CS335 Project Report

Software Engineering & Software Process

By Zi Wei (Cheemay) Song & Precious Deremo

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1. Contributions

Contributions made by each member of this project:

Zi Wei (Cheemay) Song: 50%

- Project write-up layout
- Project write-up draft
- 5 user stories
- Class diagrams
- Presentation voice-over
- Mock-up for web and mobile versions
- Demonstration video on MaSakura webpage mock-up

Precious Deremo: 50%

- 5 user stories
- Web and mobile mock-up sketches
- Presentation write-up draft
- User requirements and system requirements draft
- Use case, sequence, architecture diagram
- Mock-up for web and mobile versions

2. Introduction

Entertainment has always been an essential part of life. Anime and manga are a form of entertainment that has been widely enjoyed by lots of people all around the world. They truly take entertainment to a whole new level of quality and personality. This form of entertaining activities can maintain your mental health and refresh your mind. It is an excellent way to deal with the bountiful stress accumulated overtime, as it gives you time to reflect and prepare your mind.

Our project is centered upon the development of a software system for the industrial sector "*Entertainment*". We decided to base our project on this sector because when we were young, we became fascinated with the amazing creations of Japanese authors and animators. These creations are more commonly known as anime and manga. Since we both share a common interest, the idea of creating a project involving something we like builds teamwork and creativity.

The main goal of our idea is to help others who are also interested in anime and manga with organization and exploration of anime and manga. A system that works well in providing the user access to their needs such as recommending anime and manga, allowing the user to customize their page as they see fit and so much more. We've decided to create an extension that is similar to MyAnimeList called '*MaSakura*'.

Extensions are small software programs that customize the browsing experience. They enable users to tailor Chrome functionality and behavior to individual needs or preferences. They are built on web technologies such as HTML, JavaScript, and CSS.

While there are many other ways for people to go about exploring new anime and manga as well as organizing their collections of reads or watches. It is convenient to use a clever and beneficial way for a lot of things in the world, and so to make it easier for our users, the extension 'MaSakura' can provide users many functions that are useful and unique.

3. Research

In order to further our research on our topic, we decided it was better to gather personal experiences from other people. We created and distributed a survey to test our ideas on the general public. We received an abundance positive feedback and support. Our dream felt surreal yet simultaneously plausible.

Our questions were tailored to people who enjoyed anime/manga as that is our main demographic of users for this product. As a result, we found that 18.9% of our respondents used list web/apps for keeping track of anime/manga they were currently watching.

We queried whether there were any missing features from their current list web/apps. While asking this question "what features do you believe are missing from your current list web/app you are using?",

Some of our responses were as follows:

- A feature that keeps track on the latest animes I've watched and a history that keeps track of every anime I've watched on the sight.
- Maybe a personal-recommend-anime page.
- Notifications for upcoming animes and movies to watch need more memory storage in my brain pls.

These are particularly interesting as suggestions as they were already in our idea plan. Features such as personal user recommendations, auto-updated list tracker, notifications seemed quite relevant to our user database. Usually, users love to recommend anime/manga to their friends, so we queried whether it may be difficult to do this. We found that 18.9% have struggled with recommending since they may have lost track of how many they watched as they've watched too much. We believed an innovative idea to combat their struggle would be if we had a share option in our design that could allow users to share their lists as a link for other users to view.

Another promising prompt we queried was whether users would enjoy gaining points by watching/reading anime/manga and using these points earned to purchase merchandise from online/in stores. We understand it may be difficult but a partnership between manga companies and us would be needed to achieve this goal. Despite that, 56.8% of our respondents were quite thrilled with this idea. 70.3% of participants found our features quite useful for sites such as Netflix and Disney Plus.

4. User Stories

Our user stories were inspired by typical anime/manga watchers and readers. We are also interested in this type of entertainment and so when creating these user stories, we could also relate a lot to them bringing about a realistic way of thinking.

Cheemay's User Stories:

- Amelia just finished watching Dororo and can't seem to get over the fact that one of her favorite anime just finished. She found out that the author of the anime also created a Dororo manga. Using her accumulated points from watching anime and reading manga, she decides to use them at her local manga store to buy the manga in support of the author.
- Sokka clumsily forgot his phone was in his pocket when he went to dive into the ocean with his friends. Unfortunately for him, he kept his google account details on his phone and is unable to remember his account password. To make matters worse, he can't remember what manga he already read and is thinking of reading. Luckily, his friend knows his manga list since he's able to see Sokka's manga list on MaSakura.
- Jamie and her friends love watching anime together. They would go to each other's houses to watch anime but recently Jamie and her family moved houses. To Jamie's nightmare, she lives quite far from her friends, and she won't be able to go to each other's houses to watch anime anymore. One day, her friends suggested they use MaSakura to watch at the same time so they can watch together once again.
- Kanna is a part-time bartender and is a student in her second year of college. She knows her friend's been eyeing the Pikachu figurine on MaSakura lately. Kanna decides to get the Pikachu figurine for her friend by doing what she loves most which is watching anime in order to collect points to get the figurine.
- Mr. Kuran works at a busy office and has exceptional organizational skills. He's also a perfectionist but it just seems his list of anime and manga he likes are unorganized and imperfect to his eyes. He uses MaSakura to sort out his anime and manga list by date and author/creator.

