Wolf-Share: Book Sharing Application Phase II

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***Abstract*— Have you ever felt disheartened when you went to the library to check out a book, but due to its limited number of available copies were not granted the request? There are certain books in the library for which the demand is more and the copies are less to meet these demands. Since getting access to these books is rare, so there are chances that once a student gets access to one of these, he may wish to retain it for a longer time (by renewing it the allowed number of times). This would hinder the chances of others trying to get access to that book. But, during the span that the student keeps a book, he may not use it every day. There are days when he may have assignments, midterms, and quizzes due in other subjects. So, he would end up not using this book. This application seeks to exploit this period to help other students gain access to such books that are checked-out but are not being used by the borrower. But, wouldn't you be skeptical to lend a book to another which is issued using your credentials? We have introduced feature of penalty for defaulters of book. Due to this feature, if a borrower returns books after speculated time or misplaces the book or return it back in bad condition, user will have to pay charges to lender. The transaction will take place using PayPal. We integrated Paypal payment service for this feature to work. Also, we integrated feature of geolocation, which allows borrower to search available books from their spatial convenience. Apart from this, now lender can also provide information about condition of book user is lending, whether it new, old or torned etc.**

I. INTRODUCTION

YET TO COMPLETE

II. PREVIOUS SYSTEM : WOLFSHARE 1.0

Previous version of wolfshare application, we call it as wolfshare 1.0 was developed using PHP, MySQL, HTML, CSS and AngularJS.

Their application was working on a principle of good ratings and reviews. If user have to borrow or lend particular book from or to another user, they have to look for user rating and trust that ratings to go ahead with lending or borrowing process. There was no penalty or charge in terms of money even if books are mishandled or returned late or lost. Also, return request initiation was not provided in system. Return request was done offline in previous application.

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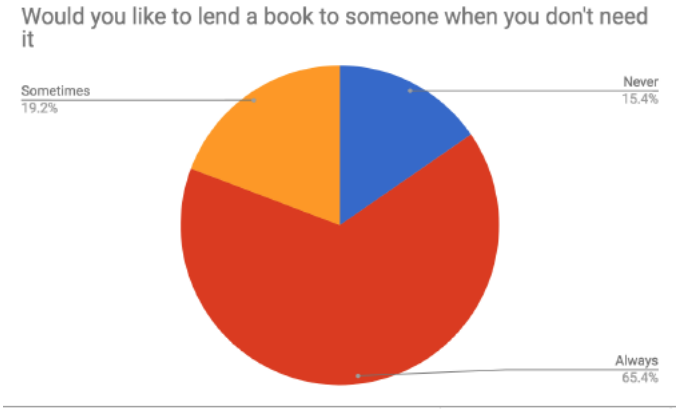
III. INITIAL SURVEY

In order to learn more about the thinking process of our target audience(university students), we have conducted a small survey to build on the already available product. Let us see how potential users responded to our intial survey when we suggested some solutions to them for problems which were present in previous system.

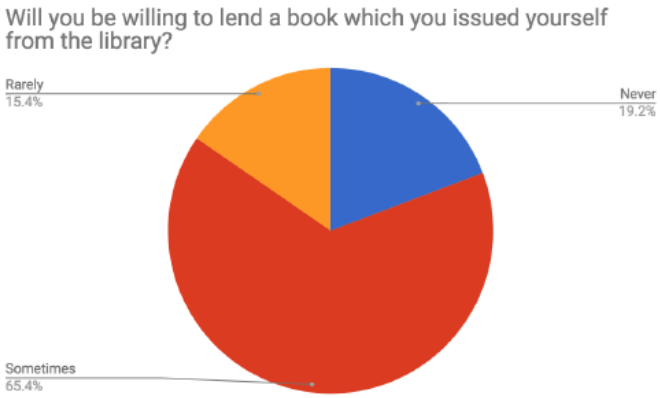
A. Would you like to lend a book to someone when you dont need it?

