Project Report

Team-1
The Hackstreet Boys
Indian Institute of Information Technology, Vadodara

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Contents

I Project Description **4**

1 Project Overview **4**

2 The Purpose of the Project **4**

3 Scope of Work **4**

4 Project Feasibilty **4**
4.1 Team profile 5

5 Product Scenarios **5**

6 Stakeholders **5**

7 Assumptions and Constraints **5**
7.1 Assumptions 5
7.2 Constraints 6

II Requirements **6**

8 Product Use Cases **6**
8.1 Use Case Diagrams 6

9 Functional Requirements **7**
9.0.1 User Class 1 Android Users 7
9.0.2 User Class 2 General Users (Android + Web) 7
9.0.3 User Class 3 Buyers 8
9.0.4 User Class 4 Sellers 8
9.0.5 User Class 5 Everybody using the portal 8
9.0.6 User Class 6 - The Reviewer 9

10 Non-Functional Requirements **9**
10.1 Performance Requirements 9
10.2 Security Requirements 10

III Design **10**

11 User Interface **10**
11.0.1 Screen images For Mobile App: 10
11.0.2 Screen Images For Web Application: 15

IV Project Issues **18**

12 Tasks **18**
12.1 Project Planning 18

13 Risks **19**

14 Cost **20**

15 What we learned from this project **20**

16 What we have delivered **20**

Part I
Project Description

1 Project Overview

BeyondBooks is a project done by The Hackstreet Boys to cope with the problem of availability of books in college. Many times, students find themselves helpless with no books inspite of the fact that someone in college is having it because they have no clue. Similarly, rating and reviews of books also gives us a perfect insight of what might this book be like as they are rated by student themselves.

2 The Purpose of the Project

The purpose of the project is to aid the students in finding the best book for the courses that they are taking. The portal will provide a space where the users (faculty and students) can review and rate the books that they have read. This will help new students to choose the books based on their reviews from the faculty and their peers.
The system intends to bridge the gap between buyers and sellers by bringing them under the same roof. This system will provide the user with the sources from where he can buy books. Similarly, if one wants to sell a particular book, the system will provide him/her the means (via advertisement and posts) to do so.

The system will also provide a platform (open forum) for people to discuss various issues regarding their courses. Students and faculty can review the products being sold. They can provide their comments regarding the same.

3 Scope of Work

The project will provide a unified portal, accessible via the internet and an android application. The main functionalities of the portal will be:

- Buying and Selling of Books.
- Books Rating / Review (Faculty and Students)
  - Users can rate and give their reviews on books whose titles will be uploaded by the users (faculty or student).
- Open Discussion Forum (for books and course related issues).
  - All the users can discuss anything related to the material on an open forum.

4 Project Feasibilty

The results of the feasibility study show us that the project is technically, politically, economically feasible.

The feasibility study took into account:

- The technical skills of the team members.
- The availability of softwares which will aid in the project.

4.1 Team profile

This gives an idea that the team is fully capable of carrying out this project. The team as a whole has all technical skills that are required for this project. There are about three to four members in each domain so that there would not be any solo responsibility. Team members with their domains are mentioned.

- **Web Development Programming :** Kushal Jangid, Akhilesh , Sonu Patidar
- **Android Programming :** Anjul Tyagi, Gaurav Yadav, Aditya Prakash,Harish Krupo
- **Database Design & UI Design :** Dilip Puri,Harish Krupo, Raghuvar Prajapati, Sonu Patidar, Chirag Panpalia
- **Server Design :** Harish Krupo
- **System-Testing & Integration :** Harish Krupo, Chirag Panpalia, Aditya Prakash
- **Documentation (After each phase a report will be generated) :** Dilip Puri, Raghuvar Prajapati

All members of the group will be part of each activity. Each activity will be carried out in the supervision of specified members.

5 Product Scenarios

The end product will be used by IIITV faculty and students for academic purposes. Students will ask questions, review and rate books. The system will facilitate the information regarding books and a common platform for discussion.

6 Stakeholders

Following stakeholders are involved in our project:

- Students
- Faculty
- ICT committee in College.

7 Assumptions and Constraints

7.1 Assumptions

1. A high end software generation is not possible due to compatibility issues arising from the current stock of resources.
2. Use of the software created would only be within the IIITV Network.
3. Students can login to the system only using their college Email ID.

