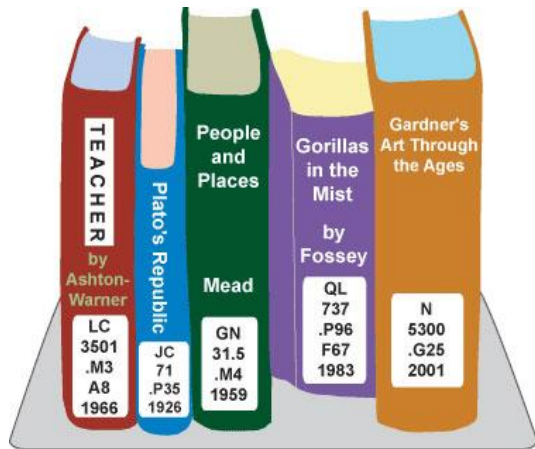


LIBRARY MAP APPLICATION



Lee Miller, Hui Li, Andrew Smith, Linna Chen

BUSINESS CONTEXT AND GOALS

- ❖ The library originally had a web application that maps catalogued books into various shelves based on the book's call number. We were asked to turn all book and shelf locations into data that library staffs would be able to edit on an administrative page. Using the data, the shelves should be able to appear dynamically on the map, instead of having each shelf hard-coded in the html code.
- ❖ The goal of library project application is to create an admin dashboard primarily for library staffs to manage sets of records in the database via web forms and also be able to visualize feedback results left by application users.

TECHNICAL REQUIREMENTS

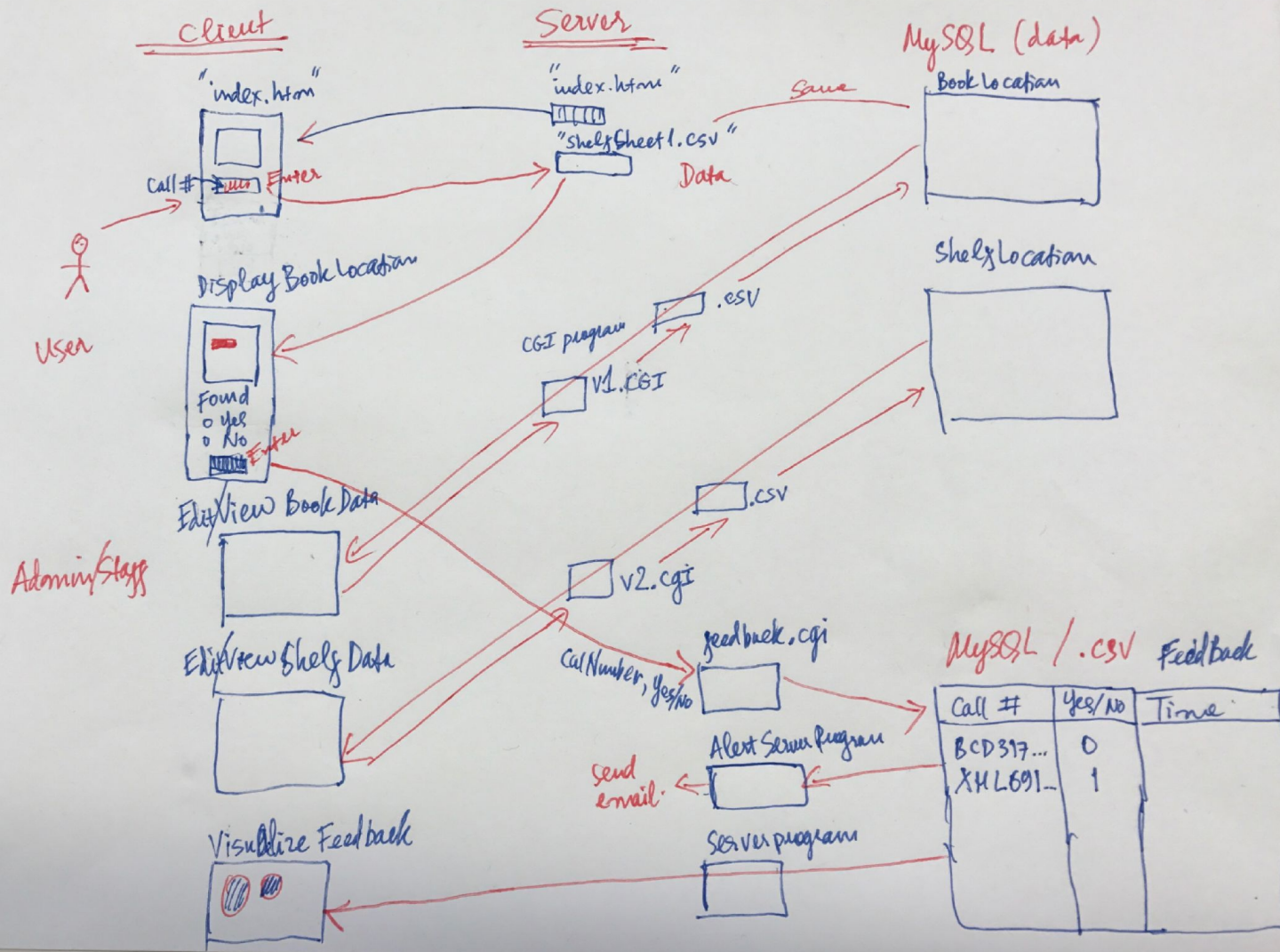
- ❑ Mobile friendly web application
- ❑ CRUD database management system using server side scripting language such as PHP
- ❑ Login system for library staffs
- ❑ Use charts as ways to visualize data

