Stakeholders** | Services and Operations: To verify and input student information into the system.  Media Resources: To restrict inappropriate access to OPAC. | |
| **Preconditions** | Student must be enrolled in a full-time program. | |
| **Postconditions** | A new library account must be created. | |
| **Flow of Activities** | **Actor** | **System** |
| 1. Librarian scan student card. 2. Librarian asks for the student to define a PIN for OPAC access. | 1.1 Retrieve student information from SIS.   * 1. Create a new account and patron number.   2.1 Saves the PIN. |
| **Exception Conditions** | 1.2 If the student is not enrolled in a full-time program:  a) The student can opt to create a Visitor’s card. If yes, *Add Visitor Account* use case is triggered by the librarian. | |

**1B. Use Case Activity Diagram**

**Add a new library patron UCAD.**

A screenshot of a diagram

Description automatically generated

**1C. System Sequence Diagram**

**Add a new library patron SSD.**

A screenshot of a computer

Description automatically generated

**Task 2: Use Case Description with Activity Diagram and SSD**

**2A. Fully Developed Use Case Description**

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| --- | --- | --- |
| **Use Case ID** | UC02 | |
| **Use Case Name** | Borrow a library item. | |
| **Scenario** | A full-time student borrows a printed book scenario. | |
| **Triggering Event** |  | |
| **Brief Description** | A full-time student wants to borrow a printed book from the library. | |
| **Actor(s)** | Librarian | |
| **Related Use Cases** | Include *UC01 – Add new library patron* | |
| **Stakeholders** | Services and Operations: To verify and input student information into the system.  Collection Management: Correctly mark “In library use” items. | |
| **Preconditions** | Student must be enrolled in a full-time program.  Student can’t have pending tuition fees.  Student can’t be on academic suspension.  Student must pay any unpaid fees or fines in their library balance.  Student must return any overdue items. | |
| **Postconditions** | Borrow date and patron information must be recorded.  Status of the item must be changed from "Available" to "On Loan".  EAS bit for borrowed items must be 0 or “unarmed”. | |
| **Flow of Activities** | **Actor** | **System** |
| 1. Librarian checks if the student card photo matches the person at the circulation desk. 2. Librarian scans the student's card bar code. 3. Librarian scans borrowed item. | 2.1 Lookup for patron number.  2.2 Retrieve financial and academic information from SIS.  2.3 Retrieve patron library records.  3.1 Retrieve scanned item information.  3.2 Record borrow date, item, and patron information.  3.3 Change item status to “On Loan”.  3.4 Disarms EAS bit. |
| **Exception Conditions** | 2.1 If a patron number is not found, *Add new library patron* use case is triggered.  2.2 If the student has financial dues or is on academic suspension, the loan transaction is cancelled.  2.3 If the student has unpaid fees or fines, the student can:  a. Pay up the balance due and proceed with the loan.  b. Cancel the loan transaction.  2.4 If the student has overdue items, the loan transaction is cancelled.  3.1 If the item is flagged as “In Library use only”, the librarian should set the item aside for reshelving. | |

**2B. Use Case Activity Diagram**

**Borrow a Library item SSD.**

**A diagram of a computer program

Description automatically generated with medium confidence**

**2C. System Sequence Diagram**

**Borrow a Library item SSD.**

A screenshot of a computer

Description automatically generated

**Task 3: CITL Partial Use Case Diagram**

**A diagram of a library management system

Description automatically generated**