4. ID for the faculty would be given by the Administrator.

5. Any conversation between the buyer and seller would not be monitored. The transaction will be completely unrelated to the system.

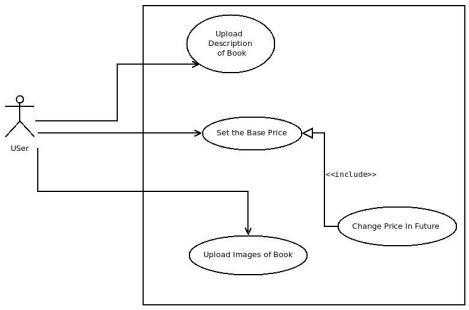
7.2 Constraints

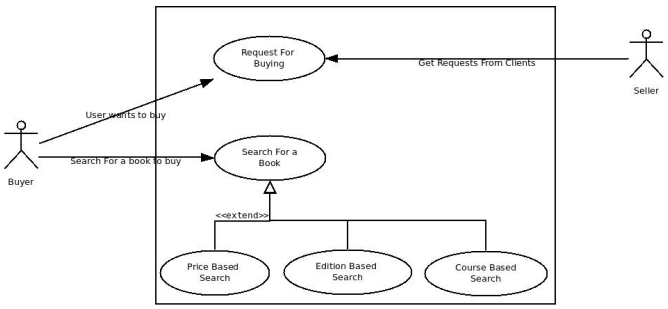
1. Only ISBN can be entered for uploading the books, so as to reduce redundancy in the book database as we aren't using any moderator for this.

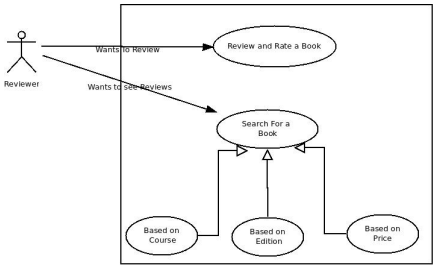
Part II
Requirements

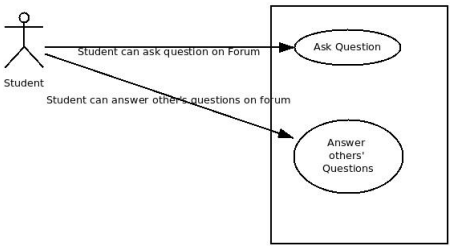
8 Product Use Cases

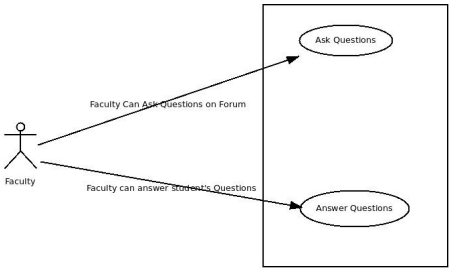
8.1 Use Case Diagrams











9 Functional Requirements

This section gives details about all the functional requrements available to the user in the application.

9.0.1 User Class 1 Android Users

- ID: FR1
  TITLE: Download the mobile application
  DESC: A user should be able to download the mobile application through either an application store or similar service on the mobile phone. The application should be free to download.
  RAT: In order for a user to download the user application.
  DEP: None

- ID: FR2
  TITLE: Upgrade the mobile application
  DESC: When a new/updated version or release of the software is released, the user should check for these manually. The download of the new release should be done through the mobile phone in the same way as downloading the mobile application.
  RAT: In order for a user to download the latest application.
  DEP: FR1

9.0.2 User Class 2 General Users (Android + Web)

- ID: FR4
  TITLE: Login to the portal
  DESC: Given that a user has registered, then the user should be able to log in to the mobile application/web portal. The log-in information will be stored on the phone (in case of android app) and in form of ccokies (web portal) and in the future the user should be logged in automatically.
  RAT: In order for a user to register to the portal.
  DEP:

- ID: FR5
  TITLE: Password retrieval for forgotten passwords
  DESC: Given that a user has registered, then the user should be able to retrieve his/her password by e- mail.

