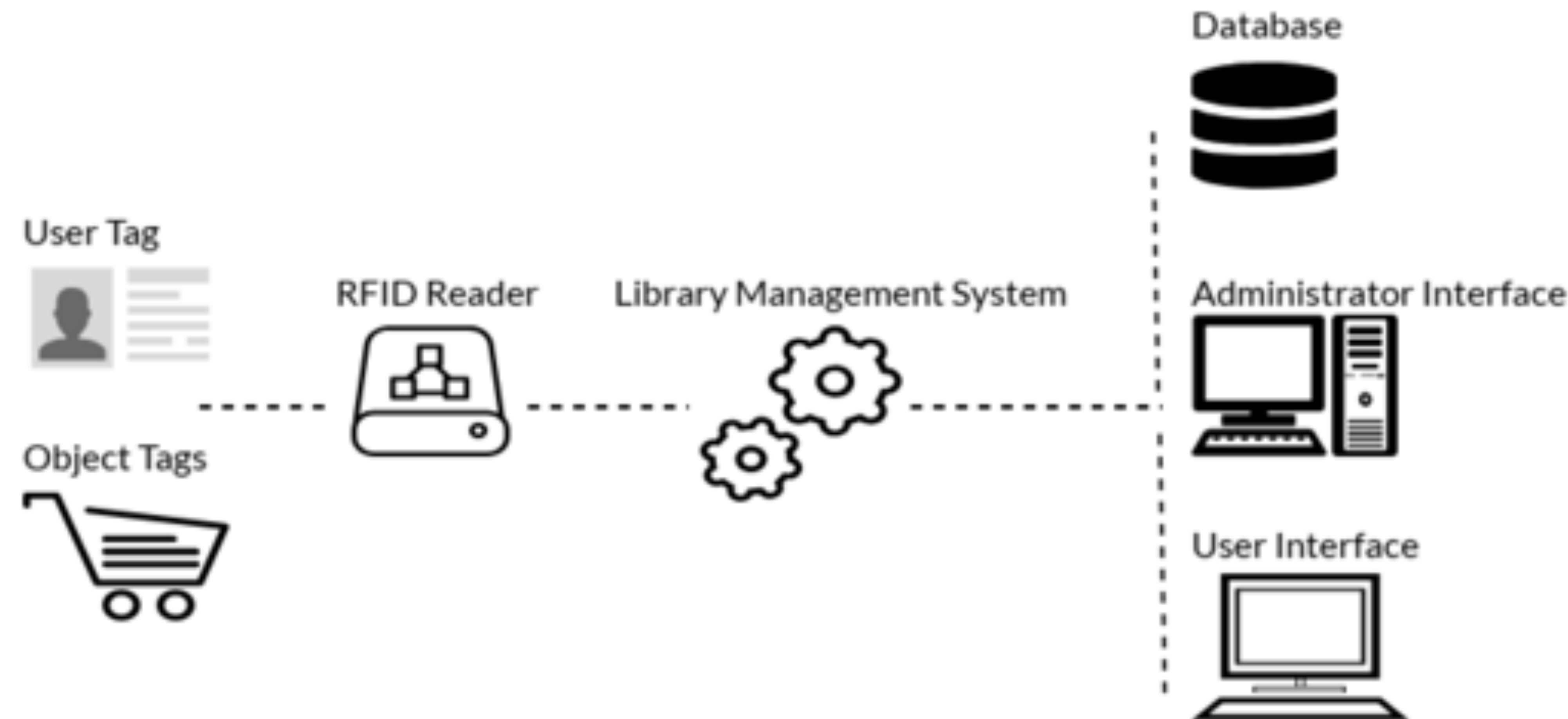


Abstract

ECLib is a self-service library management system that allows users to check-in and check-out items using RFID tags and reader. The library management system will be placed at Hopper lab in the Center for Science and Technology at Earlham College. Currently, there is no management system in place, and students and faculty in the department have a difficult time managing devices. The self-service system uses UHF RFID reader and tags and is designed to improve student access to the lab as well as making inventory and tracking easier for the Computer Science department.