RELATED TECHNOLOGIES



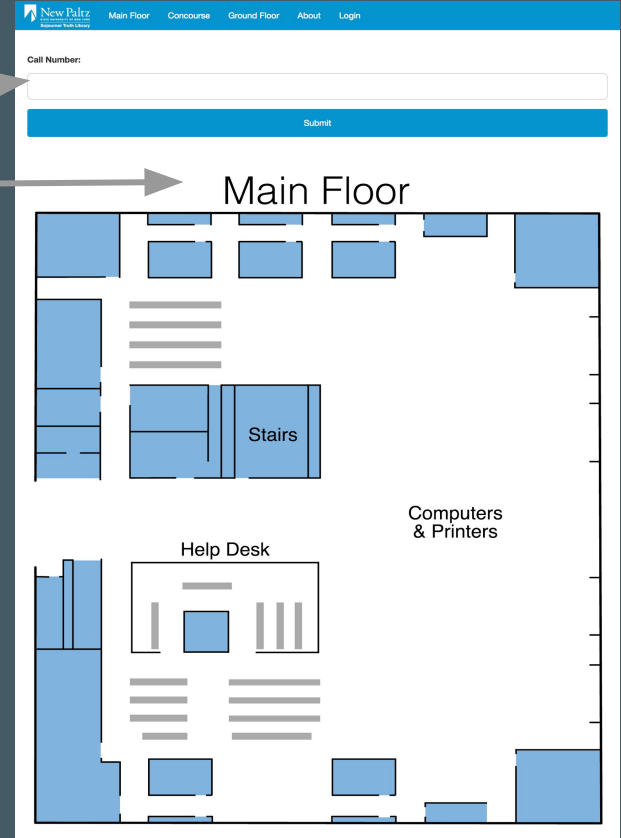
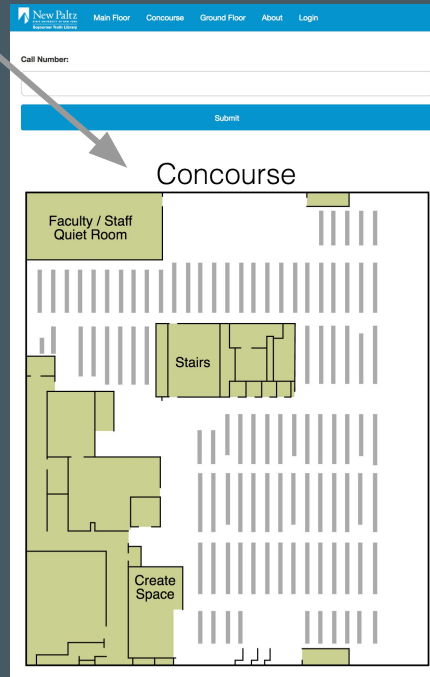
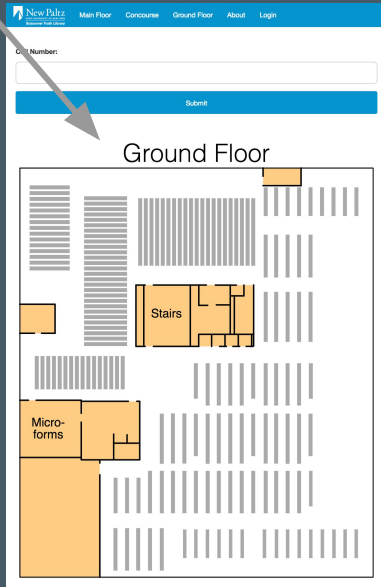
Google Charts

SYSTEM ARCHITECTURE



COMPONENTS

- Search box for call numbers
- Maps of each floor



COMPONENTS

□ Send feedback module

Once feedback is sent, the call number will be entered into the database along with the subject and shelf number associated with it.



