

SCS 3214 / IS 3113: Group Project II - 2020

Interim Report

Project Title: NovelGeek

Project Group Details

1. Group number: 51
2. Group members:

<i>Name</i>	<i>Reg. Number</i>	<i>Index Number</i>	<i>Email address</i>	<i>Mobile Phone</i>
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(iv) P.D.C.G. Wijesekara	2017/CS/194	17001943	chethaniwijesekara@gmail.com	0774051964
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Details of Project Supervisor, Co-supervisor, Advisors and Clients

Project Supervisor (Academic Staff of UCSC):

Name of the supervisor: Dr.Thilina Halloluwa

Signature of the supervisor:

Date:

Project Co-Supervisor (Assigned by Course Coordinator):

Name of the co-supervisor: Ms. Hiruni Kegalle

Signature of the co-supervisor:

Date:

Project Advisors: (External industry advisors, if any)

(Please provide, Name, Organization, email address and institute)

1.
2.
3.

The client of the Project (If applicable, otherwise supervisor will be considered as the client)

Name of the client: None

Address of the client: None

Contact person at client: None

Contact number of the contact person: None

e-mail address of the contact person: None

Project Details:

1. Project Title: NovelGeek

2. The Goal and Objectives:

Goal

- Our goal is to provide social media for all the book lovers, who intend to share their feelings about the books that they read.

Objectives

- Provide a platform to share the experience with others about the book they read
- Provide a platform to find friends who have similar interest with books
- Maintain book lists and recommended books according to their preference
- Provide a platform to contact buyers who have the interest to buy books
- Provide a platform for authors to share their works.

3. Problem Definition

Almost every one of us has read a book and have been amazed by it and many people read books and they like to share their reading experience and express their feelings with others, but most of the time we have no one to share the feeling, and it's hard to find people with the same taste in books as you. Local authors have no way of marketing there new books, and books are considerably expensive, some of us like to collect books and some of us want to sell our book after finishing reading or if it isn't interesting, there is no proper platform where we can contact people who would be interested in buying books and finding a book that would match our taste is not also an easy task, so our system would be a solution to all of these problems.

4. A brief introduction to the project

Everyone knows social media networks like Facebook, twitter etc. serving different purposes and are used by millions of people around the world. What we plan to do in our project is a social media network for books. Most of us have faced situations where when we read a book and we need to share the feeling we experience with others, the problem is finding someone who has read the book or has similar interests, and our project would be a solution to that. We would like to connect all the book lovers out there, they'd be able to express their views, find books and persons of interest, sell and buy books etc. And also the authors will be able to share their new works here.

5. The scope of the project

Users of the system:

- User
- Administrator

Main functionalities of the system:

- User registration and login.
- Profile management.
- Posts management
- Manage friends.
- Manage groups.
- Maintain book lists.
- Rate and review books.
- Generate book recommendations
- Book sales management (Sell books, Auction books)
- Polls management
- Communication management (Chat system).
- View statistical information about users and books.
- Share books and fan-fictions.
- Review reports on posts, polls.

6. Technologies Used

Front End Technology - Angular

- The reason we chose Angular for the front end is mainly that Angular is an efficient framework that can create Rich Internet Applications which are easy to maintain.
- With the help of Angular, we can provide a beautifully designed, rich and responsive web application to the client.
- It also provides developers with an option to write client-side applications using JavaScript in a clean Model View Controller way.
- As the system grows larger and more complex, the state management system provided in Angular will help the developers to keep things in order.
- Other advantages in Angular such as dependency injections which will lead to loose coupling, reusable components and also Angular code is unit-testable which will help the developers in the final stages of the development.

Back End Technology - Spring

- The main reason for choosing Spring is due to the fact that Spring is a very powerful yet lightweight Java Enterprise Edition application development framework.

- On top of that Spring has a simple learning curve which will help our team members to easily get used to it and start developing given the fact we have a limited amount of time.
- MVC framework can be easily implemented in Spring which will help to keep the development of the system neat and in order.
- Spring will help you keep your back end development separate and at the same time will make integration with the front end framework effortless, regardless of what framework we use.
- Spring offers horizontal scalability which will help the client-side to grow without slowing down the response time.
- Spring is compatible with any kind of database which is a huge advantage.
- We can use frameworks like Hibernate on top of Spring which will help us dealing with databases much easier.

Database -MySQL

- Considering the fact that our system is slightly similar to a social networking website the relational nature of users in a social network can cause lots of duplication to occur.
- MySQL would be the better recommendation since it will have the data reliability and relational tools necessary to handle the interactions and relationships among numerous users.