With this question, we wanted to emphasize on the part when the user doesnt need that book. This will reduce the shelf-time of each book. As we can see from Fig. 1, the people are not sadist in nature. They dont mind lending a book. The 35% of the students who said No for lending must have their reasons. But the most important one of those reasons being, no confidence in the unknown persons ability to return the book on time. Hence we asked the user if they would mind sharing the book which they have issued from the library



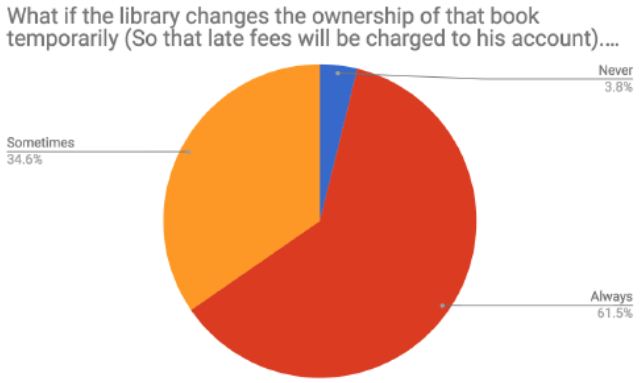
B. Will you be willing to lend a book which you issued yourself from the library?

The motive behind asking this question was, to know if people are willing to share a book which they are responsible for. These books (issued from the library) are different from the personally owned books, since the user is responsible for the issued book and would damage his history with the library if he doesnt return it. Hence, as expected, the students are reluctant to lend a book.As seen in Fig. 2, 0% people have said that they would always be available to lend a book issued from the library. Now to counter this problem we suggested them a solution and asked them if they would prefer it.



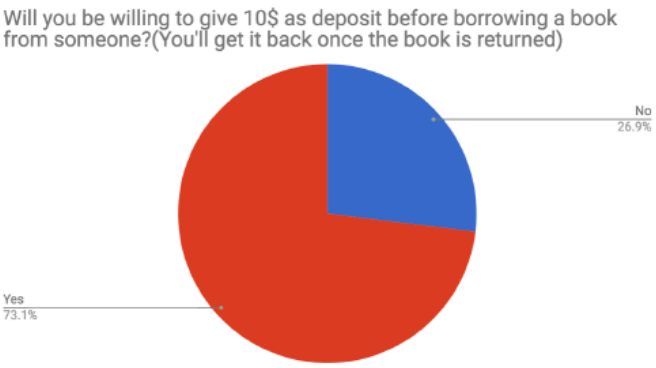
C. What if the library changes the ownership of that book temporarily (So that late fees will be charged to his account). Then will you lend the book to someone else?

This question was framed in a way that it suggests a solution to the previous problem, and asks about the acceptance possibility of the same. We can see the drastic difference in the number of people saying Always for the same question in Fig.1 and Fig.2, 62% people are willing to lend the book if they are not held responsible for any damages. Now, this can be the basis of our hypothesis that People dont mind helping out each other. Having said that, now we wanted to know, how much money the people are willing to keep as a deposit, in order to borrow a book from an unknown person.



D. Will you be willing to give 10$ as deposit before borrowing a book from someone?(Youll get it back once the book is returned)

Even though we could see around 75% people were fine with the 10$ deposit, but that much amount might not be enough for some cases where the books are expensive. But the Fig.4, demonstrates peoples commitment and understanding towards proving their genuineness. Hence, we think that just connecting the users Paypal account is enough. And if any damage to the book is done, we can charge the user for that amount later. Hence, we can conclude that adding a payment option is necessary for the users to trust this application.