Send Us Your FeedBack!

Found ?

☒ Yes

☐ No


Submit

Close

ID	CallNo	ShelfNo	Subject	Found	Time
1	GN346.A82015	100	Anthropology	1	2017-04-12 00:31:04
2	G1021.A75452015	97	Geography	1	2017-04-12 00:31:35
3	QA10.5.A152014	0	Computer Science & Mathematics	0	2017-04-12 00:32:00
4	SB191.R5R44342015	0	Unknown	0	2017-04-12 00:32:20
5	B1646.H24V642985	7	Unknown	0	2017-04-12 00:32:43
6	JC359.E46252014	152	Political Science	1	2017-04-12 00:32:50
7	B1646.H24V641984	7	Unknown	0	2017-04-12 00:33:21
8	LB1576.S6262016	172	Education	1	2017-04-12 00:33:44
9	BD215.S882969	24	Unknown	0	2017-04-12 00:33:45
10	GN409.S382017	100	Anthropology	1	2017-04-12 00:34:04
11	NX180.S6T492017	0	Arts, Fine Arts	0	2017-04-12 00:34:22
12	ML3534.3.M42017	0	Music	0	2017-04-12 00:34:47
13	PS141.F762017	0	English/Language/Literature	0	2017-04-12 00:35:36
14	PN1992.77.G5762017	0	English/Language/Literature	0	2017-04-12 00:35:57
15	ML420.W55R532016	0	Music	0	2017-04-12 00:36:53
16	HD30.28.M38392017	118	Unknown	1	2017-04-12 00:37:09
17	HM821.S2352017	133	Sociology	1	2017-04-12 00:38:45
18	E457.45.C662017	82	History	1	2017-04-12 00:38:56
19	JC423.B78342016	152	Political Science	1	2017-04-12 00:39:14

COMPONENTS

- ☐ Login module
- ☐ Administration panel

×

Username:

Password:

☐ Remember me

[Forgot password?](#)

Administrative Controls

[Book Locations](#)
[Shelf Locations](#)
[Feedback Statistics](#)
[Logout](#)



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COMPONENTS



CRUD database management system

View and Edit Book Locations

Main

Book Locations

Shelf Locations

Feedback Statistics

Logout

Click here to add new record.

Shelf No.	First Book	Last Book	Map
1	AC1.G72	AZ999.M6	1 Edit Delete
2	B72.F4	B131.D3v.5	1 Edit Delete
3	B131.E2	B243.G66	1 Edit Delete
4	B234.G881987	B801.H3	1 Edit Delete
5	B801.L441968	B945.M2984M221970	1 Edit Delete
6	B945.M461R4	B1646.H23P51968	1 Edit Delete
7	B1646.H24V641984	B2779.S451974	1 Edit Delete
8	B2779.S51962	B3998.W63	1 Edit Delete
9	B3998.W651983	B5802.A89A971992	1 Edit Delete
10	BD215.S881969	BD701.W36	1 Edit Delete
11	BF108.U5A5	BF181.G31951	1 Edit Delete
12	BF181.G31980	BF455.H6751965	1 Edit Delete
13	BF455.I531992	BF692.R38	1 Edit Delete
14	BF692.R4	BF721.R33	1 Edit Delete
15	BF721.R34	BF1141.B681976	1 Edit Delete
16	BF1141.C4731966	BJ1287.C631974	1 Edit Delete
17	BJ1287.L83M33	BL80.2.H621960	1 Edit Delete
18	BL80.2.H781975	BL1032.B4	1 Edit Delete
19	BL1032.K51968	BL2370.S5E4131970	1 Edit Delete
20	BL2370.S5E4132004	BL2790.M45D6	1 Edit Delete
21	BP60.T341987	BP624.A462004	1 Edit Delete
22	BR60.S41954	BR479.C551935	1 Edit Delete
23	BR479.H575	BS192.2.A11964G3	1 Edit Delete
24	BA192.2.A11964.G3v.3	BT28.I3411971	1 Edit Delete
25	BT28.N47v.3	BV3785.G69F7	1 Edit Delete

1

2

3

4

5

6

7

8

Click here to add new record.

Add Entry

Shelf No

Edit Record

First Book

Shelf No

1

Last Book

First Book

Map

cs.newpaltz.edu says:

Are you sure you want to delete this record?