7. Feasibility Study

Technical Feasibility

- Technical aspects of the development are well within the group's ability. The team is currently searching on a suitable technical stack to be used.
- The tentative technology stack is described above and we are using free technologies for front-end, back-end and database requirements

Economical Feasibility

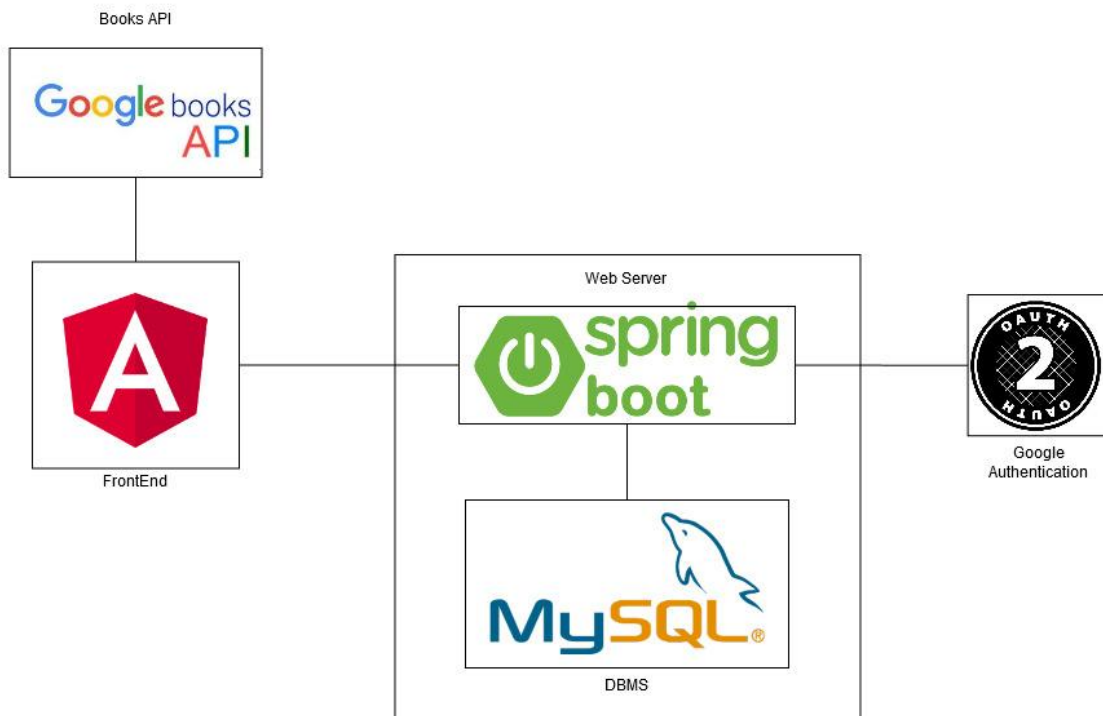
- As we mentioned we are using free technologies to develop the system. Therefore there will be no cost incurred with the development, only the cost incurred for deployment must be considered.
- Currently, we are planning to host the web application on AWS free-tier server, which is provided by AWS for free for one year. Therefore no charge for the first year of operation.

Schedule Feasibility

A timeframe is not a client requirement, but however, it is a course objective.