IV. CHALLENGES FACED

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V. DEVELOPMENT LIFE CYCLE

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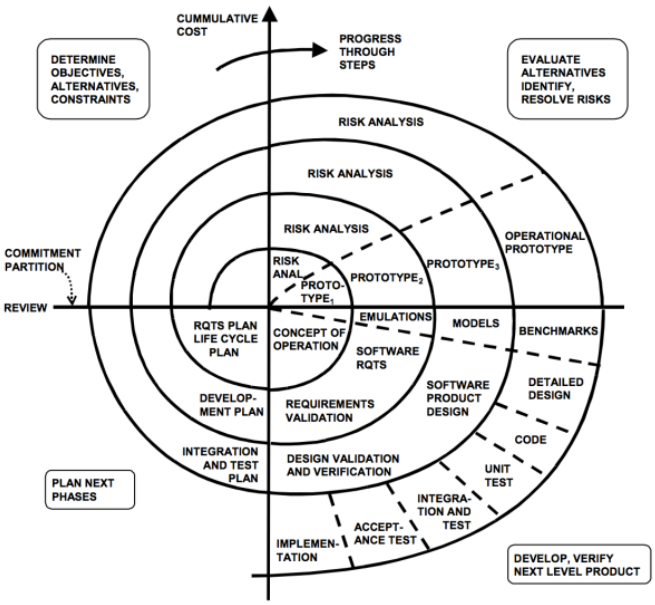

VI. IMPLEMENTATION

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VII. EVALUATION

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VIII. CONCLUSION

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IX. FUTURE SCOPE

A. Integration with NCSU Library

This will be one of the most important feature that we can include in our system. Let us discuss need for this feature. If one user issued book from library and after some time user(let say 1^{st} owner) lend the book to another user (let say 2^{nd} owner). If this 2^{nd} owner misplaced the book or did not return book on time to 1^{st} owner, library will charge penalty fees to 1^{st} owner's account. Here, even if

1^{st} owner was not at fault, this user will have to pay the penalty. Instead, after we integrate our system with NCSU library, when someone who borrowed book from library, lends that book to another user, liability of that book will automatically gets transferred the latest borrower. So, when one user borrows book from another user through our system, library will possess record of the latest holder of book and this user will be held responsible for any damage or loss of book as well as for the fine for late return. This will also lead to increase in popularity of our system.

B. Faster Mail API Integration

Though we have improved and added new features into the existing application, there is need of improving one basic and important feature which helps in user registration, that is e-mail. Current system is using PHP mailer which was already implemented in wolfshare 1.0. But this mailer does not perform well. It takes approximately 45-60 mins to send verification code to user. We will try to incorporate new mail API which will be able send verification mail within few seconds, because no one waits for this huge amount of time just for registration.

C. Chatbox

Once user (borrower) places borrow request, and it is approved by lender, lender's and borrower's e-mail are shared with each other so that they can discuss about place of exchange and any other matter related to exchange using e-mail communication. This mode of communication does not encourage use of application more and more, rather it makes both users to go away from application for communication. To overcome this issue we can implement 'chatbox' functionality. With chatbox available for communication, users will not need to go away from application, login into mail account and communicate using e-mails. With this feature, users can discuss exchange point, time and other related details with ease. As multiple chat applications are used by lots of people and are preferred by users this feature will surely boost liking towards our application. Also, it will encourage users more and more to use our application platform.

D. Book Recommendation

E. Review Mining

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REFERENCES

[1] PHP: https://github.com/php
[2] AngularJS: https://github.com/angular
[3] HTML5: https://www.w3.org/html/
[4] PHPMailer:https://github.com/PHPMailer/PHPMailer
[5] CSS3: https://www.w3.org/Style/CSS/
[6] JS:developer.mozilla.org/enUS/docs/Web/JavaScript
[7] MySQL: https://github.com/mysql
[8] Software Engineering: A Practitioners Approach 8th Edition, Roger S. Pressman, Ph.D., Bruce R. Maxim, Ph.D.
[9] https://www.lib.ncsu.edu/borrow/fines
[10] https://github.com/DexterousMe/BookSharingApplication/blob/master/Report/MarchRe