RAT: In order for a user to retrieve his/her password
DEP:

- ID: FR6
  TITLE: Build a profile on the portal
  DESC: Given that a user has registered, the user should be able to customize his/her profile, add books to his/her personal reading list, upload course materials, buy/sell stuff.
  RAT: In order for a user to use full functionalities of out portal.
  DEP:

9.0.3 User Class 3 Buyers

- ID: FR7
  TITLE: Get the contact of any seller
  DESC: Given that a user has registered and wants to buy books being sold by another user, he/she should be able to get the contact number of the seller as to get clear information of the product being sold.
  RAT: In order to establish trust factor between buyer and seller and to ensure that buyer is aware of the product he/she is buying.
  DEP: FR6

- ID: FR8
  TITLE: Search and view all available deals and item details
  DESC: Popularity, edition, price, ratings, isbn, seller ratings
  RAT: In order to provide a user with different parameters to filter and narrow his search.
  DEP: FR1 or None

- ID: FR9
  TITLE: View the best deals on the home page of buying and selling portal
  DESC: To make the job of a buyer easier by giving him exiting deals to make him buy stuff and revisit our portal.
  RAT: To attract more buyers and sellers to buy/sell books.
  DEP: RF1 or None

9.0.4 User Class 4 Sellers

- ID: FR10
  TITLE: Upload and categorize books and USP of each book i.e. book details.
  DESC: To make the searching of books by buyers more easier.
  RAT: To make searching of books easier.
  DEP: FR6

9.0.5 User Class 5 Everybody using the portal

Open Forum

- ID: FR11
  TITLE: Start any conversation or discussion on the forum
  DESC: To encourage users to clear their doubts and discuss about any idea they have in mind.
  RAT: To let the ideas of different people flow.
  DEP: FR6

- ID: FR12
  TITLE: Answer and participate in any discussion or questions
  DESC: To encourage other users o help their peers in their idea or clear their doubts.
  RAT: To encourage interaction between users.
  DEP: FR6

9.0.6 User Class 6 - The Reviewer

- ID: FR13
  TITLE: Separate profile for everybody
  DESC: Every user faculty or students has seprate profiles. To do any kind of activity one has to sign up, after confirming their institutes's email account he/she can use the features of software.
  RAT: In order to differentiate the classes of users.
  DEP: None

- ID: FR14
  TITLE: Able to review only after logging in
  DESC: After providing the user name and password user can use the various functionalities of the software.
  RAT: It helps in verifying the user's identity and get the correct/verified reviews
  DEP: FR13

10 Non-Functional Requirements

10.1 Performance Requirements

- The software must be easily available to every student and faculty of IIITV.
- The web application must be resposive
- The user interface must be easy to use.
- The user profile creation must be as automatic as possible.
- The search feature must be quick.
- Proper and timly delivery of notification.

10.2 Security Requirements

- ID: SR1
  TITLE: Password hashing
  DESC: During logging in or while registering to the portal, the password user types isn't directly stored to the database. Password hashing is used to safely store the passwords.
  RAT: In order to keep the password of the user secure.

- ID: SR2
  TITLE: Page crash should not reveal application or server information
  DESC: In case of any error or sudden page crash, application or server info should not be displayed. For this case, error page should be displayed and error pages should be created for any known error.
  RAT: In order to prevent the application from being vulnerable.

Part III
Design

11 User Interface

11.0.1 Screen images For Mobile App:

We have prototyped what we would like the basic user interface concepts to be. The screenshots are from the next page:

