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**CRC Design for the Library System**

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| --- | --- |
| **Book** | |
|  Know whether it is currently borrowed or not (availability status)   Respond to the Library’s request to be borrowed or returned |  **Library** |

|  |  |
| --- | --- |
| **Member** | |
|  Request to borrow or return books   Adhere to borrowing limits (up to 3 books) | |  | | --- | | • **Library** |  |  | | --- | |  | |

**Notes:**

* The **Book** itself does not directly interact with **Member** or **Librarian**.
* All changes to a **Book** (e.g., borrowed/returned) are requested by the **Library**.

**Notes:**

* The **Member** communicates only with the **Library** to borrow or return.
* The **library** enforces the limit of 3 books per member.

|  |  |
| --- | --- |
| **Librarian** | |
| |  | | --- | | • Add or remove books from the collection  • View book availability and borrowing status. |  |  | | --- | |  | | |  | | --- | | **• Library** |  |  | | --- | |  | |

|  |  |
| --- | --- |
| **Library** | |
| • Maintain the overall collection and track which books are borrowed/available  • Handle borrowing and returning transactions, enforcing the 3-book limit  • Provide list of available and checked-out books, and who has them | • **Book**  • **Member**  • **Librarian** |

**Notes:**

* The **Librarian** relies on the **Library** to actually update and report on the collection.
* No direct interaction with **Book** or **Member** is required.

**Notes:**

* The **Library** is the central mediator among **Book**, **Member**, and **Librarian**.
* It enforces rules, updates book states, and supplies status information.