Precious's User Stories:

- Taylor comes home from her 9-5 office job to relax and watch the current episode of the new season of Noragami. Taylor enters the MaSakura homepage to view her watchlist. Taylor clicks the link for the Noragami episode, and it brings her to Netflix where she is watching it.
- Kara is frustrated because she lost her notepad full of the animes list she was watching. Her friend Darren offers her a link to join MaSakura so when she syncs her account login she can view her anime list.
- Sakuta is a full-time student who uses his spare time to read manga via the MaSakura website. He decides to customise his background by choosing pretty bunny girl backgrounds and chooses a new profile picture to match his theme.
- Cameron bought a jumper of one of their favourite characters from My Hero Academia, Bakugo, using his MaSakura points from their local Manga store. However, the jumper was a little too small, so they returned the jumper for a full refund. The waiting time for the points to be refunded is 20 minutes.
- Kennedy has just finished watching the show Blue Period and is looking for new recommendations to watch. Kennedy clicks the extension pop up to view her list. She clicks where Blue Period is, a drop-down menu appears showing her the link to watch the show and recommendations. Kennedy clicks the recommendations and is brought to a page full of shows similar to Blue Period.

5. *UML Diagrams*

Our UML Diagrams are based on how we interpreted our user stories.

Use Case

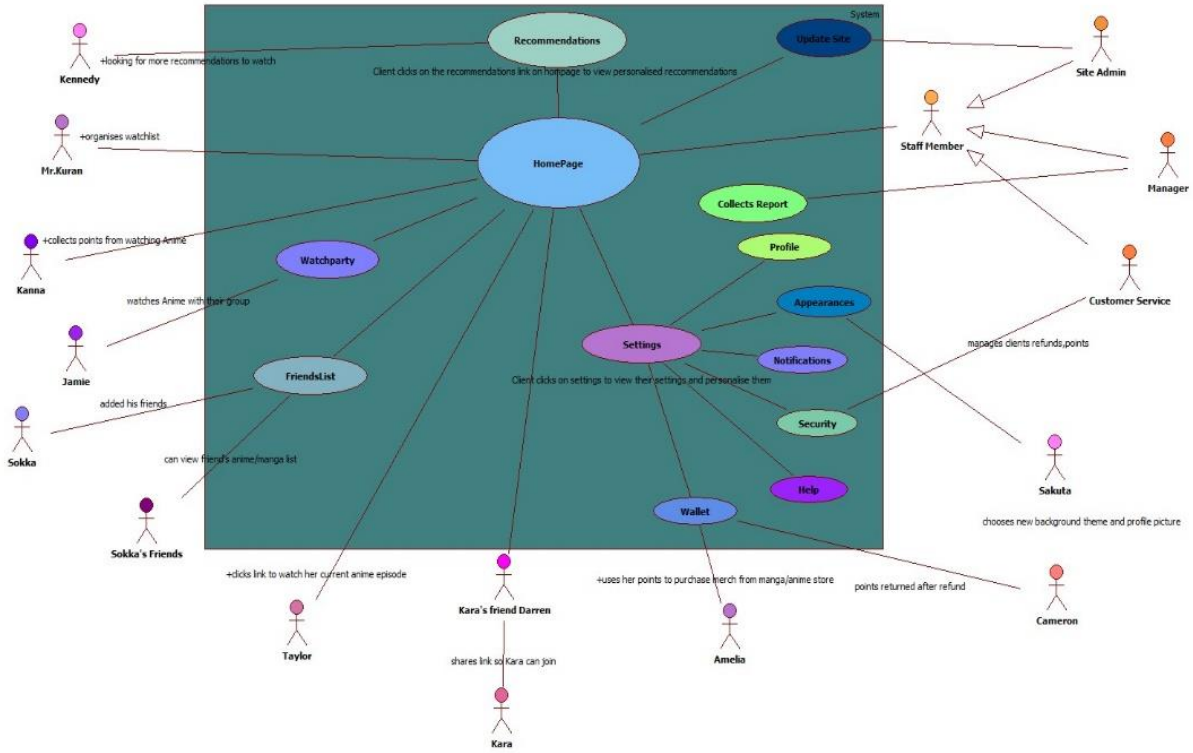
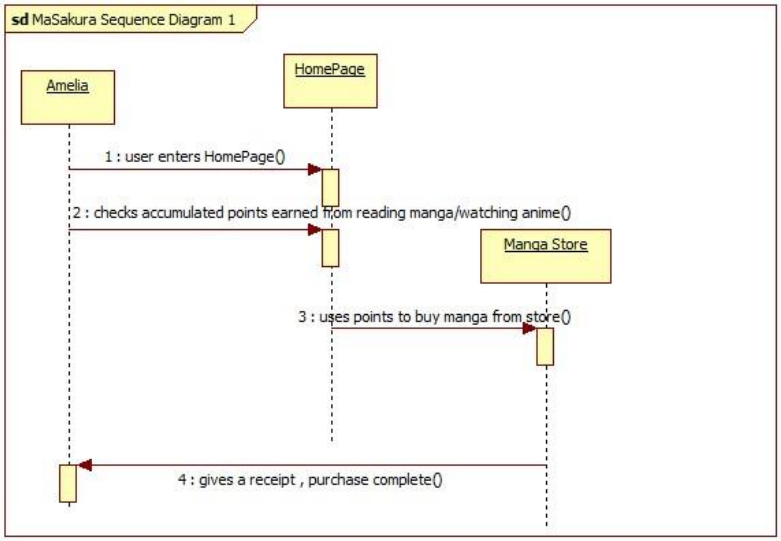
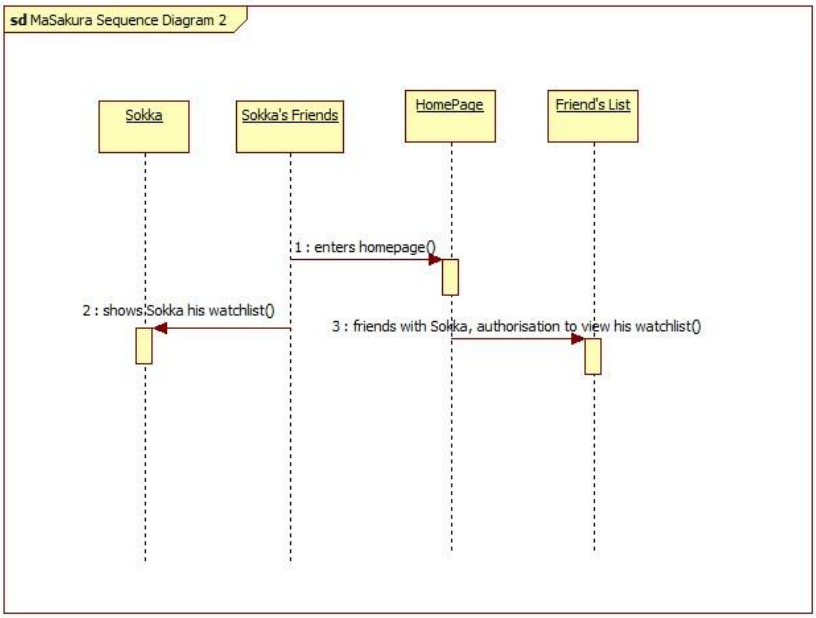
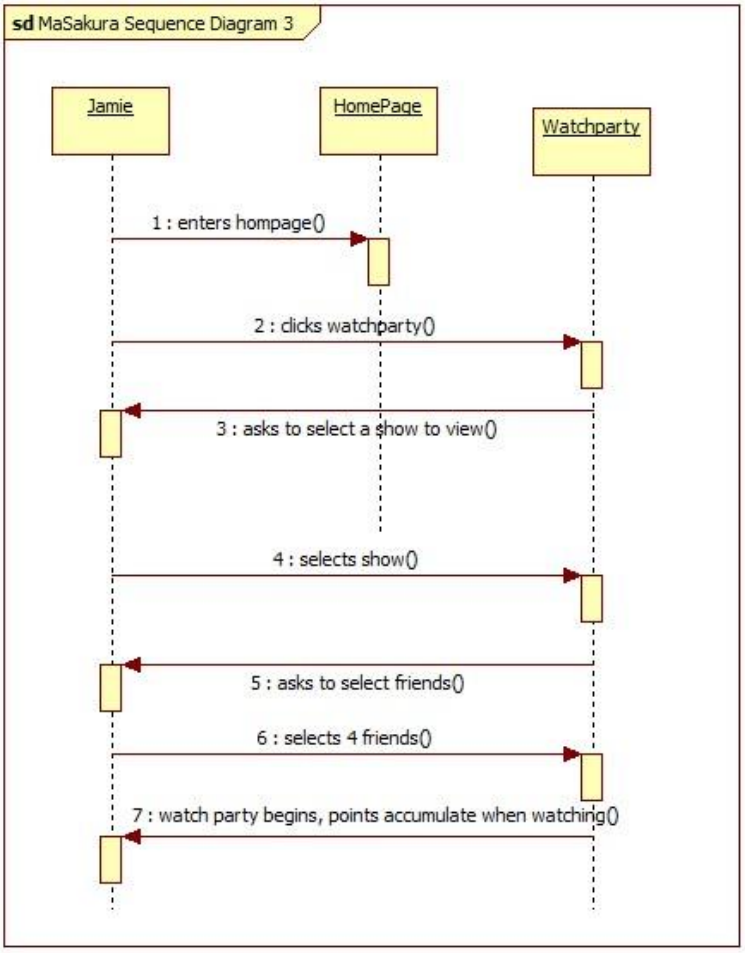