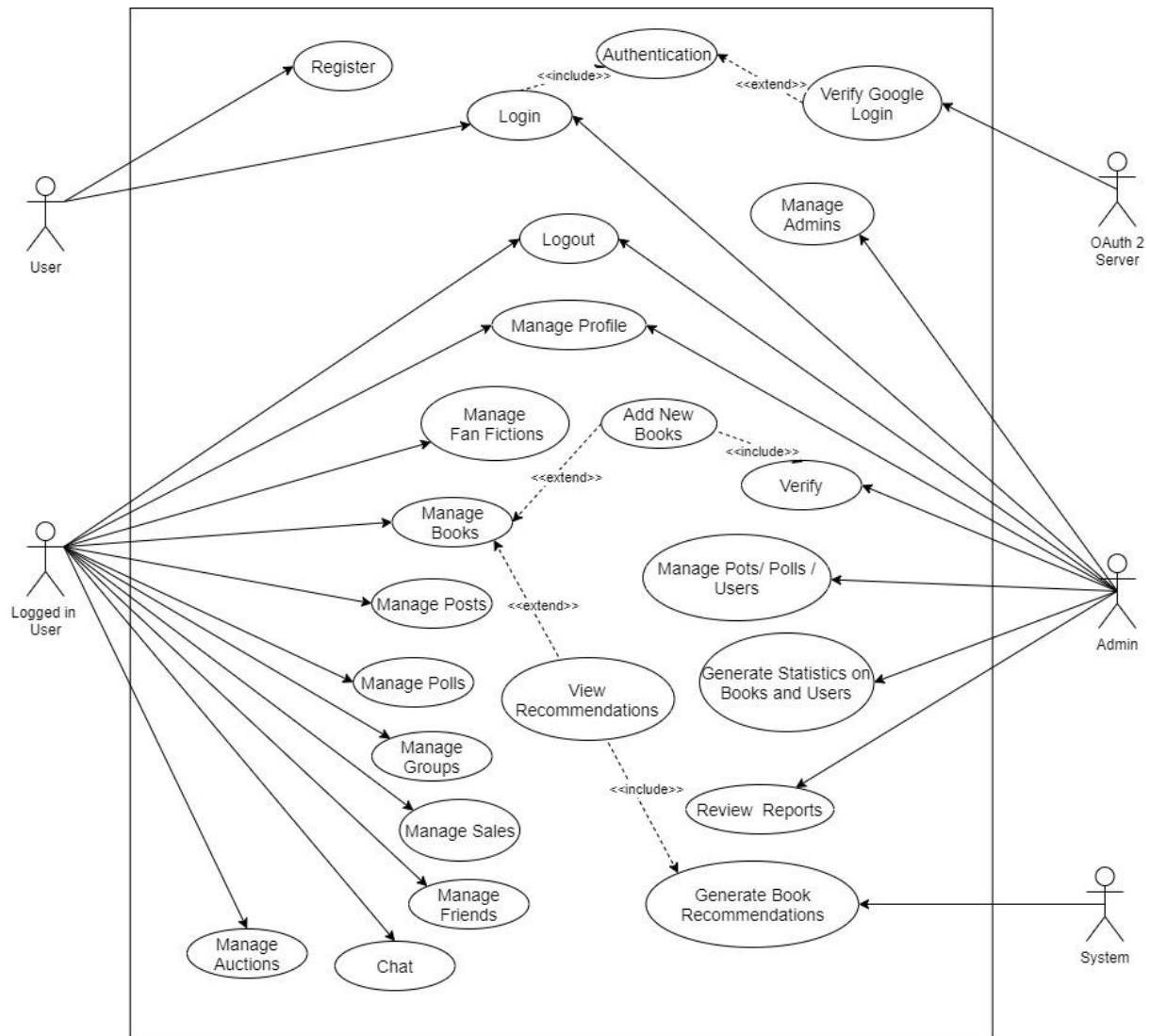
- Number of group members = 6
- Number of working hours (per day per person) = 2 hrs
- Man hours per week (per person) = $2 \times 7 = 14$ hrs
- Estimated number of weeks = 30
- Estimated total number of man-hours (per person) = $14 \times 30 = 420$ hrs
- Estimated total number of man-hours for group = $420 \times 6 = 2520$ hrs