Cancel

OK

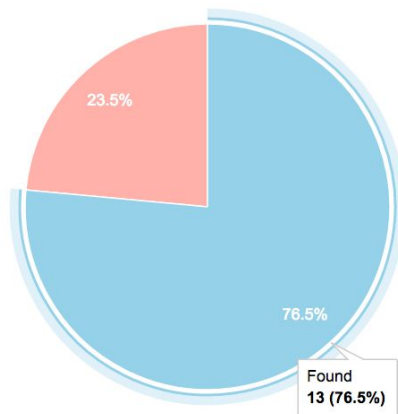
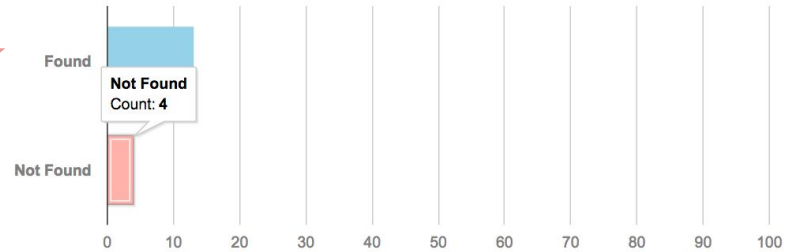
Cancel

COMPONENTS

□ Data visualization



History



SOFTWARE/SYSTEM DESCRIPTION

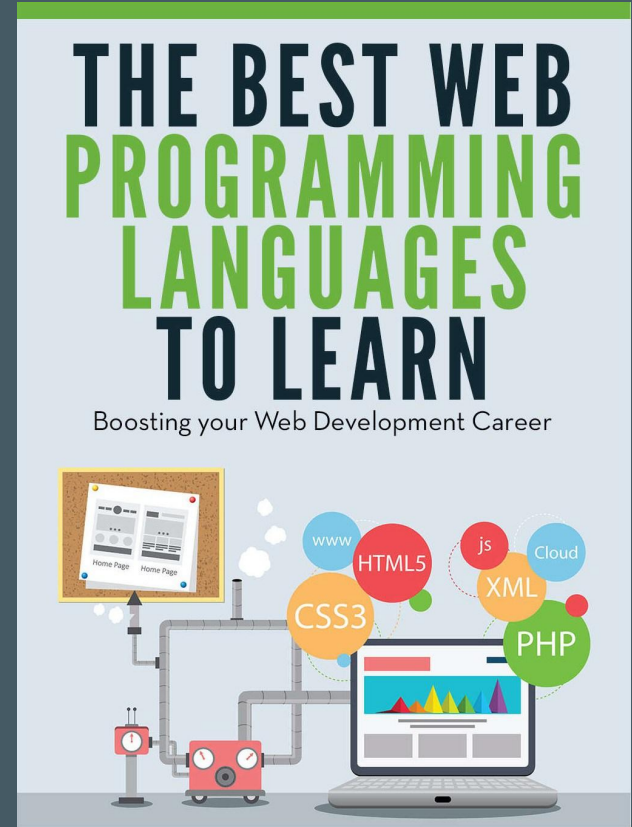
Library Map Application allows a user to search a book's location within the library shelves. The application starts by receiving a call number entered by the user. The application then finds the shelf number of the shelf containing book. It does this by finding the shelf with a range of call numbers that the user entered call number resides in. The application then colors the correct shelf on the map and then sends feedback based on subject, found or not found, etc.

TEST RESULTS/OBSERVATIONS

We began testing by feeding several real call numbers as well as fake ones into the application. We observed how it logged the feedback as well as whether it colored the correct shelf or not. We found the application to be running as expected. We also tested the functionality of the MySQL database tables to ensure that the data was added correctly. The functionality of the newly designed admin page was also tested and proved to function as expected.

PROFESSIONAL AND CAREER BENEFITS

The Library Map Application has many professional and career benefits. The Sojourner Truth Library Administration hopes to present the application to other SUNY library administrators. In addition, to use by other SUNY campuses, the application can be implemented for use in other private libraries. The application allows for smoother locating of books within a library. The Library Map Application streamlines the book locating process for the user.



CONCLUSION

For the Library Map Application, we started with a previous version of the application by a previous developer. From there, we redesigned the map to make it more dynamic by creating separate layers for the map backgrounds, selves, and coloring of the shelves. We also designed an administrative page to read feedback data, add, edit, and delete entries to the database tables which hold the data for the shelves. The Library Map Application is now more dynamic and allows for easy changes to shelf and book locations. The application was streamlined and made easy to use.

THANKS!