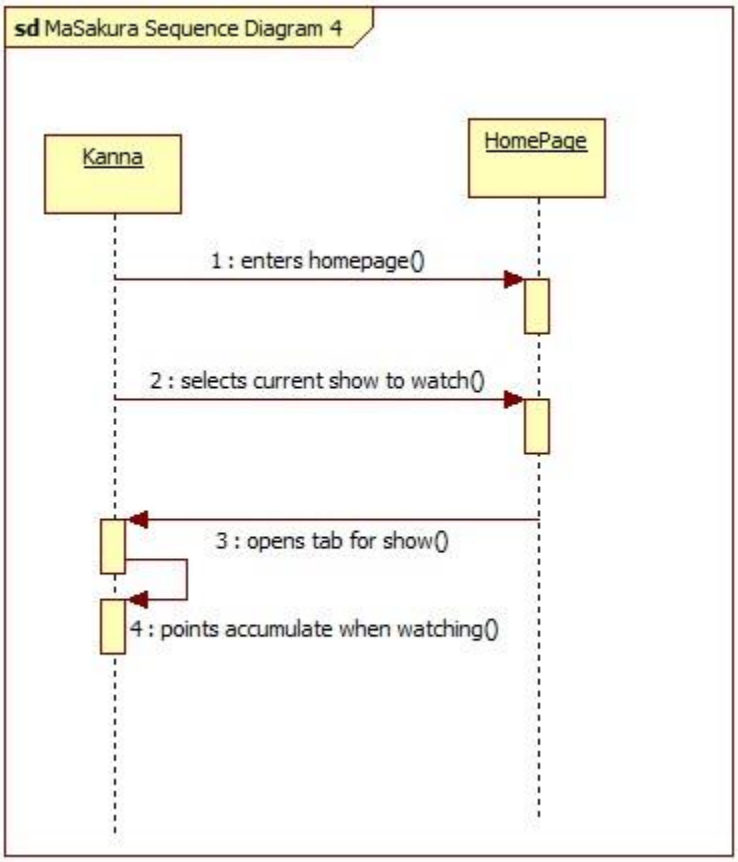
Fig. 1. Use Case Diagram

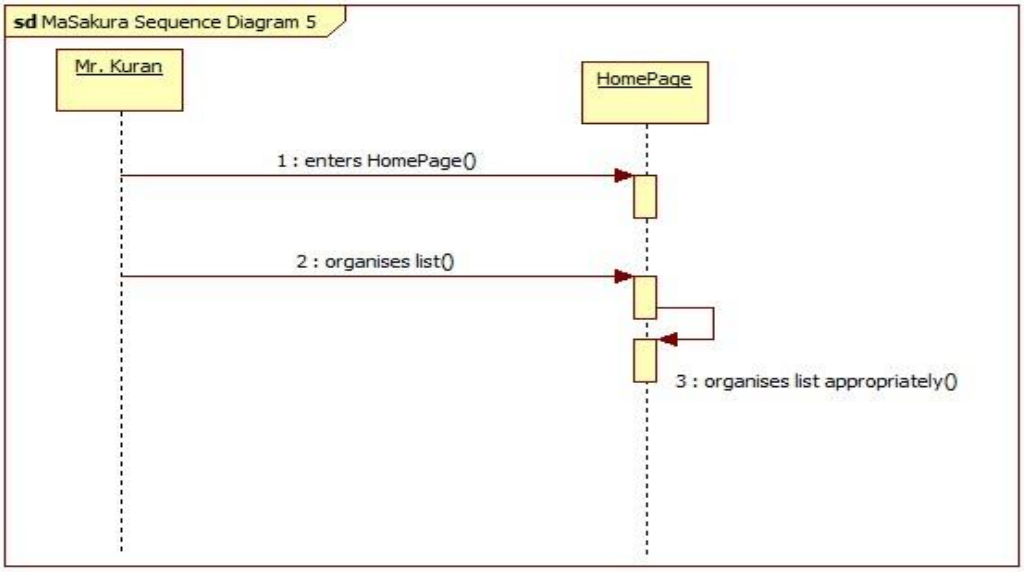
Sequence Diagram

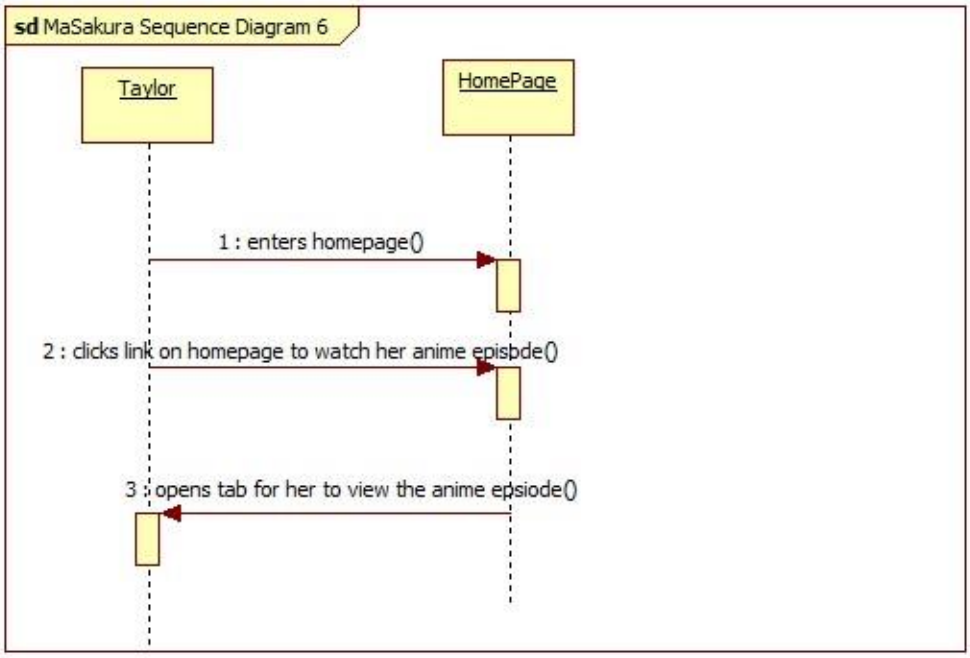


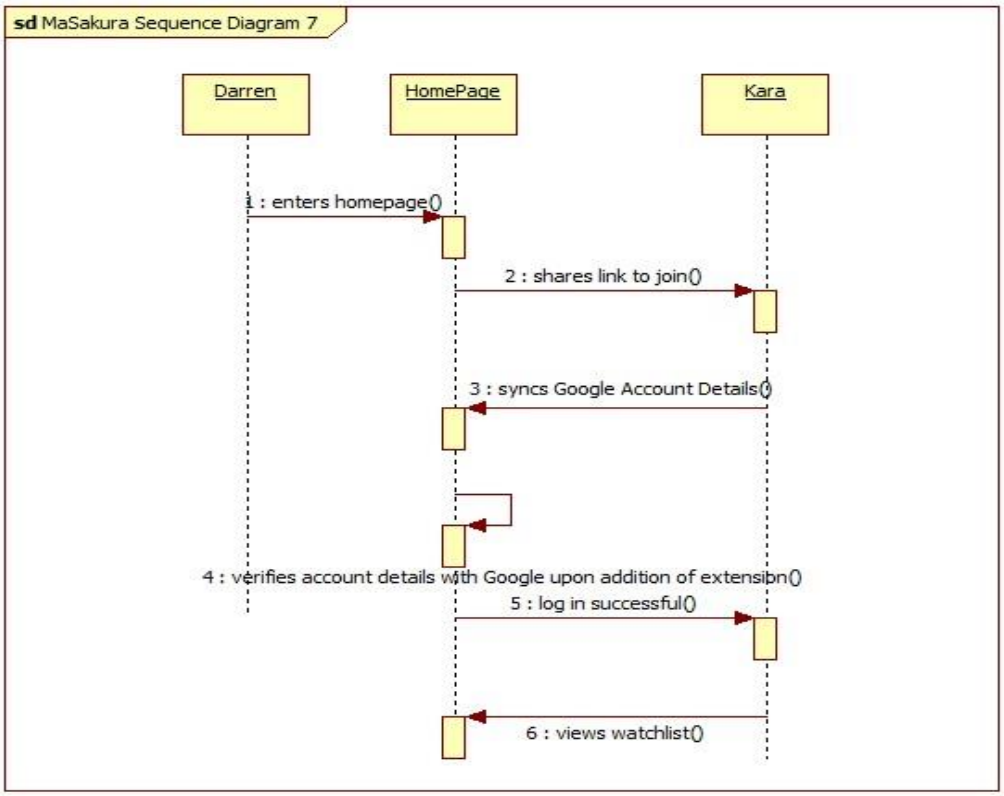

sd MaSakura Sequence Diagram 2
Sokka
Sokka's Friends
HomePage
Friend's List
1 : enters homepage()
2 : shows Sokka his watchlist()