System Architecture

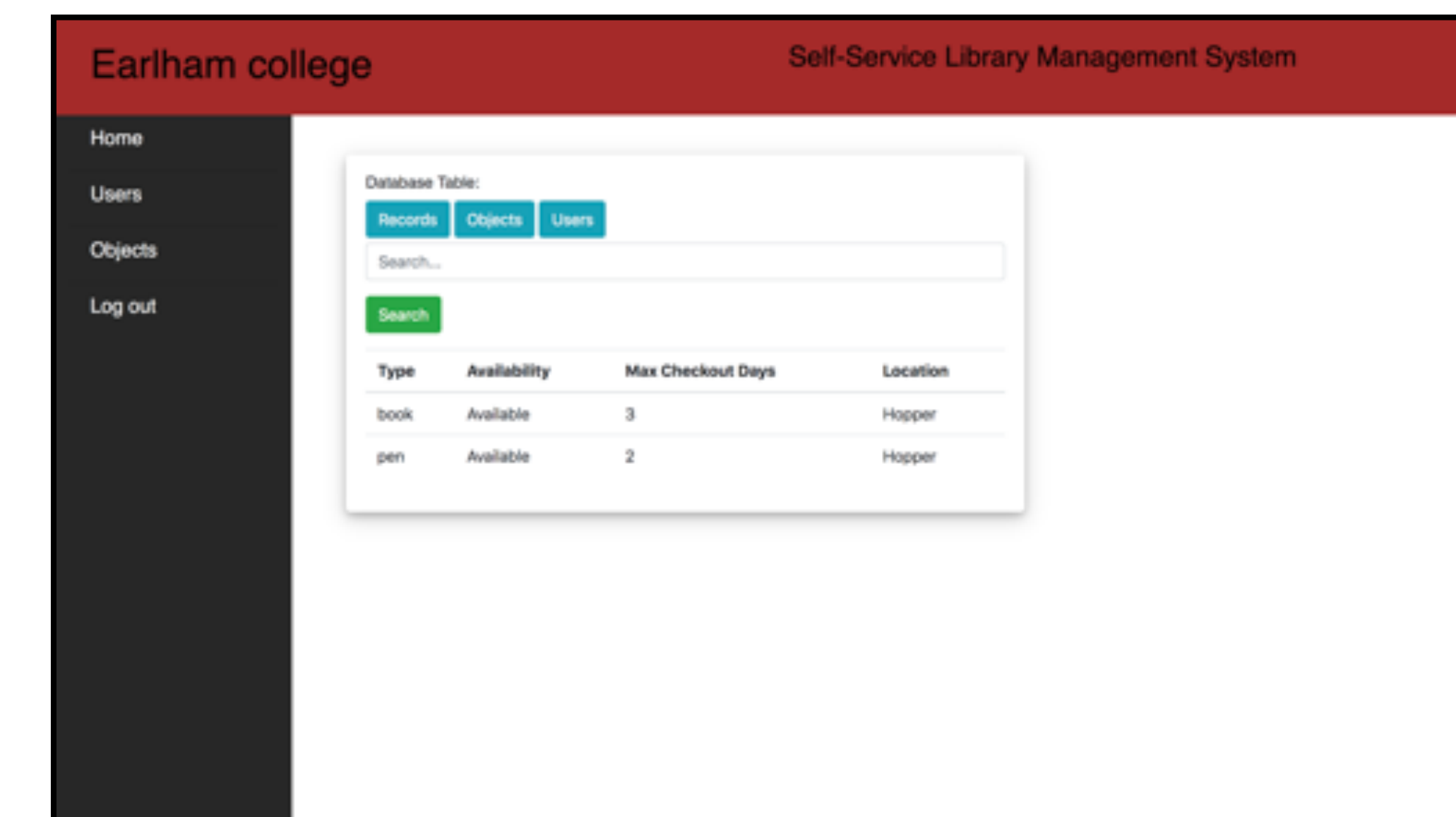


Visuals

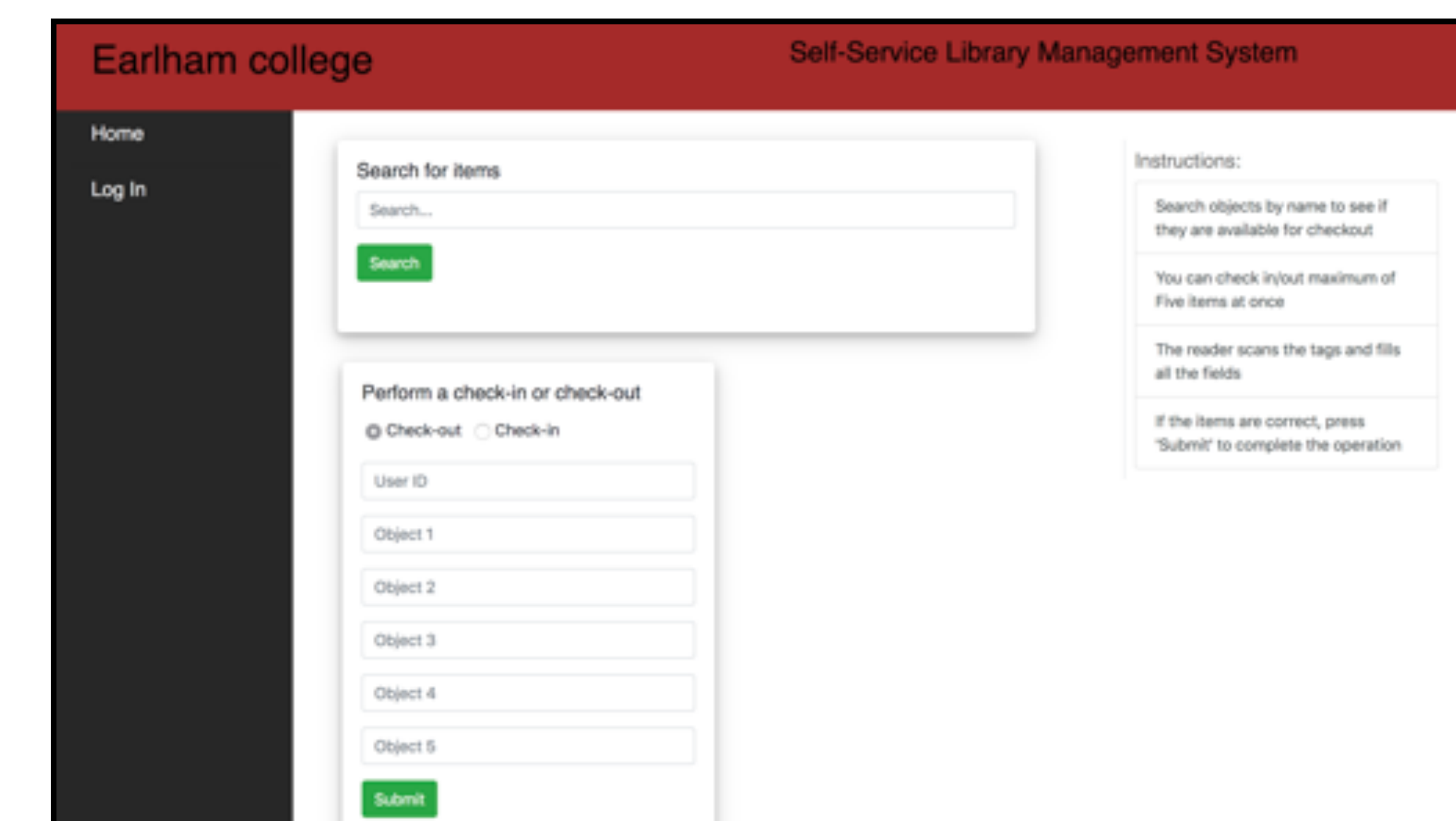
Administrator Authentication



Administrator Home Page



User Home Page



User Features

Search (Accessibility):

The system is available over the internet and any user can search the availability of the items

Self Check-out (Efficiency):

The system increases efficiency- allowing simultaneous checkout of multiple items at once, being available 24/7, and removing the need for faculty.

Self Check-in (Efficiency):

Check-in operation is equally simple- allowing students to scan multiple items at once, getting simultaneous feedback on items and status of operation.

Administrator Features

Monitoring (Security):

The system gives the administrator a current record of operations. The administrator can also set measures such as maximum checkout time, or maximum number of items checked at once.

User Management (Accountability):

The administrator can add new users, delete existing users, and edit their information at any time.

Inventory Management (Efficiency):

The administrator have access to a current record of items in the library. The administrator can make items available and unavailable, and monitor their usage.

