



Assignment 1

Analyzing the University Library system

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Observing the University Library System

We have chosen to examine and observe the University Library system to increase our understanding of how it works. To achieve this understanding, we managed to observe the entire journey of the actors and their interactions with the system and the artifacts it is composed of.

In the scope of this assignment, we have observed the flow of information within the university library system. This document contains a description of the tasks and the sub-tasks taking place in this system, including but not limited to finding and borrowing media, the returning of the media, the reshelving of the media and the handling of unborrowable books.

The physical boundary of the system consists of the library building. The user, however, can monitor the available books remotely through the internet database. There is also two other libraries in adjacent systems; the art library and the medical library, but we are only examining the main university library for this assignment.

Analytical description of the system

Agents

The clients, in this case the people who want to borrow media from the library.
The personnel, managing the library.

Artifacts

The digital book database, containing information about the availability of the books.
The library map, used to navigate the physical premises of the library.
The library card, used to identify yourself within the borrowing system.
The borrowing terminal, used to check out media from the library.
The return terminals, used for returning the books to the library.
The automated sorting machine, ordering returned books and depositing them in the appropriate carts for reshelving.

Finding and borrowing a book

To begin with, we have to find out whether the book exists in the library and whether it's available to be borrowed. We do this by visiting the library web site and searching its database using relevant search terms such as author, title et cetera. When we find the book we intend to borrow, there are two different scenarios: either the book is available and we can go find it in the shelves ourselves, or it's already borrowed, in which case we can book it.

In the case that the book is available, we arrive at the library with some of the required information to track it down. To do this, we either ask the staff to help us find the book, or we attempt to navigate the library ourselves using the library map.

If the book was not available at the moment, we have to wait until we receive a notice from the library. Having received this notice, we can then proceed to the library and find the book waiting for us in the reservation shelf.

When we have obtained the book, we bring it to the borrowing machine. At this point we scan our library card, enter our pin code into the machine and then scan the book. When the book is scanned, we receive a receipt of our current loans, which brings an end to this part of the interaction with the library system.

Returning a book

When we are done with the book, we return to the library building and place it in the return slot next to the borrowing machines. If the loan has expired and we're not done with the book, we can extend the loan assuming that there are no other people in line to borrow it. If there are other people, we can not extend the loan, and have no choice but to return it to the library or get fined every day until we successfully return it.

Reshelving the book

When we place the book in the return slot, our responsibilities are fulfilled. It doesn't, however, mean that the system is complete. Obviously, the book needs to return to the shelf somehow. As it travels on the conveyor belt through the return slot, it is greeted by the sorting machine, which deposits it into the correct, alphabetized cart for redistribution into the library shelves. If the book is reserved, however, it will end up in a separate cart, and if the book originates from another library, it's also sorted separately. When a cart is full, a green signal light is shown both in the machine room and also in plain view of the manned information booth, signalling a need for manual work.

From here, the books are placed into the hands of the library staff. The most common scenario is that the book is to be returned to its shelf. This is conducted by an employee who takes a cart from the machine, replaces it with an empty cart, and then sorts the books on the full cart manually in alphabetical order. When the sorting is complete, the employee brings the cart out into the library space to reshelve the books.

If the book is reserved, the employee will scan it into the computer, triggering an automated notice to be sent to the client who reserved it. A name sheet is then printed and inserted into the book cover, and the employee brings it outside and around the corner to the reservation shelf, where the client can find it.

In the case of the book belonging to another library, they are gathered into a separate shelf from which the library janitors retrieve them in order to return them to their home libraries.

Unborrowable books

Some books are only meant to be read in the library, most commonly at least one copy of each course literature book. When the user is done reading an unborrowable book, he can either put it back into the shelf from which he took it, or into a specific shelf near the entrance of the study area where others can retrieve it either to read or to reshelf.

Possibilities of improvement

Ergonomy issues

The borrowing and the return terminals are not optimized for clients with physical disabilities. For example, the touch screen is largely out of reach for a person in a wheelchair or one afflicted by dwarfism. This could be easily arranged by making the position of the touch screen modifiable, for example with a physical pivot point.

Technical issues

The placement of the barcode on borrowable media is not as clear as it should be. If it was replaced by a RFID marker, you wouldn't have to bother with correct positioning in relation to the barcode reader.