3 : friends with Sokka, authorisation to view his watchlist()

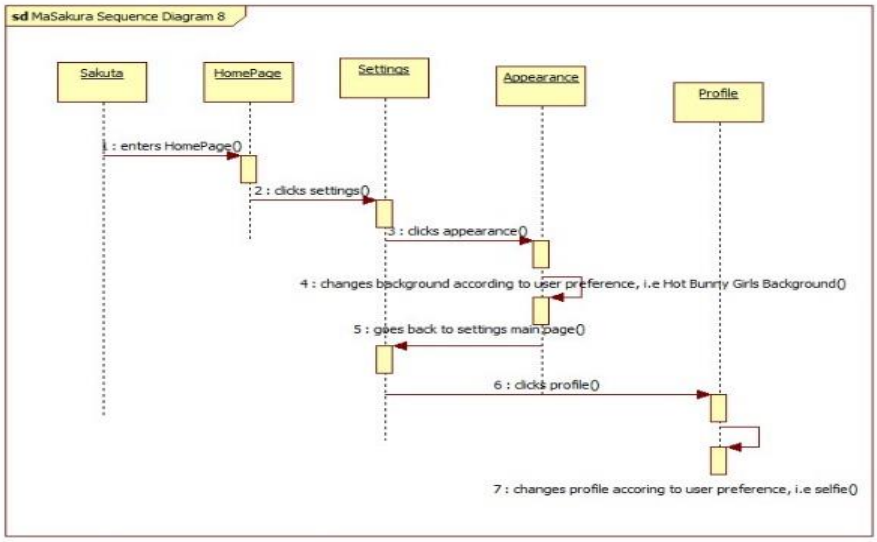

sd MaSakura Sequence Diagram 3
Jamie
HomePage
Watchparty
1 : enters hompage()
2 : clicks watchparty()
3 : asks to select a show to view()
4 : selects show()
5 : asks to select friends()
6 : selects 4 friends()
7 : watch party begins, points accumulate when watching()