8. High-Level Architecture

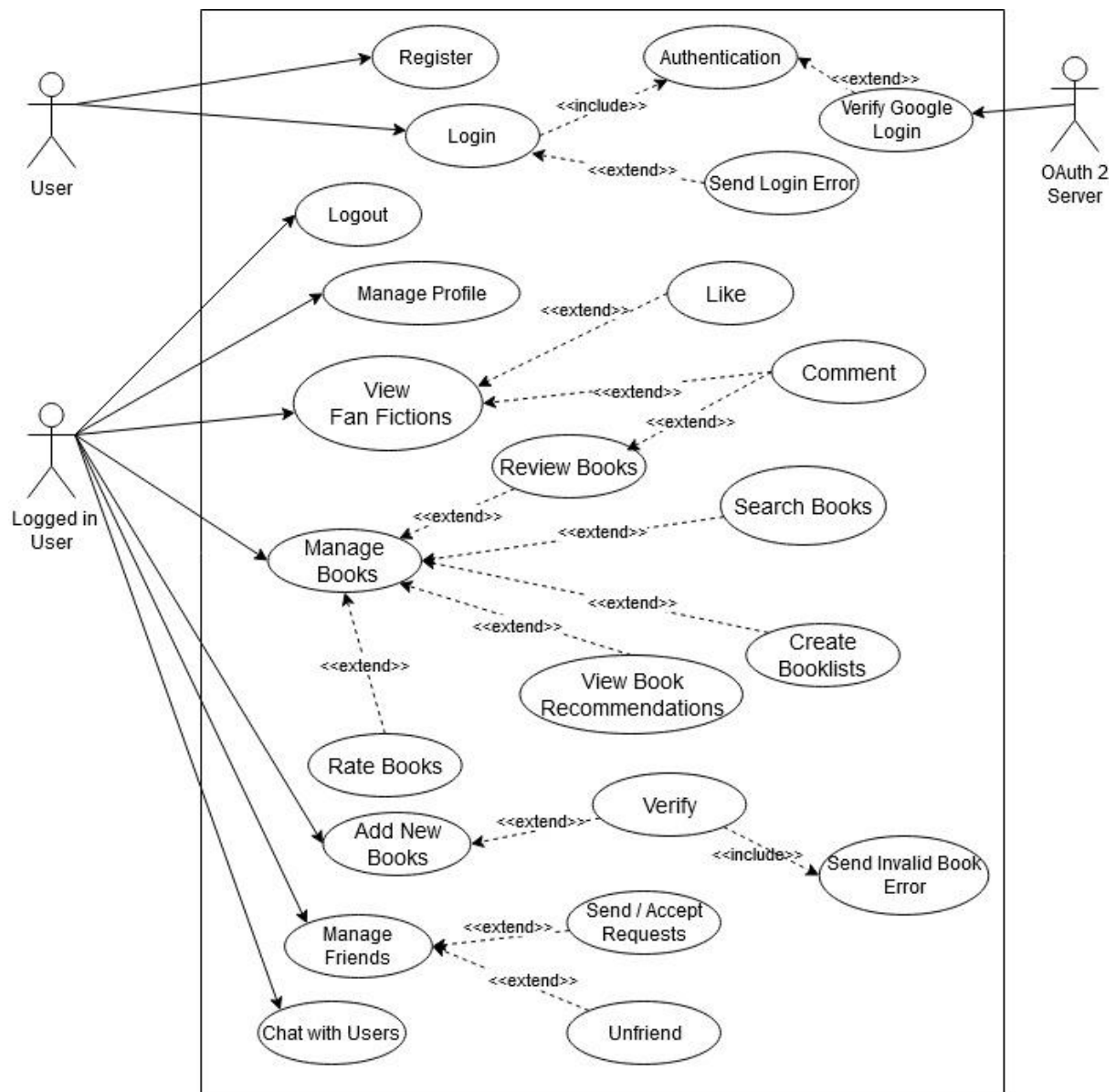


9. Requirements Specification

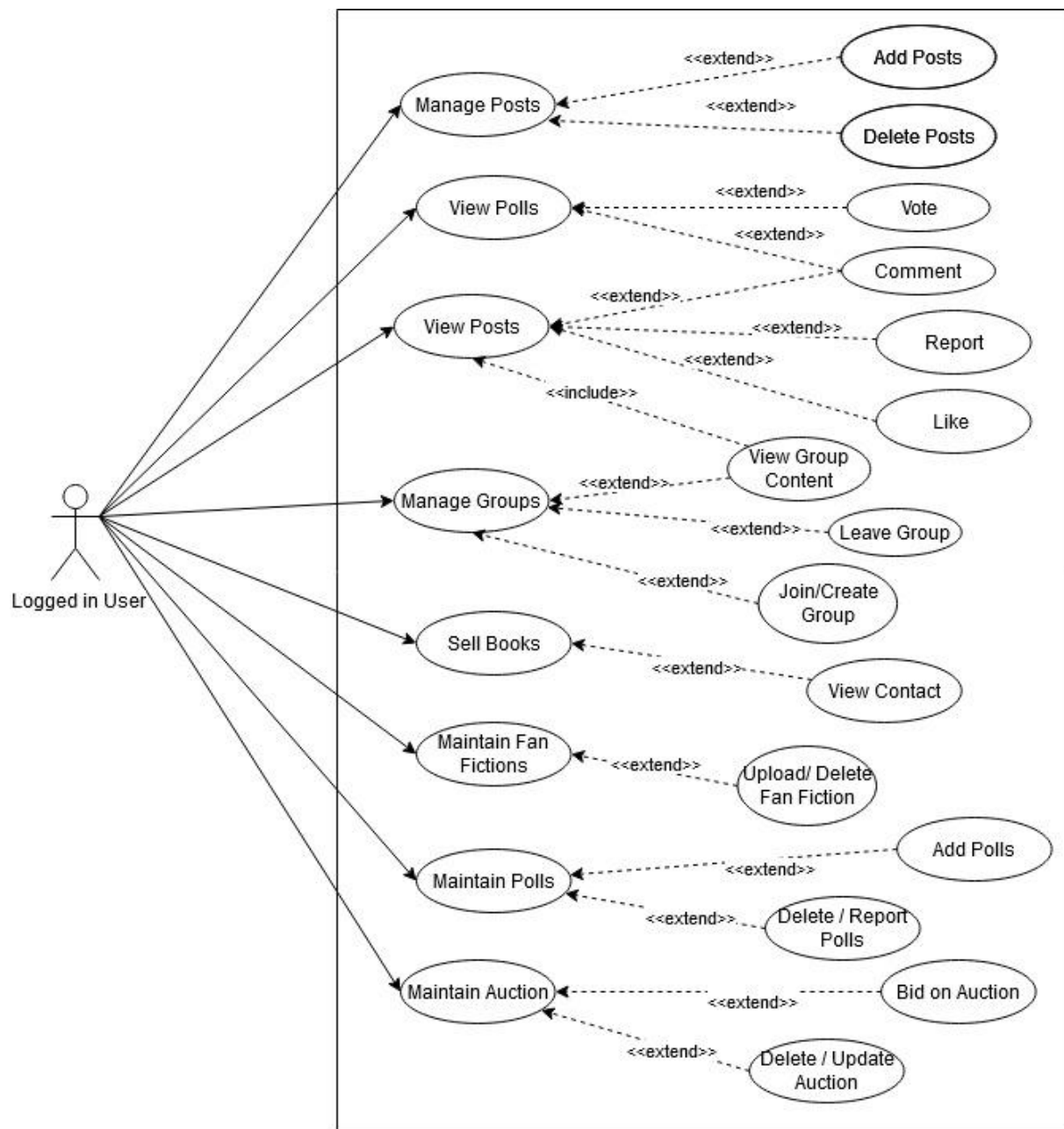
High-Level Use Case



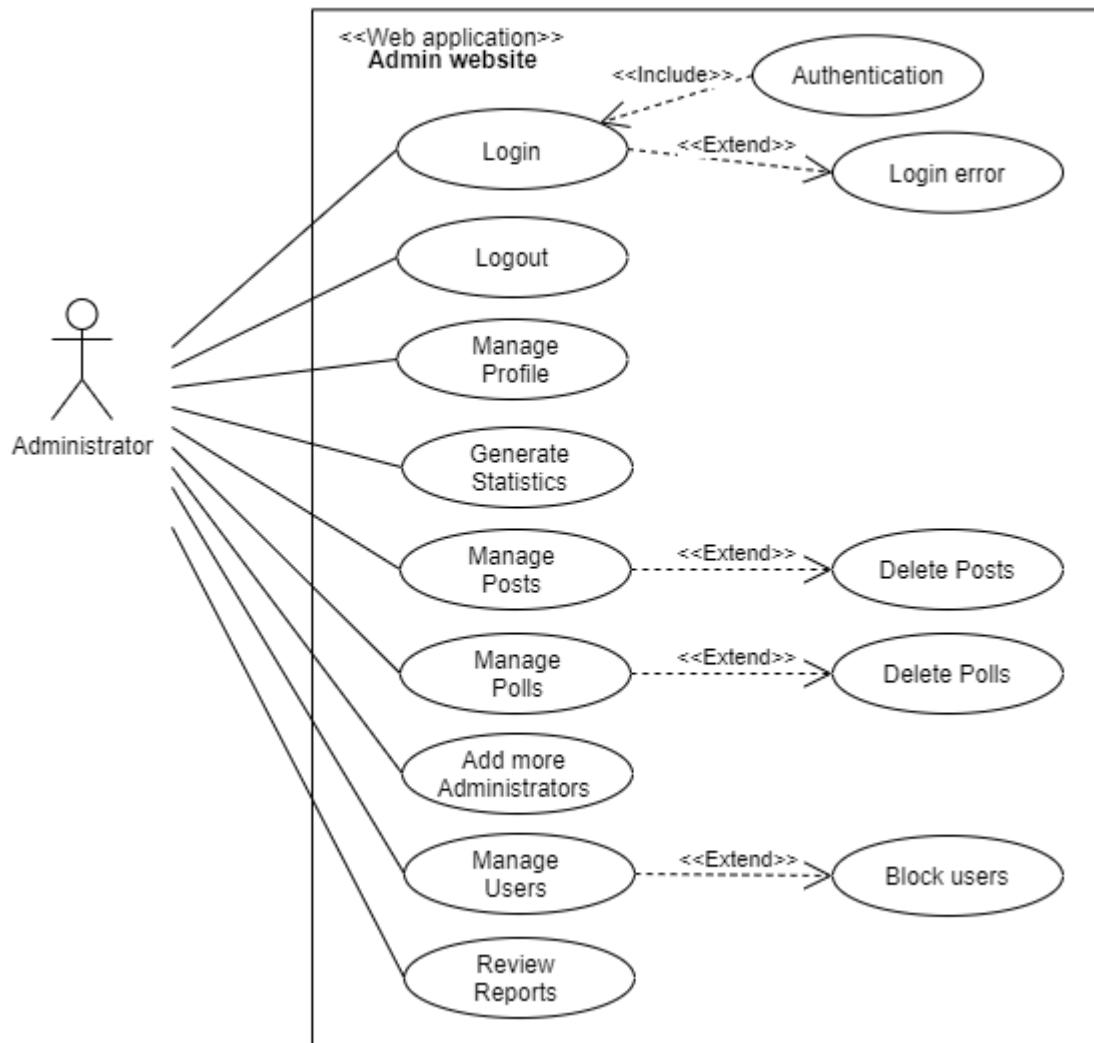
Use Case I of User



Use Case II of User

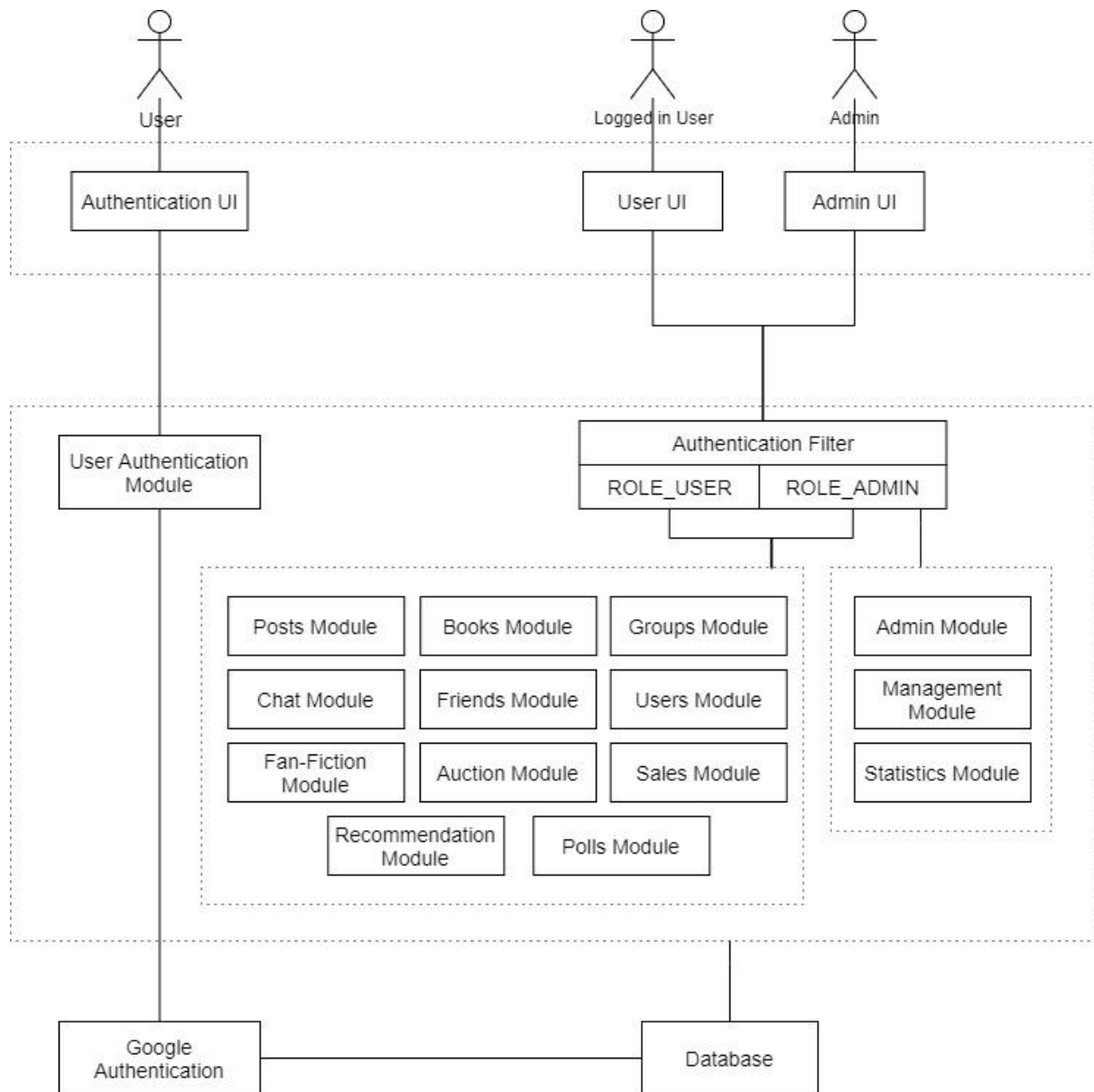


Use Case of Admin

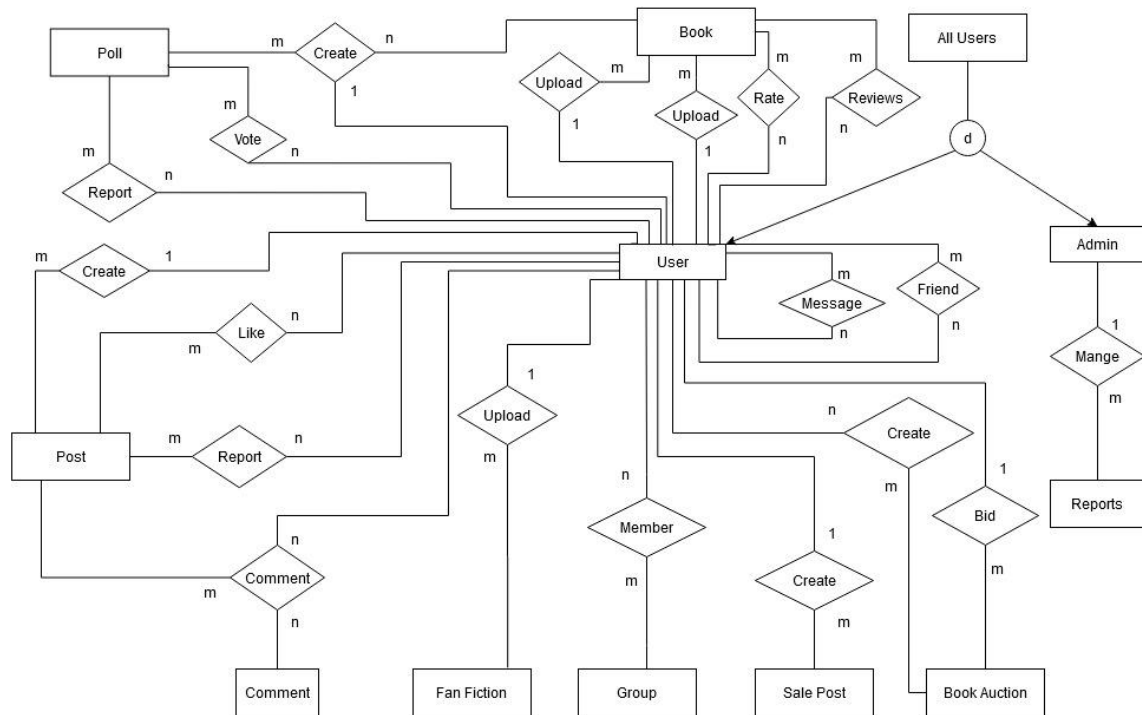


10.Design Specification

System Architecture Design



Data Design (ER Diagram)

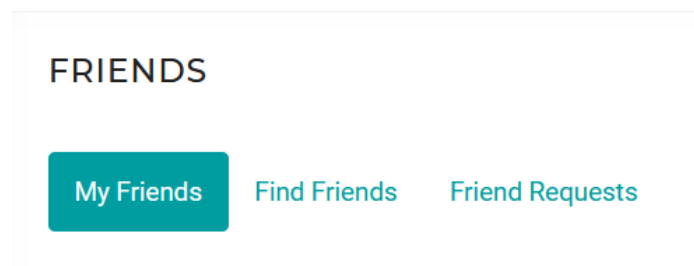


11. User Interfaces

We use best practices of UI and UX design for websites in order to improve interaction between the user and the system, some of the practices we follow are listed below

- Simple, Clutter free interfaces - We used interfaces which only show the necessary actions needed for the user at the instance, without cluttering our interfaces with unnecessary details.

Ex: Dividing friends into subsections to avoid clutter and show only necessary details in each section



- Consistent design and common elements - Constant color palette, and fonts throughout the system, and using the same type of buttons, cards with themes etc. throughout the system to maintain consistency. Consistency is the key to any good UI design.

Ex: Consistent color palettes, fonts and ui elements throughout the system.



Primary raised and outline buttons

Font Scheme

Fonts according to different hierarchies

- Feedback for user actions - provide feedback on actions done by the user.