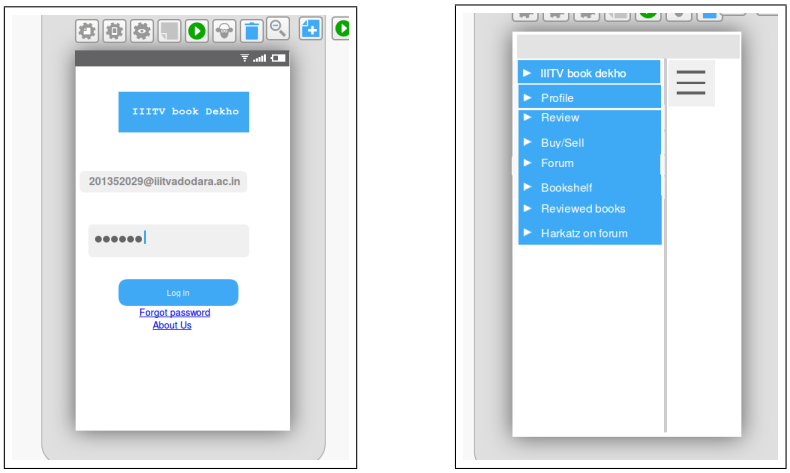


Figure 1: First: Login Page, Second: Navigator

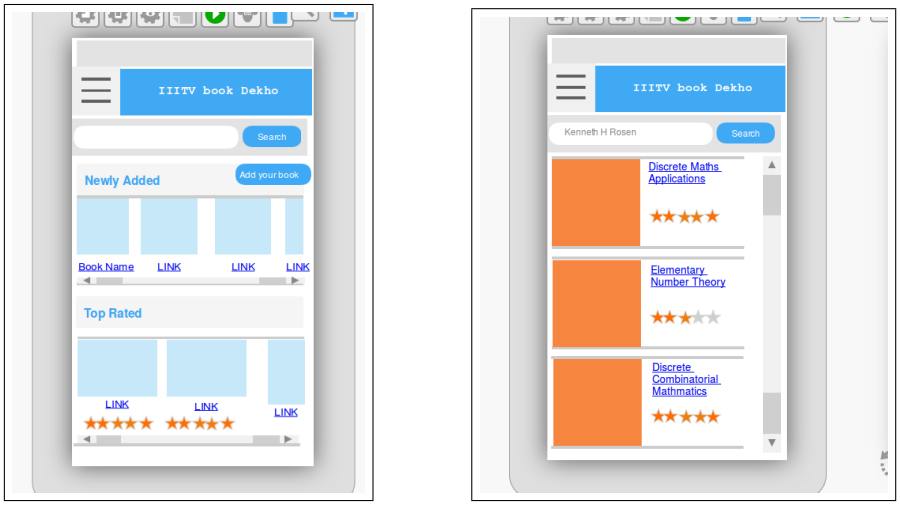


Figure 2: First: BookShelf, Second: BookSearch

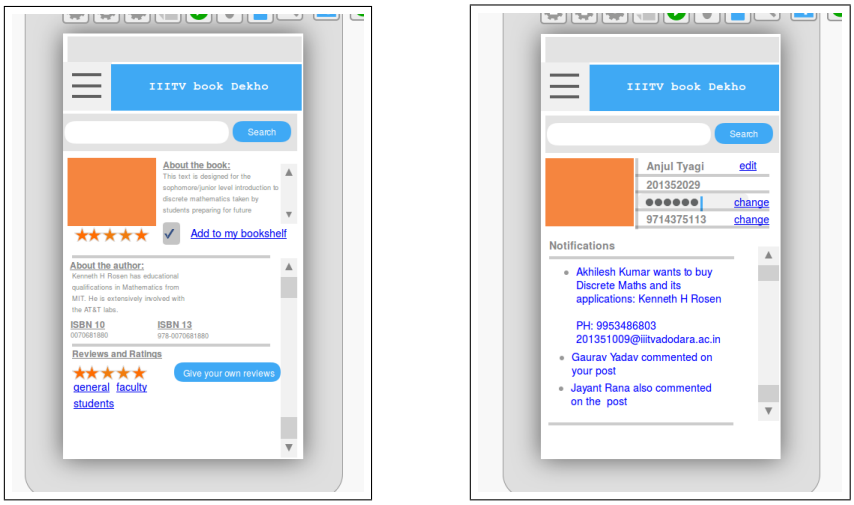