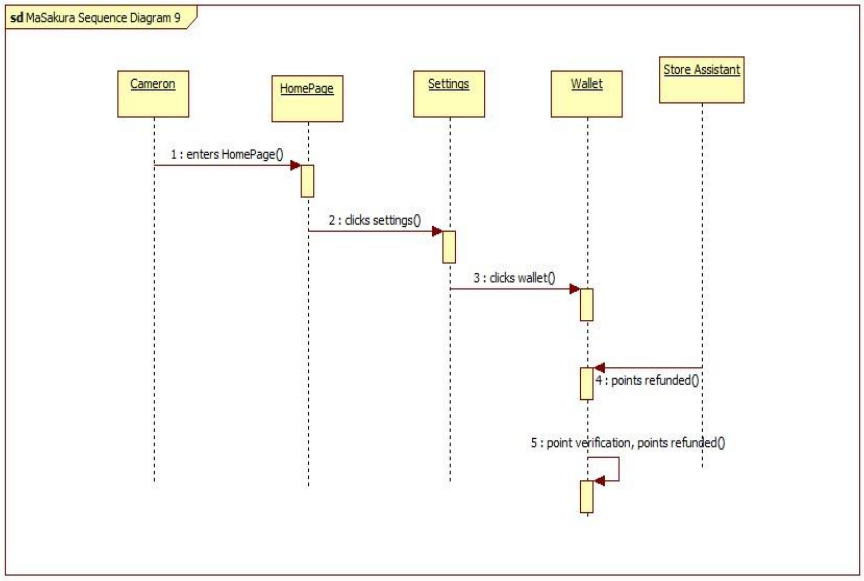

sd MaSakura Sequence Diagram 4
Kanna
HomePage
1 : enters homepage()
2 : selects current show to watch()
3 : opens tab for show()
4 : points accumulate when watching()

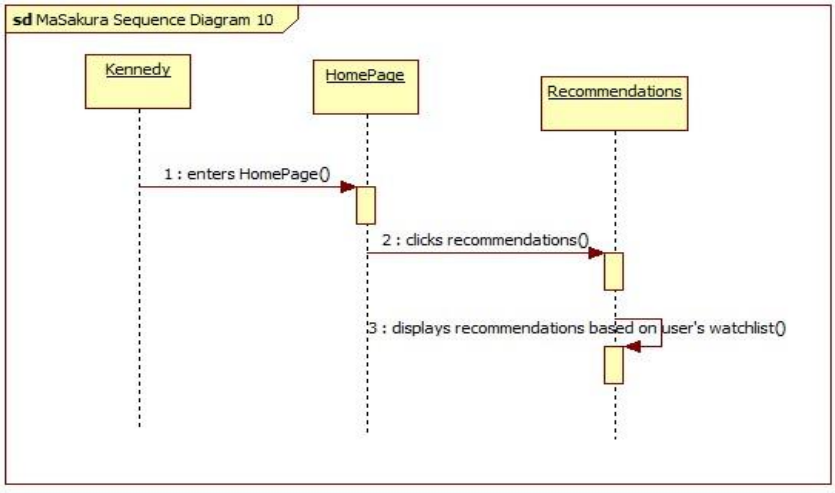

sd MaSakura Sequence Diagram 5
Mr. Kuran
HomePage
1 : enters HomePage()
2 : organises list()
3 : organises list appropriately()


sd MaSakura Sequence Diagram 6
Taylor
HomePage
1 : enters homepage()
2 : clicks link on homepage to watch her anime episode()
3 : opens tab for her to view the anime episode()


sd MaSakura Sequence Diagram 7
Darren
HomePage
Kara
1 : enters homepage()
2 : shares link to join()
3 : syncs Google Account Details()
4 : verifies account details with Google upon addition of extension()
5 : log in successful()
6 : views watchlist()


sd MaSakura Sequence Diagram 8
Sakuta
HomePage
Settings
Appearance
Profile
1 : enters HomePage()
2 : clicks settings()
3 : clicks appearance()
4 : changes background according to user preference, i.e Hot Bunny Girls Background()
5 : goes back to settings main page()
6 : clicks profile()
7 : changes profile accoring to user preference, i.e selfie()


sd MaSakura Sequence Diagram 9
Cameron
HomePage
Settings
Wallet
Store Assistant
1 : enters HomePage()
2 : clicks settings()
3 : clicks wallet()
4 : points refunded()
5 : point verification, points refunded()


sd MaSakura Sequence Diagram 10
Kennedy
HomePage
Recommendations
1 : enters HomePage()
2 : clicks recommendations()
3 : displays recommendations based on user's watchlist()

Class Diagram

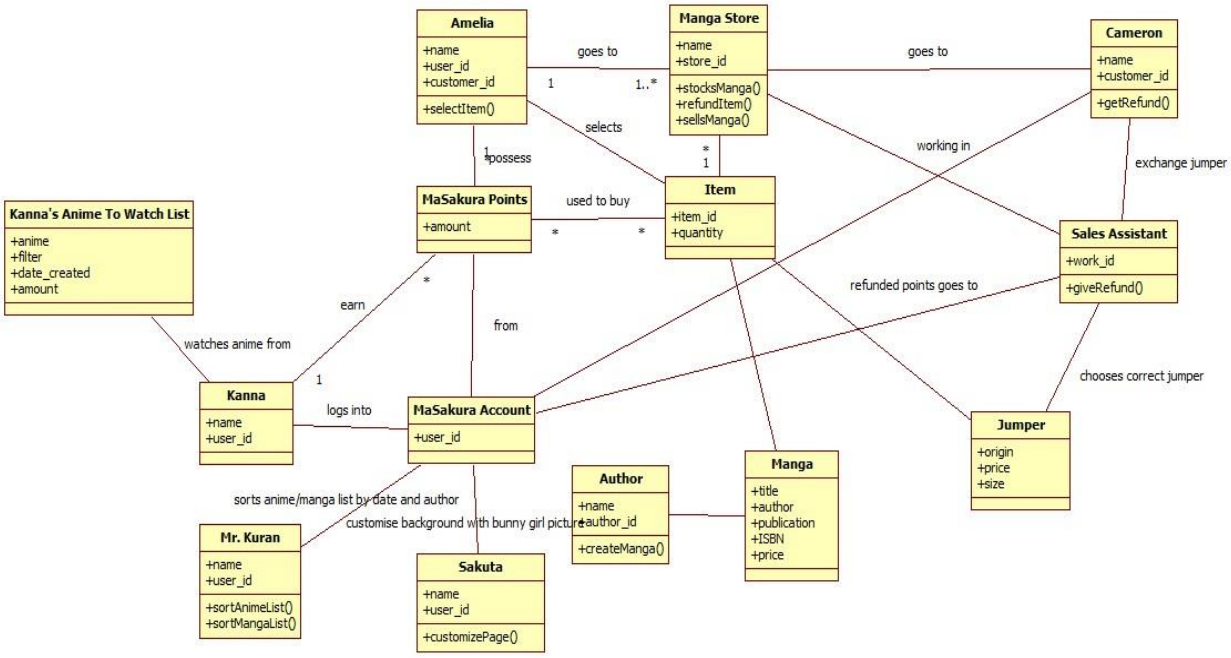


Fig. 2. Class Diagram 1

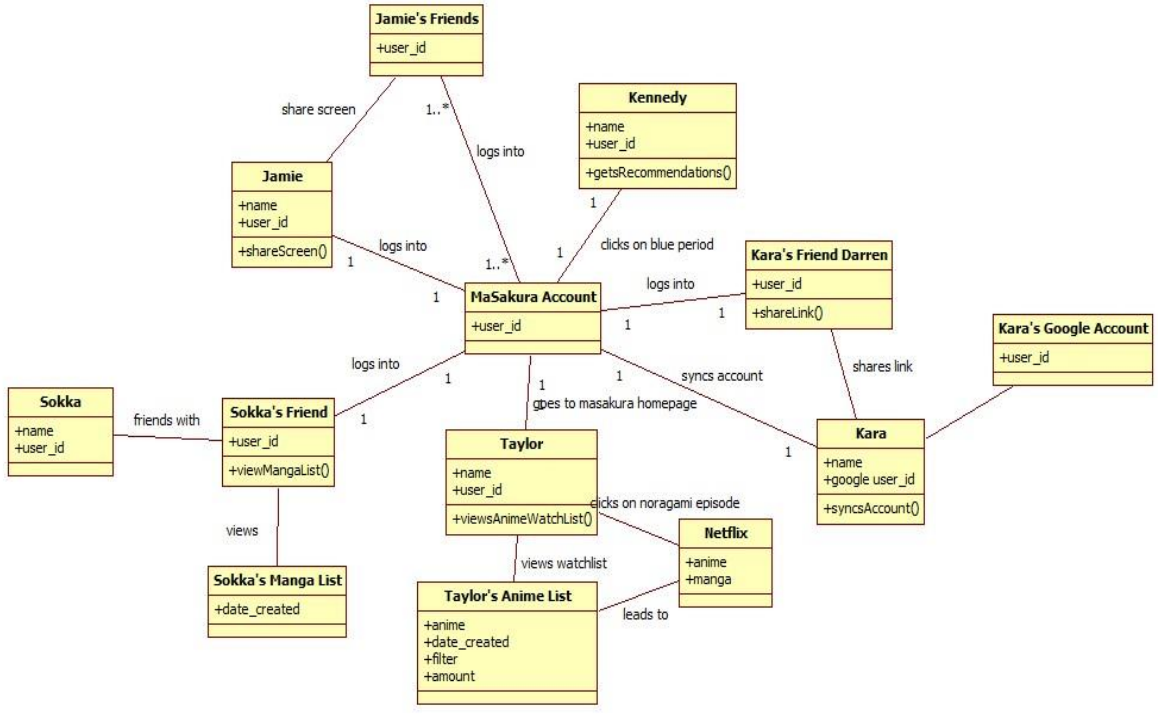


Fig. 3. Class Diagram 2

Architecture Diagram

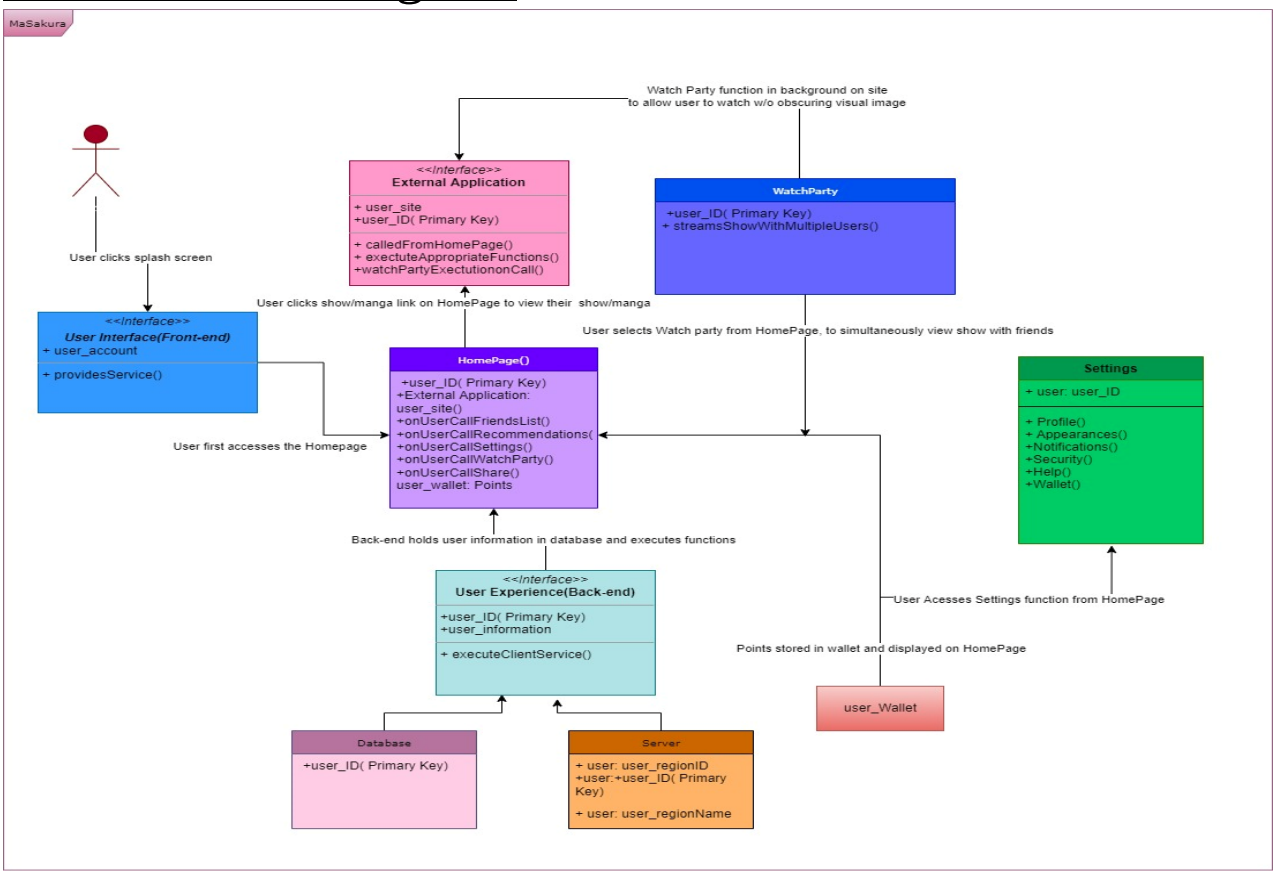


Fig. 4. Architecture Diagram

6. Mock-up

Presenting our mock-up sketches:
Mock-Up Sketches

Presenting our mock-up design for our MaSakura web extension:
(These are clickable wireframes to show a realistic version of the prototype design)

MaSakura Web Design Mock-Up

Presenting our pre-mature idea for a mobile version:
MaSakura Mobile Mock-up Idea

Demonstration on MaSakura Webpage Mockup
MaSakura Web-page Demonstration

Inspiration for the designs came from various sites including Crunchyroll (anime/manga website) and MyAnimeList (anime/manga website)

7. System Tests

User Requirements MaSakura

- Users must be able to easily navigate and personalize the site.
- The software must have tools for retrieving external files, when necessary, for starting the watch party, adding friends etc.
- The software must have tools for syncing the Google account with the site.
- Retrieval of refunded points should be a fast and simple process; externals tools are a requirement for this.
- Details of user must only be shown to user.
- Recommendations of user should change whenever the user is watching a new show or reading a new manga.
- Acquiring the site should be easy.

System Tests for User Requirements

- HomePage ⟶ External link ⟶ HomePage ⟶ Recommendations ⟶ HomePage ⟶ Settings ⟶ Settings Options ⟶ HomePage.
- Upload function ⟶ Local files from device ⟶ User selects file image ⟶ Upload auto saves image.
- Watch Party ⟶ Prompt user to select show from user list ⟶
- Prompt user to select up to 4 friends ⟶ Starts watch party on link of user's selected show.
- Add Friends ⟶ User enters Gmail or user account name ⟶ New user added.
- Security ⟶ Sync function ⟶ Sync with Google Account ⟶ Anime/Manga information retrieved.
- Settings ⟶ Wallet ⟶ Refund ⟶ Sales Assistant enters ID ⟶ Waits for verification ⟶ Sales Assistant enters receipt number ⟶ Verification ⟶ Refund given.
- Security ⟶ Privacy Policy.
- HomePage ⟶ New user show finishes ⟶ Recommendations ⟶ New Recommendations ⟶ Selects one recommendation ⟶ Process cycle repeats.
- Google extensions web store ