Title: Dispersed Library Accountability System for Our Lady of Lourdes, Daytona Beach

RE: Software Requirements Specification

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Background Description

Our Lady of Lourdes Catholic School operates with a **limited budget** and **limited space**. As a result, when the school decided a media room and computer lab was needed, they decided to do away with the physical library. Teachers relocated the books they specifically wanted to their own classrooms until the library was completely empty. The new English Language Arts teacher for the Middle School needs to know what books are in the school, where they are located and obtain a simple solution for students and teachers to check out individual books.

Requirements

User Access

1.1 Upon initiating entry into the system, the user will be shown an initial welcome screen with the school logo and the title of the system. The initial screen will prompt the user to login with their username and password or create an account.

1.1.1 If the user selects to create an account, a screen showing the appropriate empty fields will be displayed for the user to fill in. Their username will be unique from any others in the database and the password will be stored as a hash to prevent those with access to the database to have access to the user’s password. Once an account is created with acceptable parameters, the user will be told the action was successful and redirect back to the main login screen.

1.1.2. Upon initial login, each user will be granted student access only. The user will be afforded three attempts at logging in with their username and password before their account is locked out. As a stretch goal, it would be preferred to measure system time/date to determine when 30 minutes has passed before the account would be unlocked automatically, otherwise, the administrator would be able to manually unlock a user to try again.

1.2 A user logging in with the administrator username and credentials would have a separate window to come up enabling them to perform administrator functions. The Administrator will have the opportunity to (1) perform user maintenance for unlocking passwords or increasing the level of access (2) adding or deleting any items from tables located in the database (3) view reports of user access or other table reports.

1.2.1 Upon access by the administrator to perform user maintenance, a block giving the ability to search for a user and to allow that user’s information and access to show up would be output to the screen. Each user field displayed would give the ability for the administrator to make changes and then save the information to the database.

1.2.2. If the administrator selects a certain table with some basic filter capability (specific to the table in following requirements), the contents of the table would be displayed to the screen and printable or downloadable to a file.

1.2.2.1. Book title, status (in or out) by location selected.

1.2.2.2. Media Item, Media Type, status (in or out) by location selected.

1.2.2.3. Location, total number of books at that location and total with status ‘out’ , by location

1.2.2.4. Location, total number of media at that location and total with status ‘out’ , by location

1.2.2.5. Location, Book title, user name of only items checked out and by location

1.2.2.6. Location, Media title, media Type, user name of only items checked out and by location

1.2.3. The administrator would also have the ability to add or delete an item in the database. The add feature would make fields blank for filling in on a form while the same form could be populated for items the administrator searches for to edit or delete. For constrained fields, the administrator should be able to select an appropriate item from a list.

1.2.4. The administrator also will have the option to upload a .csv or similar file for populating the database with new data or merging data into an existing database.

1.2.5. The administrator will also be able to restore the database to a historical file which would be backed up in the case of corruption of the main database.

1.3. If the user logging in is also a location administrator, they will see the same screen as the student access in 1.1.2 with an added link to “manage location,” but only if they have their location selected.

Actions After Login

2.1. Once an existing username and password is properly authenticated by a non-administrator, an interface will be displayed showing the books located at the same location as the user’s profile. For example, if the user is associated with the 8th grade, books located in the 8th grade classroom will be shown.

2.1.2. The main window displaying the current books will have appropriate fields enabling the user to select various filters and perform basic search functions. They will be able to select books searching by location, title, author, lexile score, subject or grade or any combination of these.

2.1.3. Each item will be selectable and open to a more detailed window about the item. The detailed window will include most everything located in the row from the database for that specific item. The item will remain in view even though it may be checked out. Inside the detailed window, the user will have the ability to place a hold on the item. There will be a maximum of 5 items able to be held by any 1 user. If a user logs out or doesn’t complete any transactions, the holds will be released upon closing.

2.1.4. The user will be given the opportunity to view their ‘cart’ to see what books they have in their request queue. An actual hold on an item will not be implemented until the cart is reconciled and sent to the location administrator. The cart will display basic information per row with a total of items located at the bottom. Each item should indicate in the cart what the location of the item is as well. The cart will be the only place to be able to complete the check out process.

2.2. If the location administrator clicks on the “manage location” portion of the page, they will be shown a screen with items users have placed on hold and ready for their action to “check out” and deliver the items to the user. There will also be an interface enabling the user to manage their inventory at their location only. They will be afforded the same add and delete access as in 1.2.3 but only to their location.

Actions Upon Item Checkout

3.1. From the cart, and upon checkout, the items contained within the cart will change the status of the item in the database to hold. Upon cart checkout, an e-mail for each item will be generated to the location administrator indicating the new items placed on hold and by which user.

3.2. The location administrator will be able to click a link on the e-mail to direct them to their specific location screen. This will be a convenience and the location administrator can also click “manage” location from their main page after they login. From the manage location screen, the items requested will be grouped by a user name. The user name will be clickable opening up the cart and having a final check out button visible for the location administrator. The cart will be editable so if an item is not able to be delivered as requested, the user will not be held liable for the item upon final checkout.

3.3. Once finally checked out, the item’s status will change to checked out in the database. Items ready for check out -OR- check in will be displayed on the “manage location” screen for the location administrator.

Actions Upon Item Return

4.1. When a user returns an item, the location administrator will be able to manage their location, click the specific user’s name (items will be grouped by name) and item by item be able to check them back in. Once an item is checked back in, the data base will be updated immediately for new holds to be placed.

Conclusion

The overall project will yield a single portal accessed through an internet based portal allowing the users and faculty to interact for media and book management. The phone app access continues to be a stretch goal and at a minimum, the web based portal will have a mobile format/component to enable easy viewing while on a mobile device browser. Next in the process is to develop images or templates of the design for implementation and creation.

Gist File in

<https://gist.github.com/gwilso39/77b68eb7b0e9924f5d05d03d91c130e7.js>