**Database/Bean:**

|  |  |  |
| --- | --- | --- |
| **Books** | **Employees** | **IssuedBooks** |
| Book\_ID | Employee\_ID | Employee\_ID |
| Book\_Name | Employee\_Name | Book\_ID |
| Book\_Type | Phone\_Number | Issue\_DateTime |
| Author\_Name | isAdmin | Return\_DateTime |
| Original\_Qty | Password | Late\_Fees |
| Qty\_Left | Book\_Limit | Scheduled\_DateTime |

**Persistence:**

|  |  |  |
| --- | --- | --- |
| addBook() | addEmployee() | issueBook() |
| removeBook() | removeEmployee() | returnBook() |
| searchBook() | searchEmployee() |  |
| getAllBooks() | getAllEmployees() |  |

**Service:**

|  |  |  |
| --- | --- | --- |
| addBook() | addEmployee() | issueBook() |
| removeBook() | removeEmployee() | returnBook() |
| searchBook() | searchEmployee() | calcLateFees() |
| getAllBooks() | getAllEmployees() |  |

**Presentation:**

|  |
| --- |
| showMenu(isAdmin) |
| performMenu(isAdmin) |

**Login**

**Client**

**IssueBook:**

1. **Input bookID**
2. **Check qty**
3. **Reduce employee book limit by 1 and reduce book qty**
4. **Calc scheduled return date and leave return date and latefees blank**
5. **Create entry**

**ReturnBook:**

1. **Input bookId**
2. **Check for entry in issued books**
3. **If exists, set return date and calc latefees**
4. **Increase book limit and qty**
5. **Update entry**
6. **Output**

**Additional features:**

* **Monthly late fees**
* **All books issued by a user**
* **Search by category**