Figure 3: First: Books' Description, Second: User Profile & Notifications

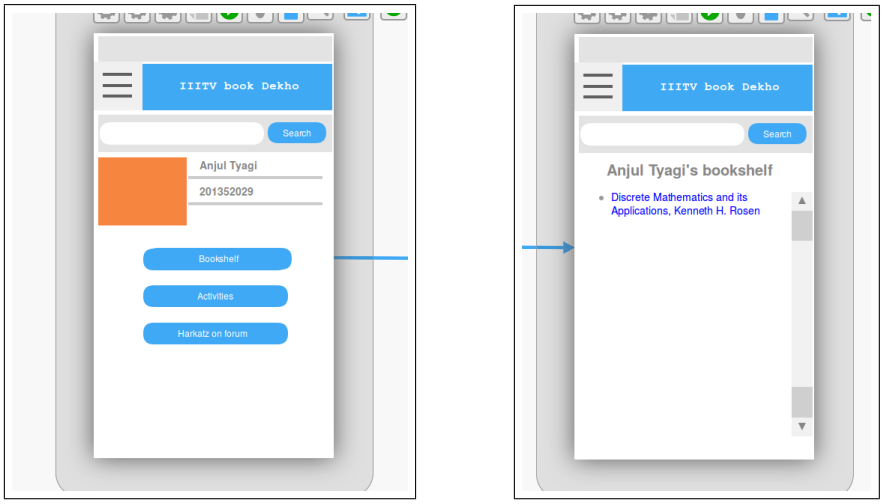


Figure 4: First: User Profile Navigator, Second: Users' Bookshelf

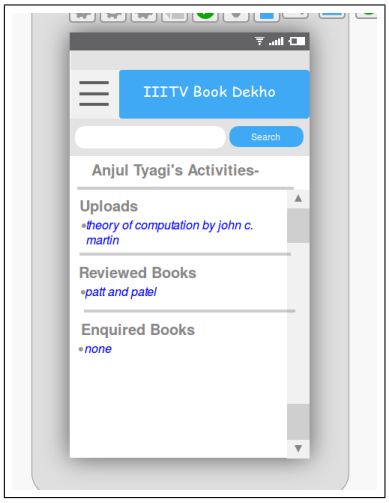
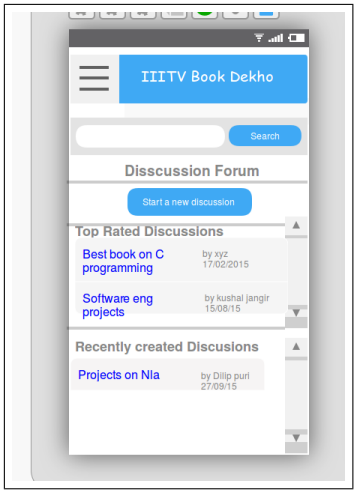


Figure 5: Users' Activities



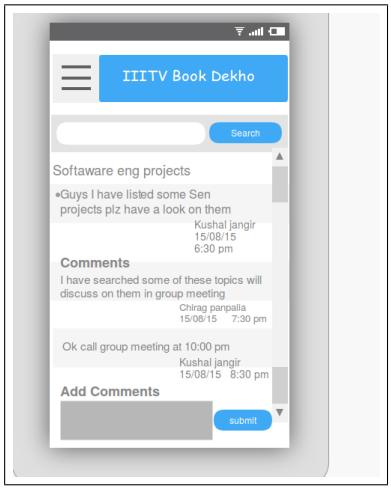


Figure 6: First: Discussion Forum Homepage, Second: Listing of Discussions

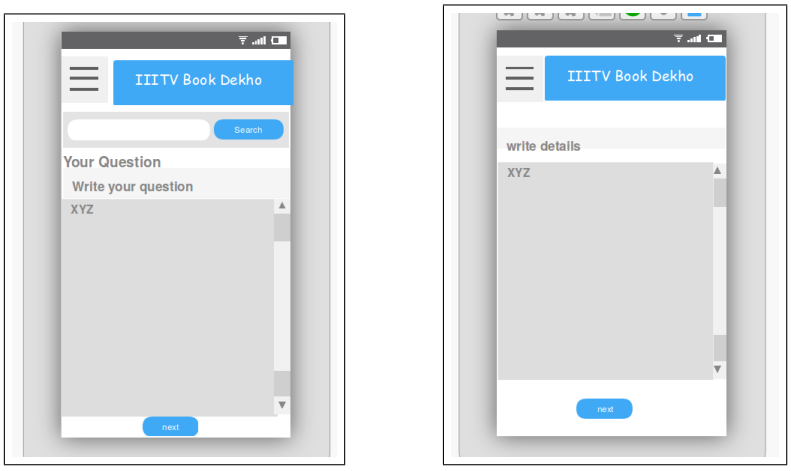


Figure 7: Adding Question on Forum

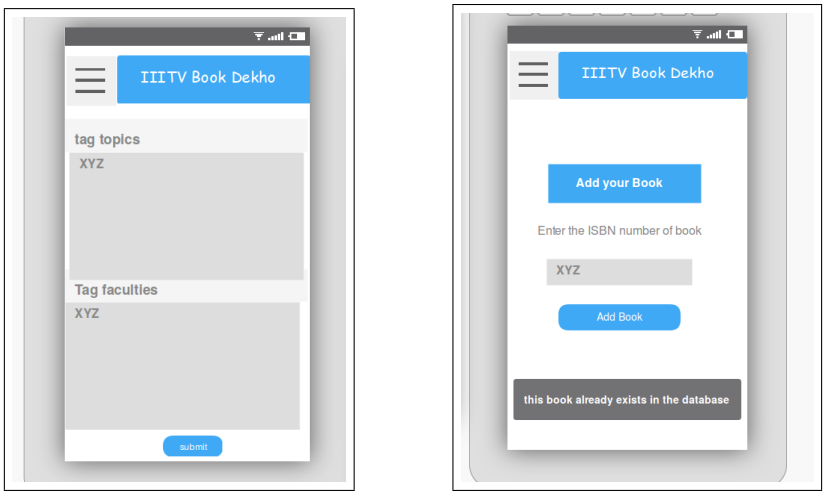


Figure 8: First: Adding Question on Forum, Second: Adding a new Book

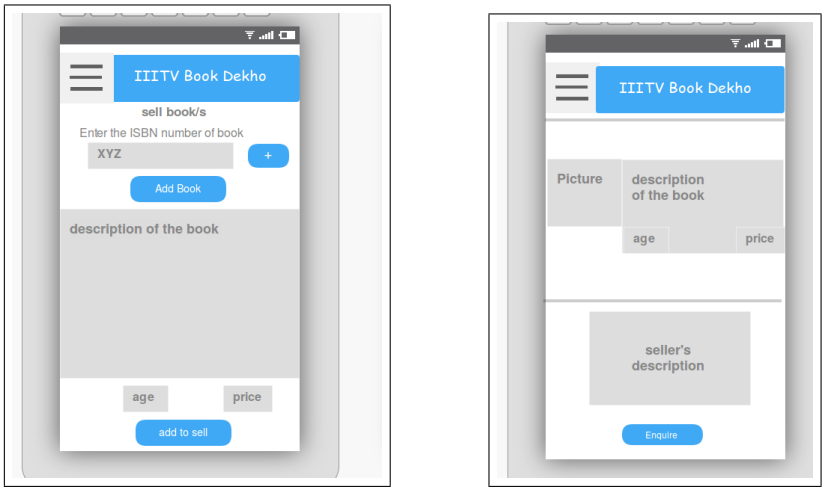


Figure 9: First: Adding Book to Sell

11.0.2 Screen Images For Web Application:

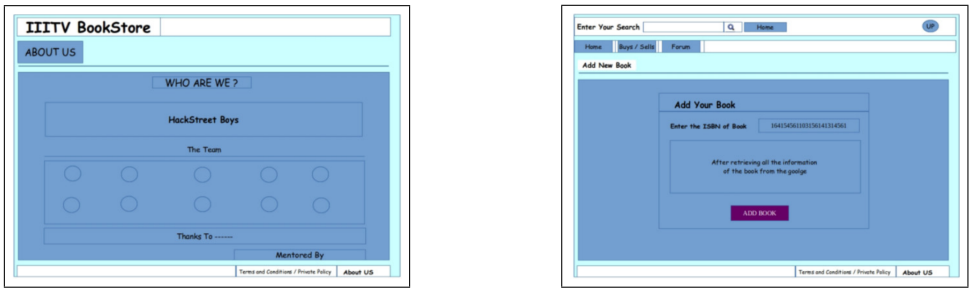


Figure 10: First:About US, Second: Add Book to Sell

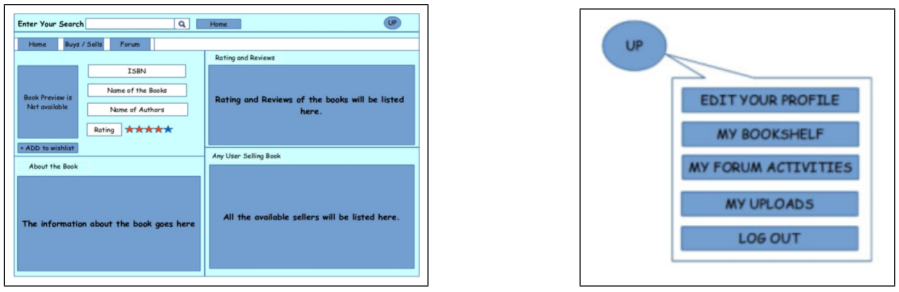
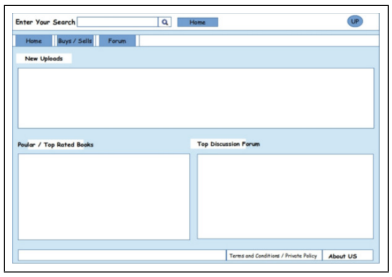