Ex:

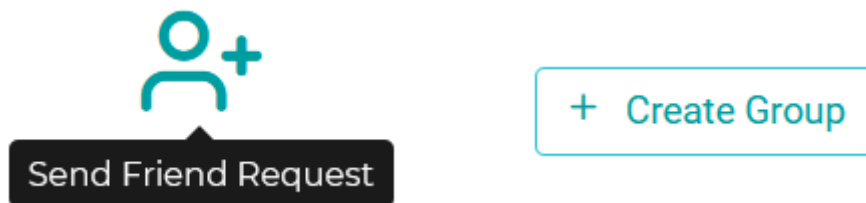


- Ability to cancel some mistakes done by users - This feature is essential because even professional users may make slips.

Ex: A user can delete a friend request he sent to another user.



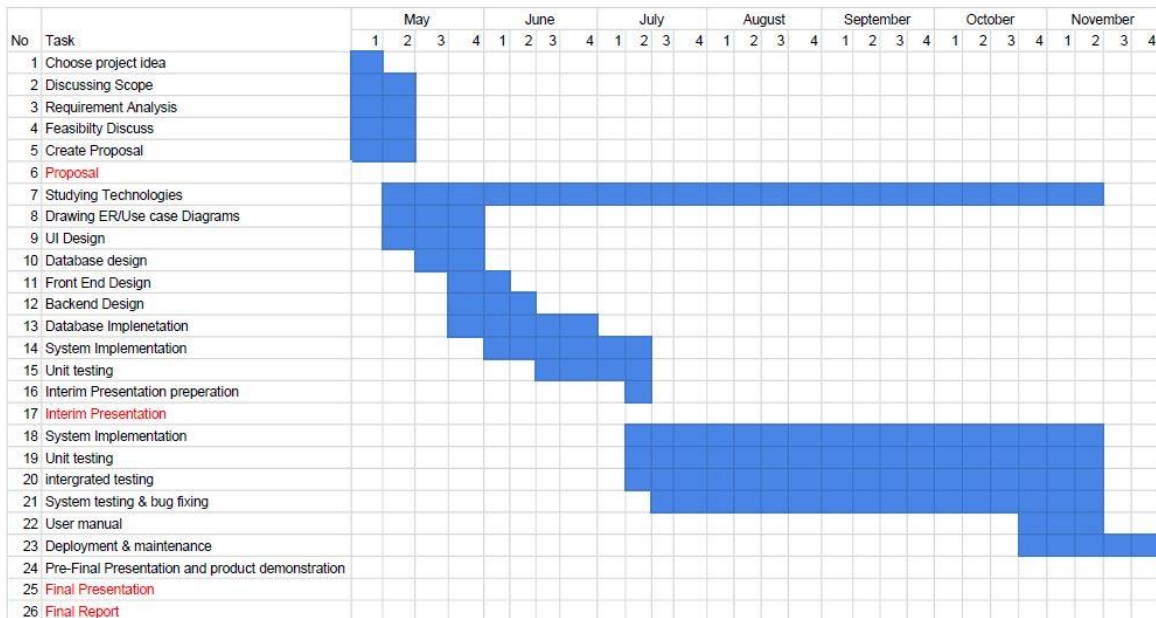
- Discoverability - Making the user know what actions a user can perform by using tooltips, icons, highlighting links etc.



12. Main deliverables of the system

1. Web application of our project.
2. REST API of our project.

13.The Project Plan








- Above gantt chart describes our tentative time frame and milestones are shown in red color.
- Identified project milestones are:
 - Proposal
 - Provide a basic idea about product to be developed and at this point team should have the basic idea about scope, objectives, requirements, technologies to be used and feasibility
 - Interim presentation
 - Need to be completed following components of system
 - System sign in/ sign up with validations
 - Main system functionalities such as posting, profile management, commenting
 - Final Presentation
 - A working product with identified functionalities should be presented.
 - The completed system should be ready to deploy.
 - Final Report
 - Give a final report regarding the system and work done.

14. References

- <https://morpheusdata.com/blog/2015-04-01-mysql-vs-mongodb-the-pros-and-cons-when-building-a-social-network>
- <https://www.freelancinggig.com/blog/2018/04/26/spring-popular-java-frameworks/>
- https://www.tutorialspoint.com/angularjs/angularjs_overview.htm
- <https://www.usability.gov/what-and-why/user-interface-design.html>

15.Declaration

We as members of the project titled NovelGeek, certify that we will carry out this project according to guidelines provided by the coordinators and supervisors of the course as well as we will not incorporate, without acknowledgement, any material previously submitted for a degree or diploma in any university. To the best of our knowledge and belief, the project work will not contain any material previously published or written by another person or ourselves except where due reference is made in the text of appropriate places.

<i>Name</i>	<i>Signature</i>
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