Figure 11: First: Book Description, Second: User Profile Navigator



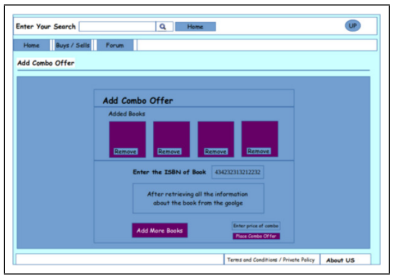


Figure 12: First: New Uploads Page, Second: Add Combo Offer

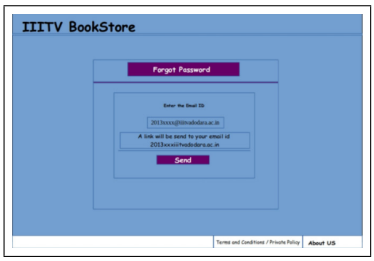
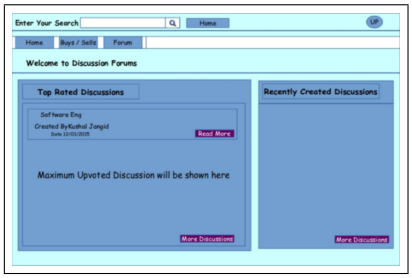


Figure 13: First: Sending RTB to Seller, Second: Forgot Password



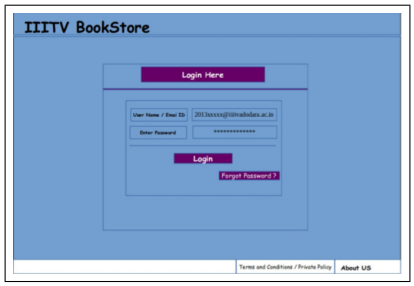


Figure 14: First: Discussion Forum Home Page, Second: Login Page

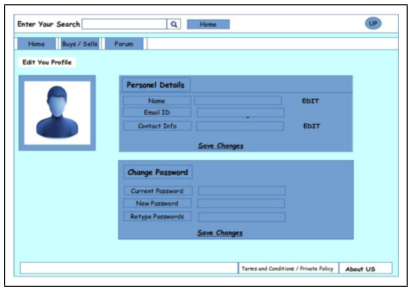
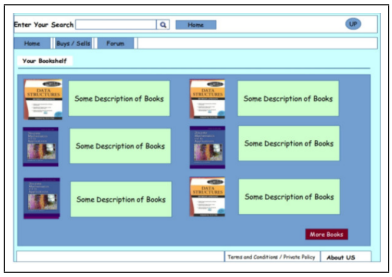


Figure 15: First: Book Description Page, Second: User Profile Page



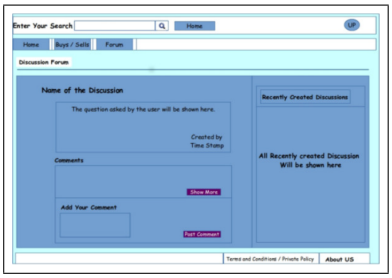
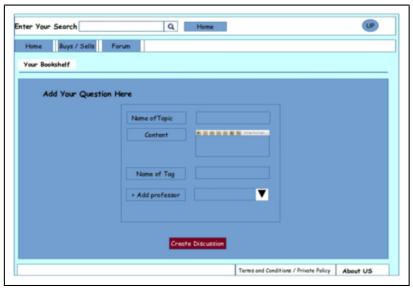


Figure 16: First: BookShelf, Second: Listing of Discussions



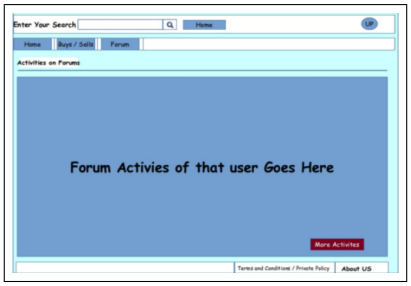


Figure 17: First: Adding Question on Forum, Second: Users' Activities

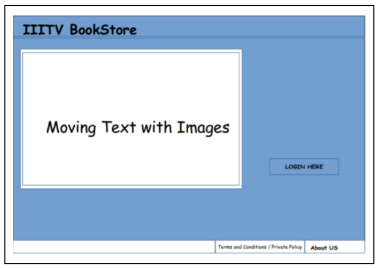


Figure 18: First: Listing of Search, Second: Websites' Home Page

Part IV
Project Issues

12 Tasks

12.1 Project Planning

Here is our plan of actions for the various development phases:

1. Proposal Writing: Till $7-8^{th}$ September 2015.
2. Requirements gathering and analysis: $2-4^{th}$ September 2015
   (a) Target Audience Survey(Students of IIITV): 5^{th} September 2015.
   (b) Target Audience Survey(Faculty Interviews): 8^{th} September 2015.
   (c) Requirement analysis and SRS preperation: Till 10^{th} September 2015.
3. Design Phase:
   13^{th} September to 29^{th} of September 2015.
4. Coding, Unit Testing and Integration: 1^{st} October - 7^{th} November 2015.
5. System Testing: 8^{th}-12^{th} November 2015.

13 Risks

Risk ID	Risk(Description)	Impact	Mitigation Plan	Contingency Plan
R01	Team member(s) is/are not available for project(due to health issues or unavoidable circumstances)	Deadline of project tasks may be extended	Proper hygienic atmosphere, food and water should be available	If team member(s) is/are not available, then other members will have to do extra work
R02	Internet is not available	Some tasks will remain incomplete	All tasks dependent on internet for their functionality should be done with higher priority	Purchase of internet with our own money to finish tasks.
R03	Database system crashes	Loss of data	Backup in Dropbox, Github and Offline(Hard-disk)	Start with full fledge and recreate it
R04	Documents created are lost	If lost, then project plan will be affected	Backup in Dropbox, Github and Offline(Hard-disk)	Start with full fledge and recreate it
R05	Team member/s doesn't want to do any project related work (non-conforming team member/s)	It will affect project deadline and remaining members will have to do extra work	Try to create his/her interest by giving him/her work in which he/she is interested	If this doesn't workout, then other team members will have to do his work, because his work cannot be leftout.
R06	CASE tools' current version is unstable or it's support is pulled out	Project implementation part will be affected	First research the internet or use help from other people to find out the stable version of that tool or go for the best alternative	If this doesn't workout rework it
R07	If we find some requirement which is to be changed (add or remove)	It would be time consuming so deadline may be violated	Do proper requirement analysis and be upto date	Make modules independent and keep hard and soft deadlines for changes and work overtime to meet customer requirements.
R08	Improper communication durig Mid-sem break	Work dependencies will be there and efficient work will not be done	Give each member independent tasks and use multimedia communication like whatsapp	Do overtime

14 Cost

Cost has not been a decisive factor in the project. Basic requirements of the project are systems and latest software. These are all open source so no price was involved. Although some cost was involved during the requirement gathering.

15 What we learned from this project

In this projet we learned many things new:-

1. How each stakeholder effects project and project deliverables.
2. How each stakeholder is connected to project and what role he plays in project.
3. How software engineering principles are really applied in any project.
4. What actually are software engineering principles.
5. What really is produced as work products in any software project.
6. The key thing is we worked as a team of 10 people for around 13 weeks.
7. Many of the members were new to web developing and android developing. They learned the respective by doing it.
8. Only win-win situation is acceptable. And many more...

16 What we have delivered

This will be tested by the users.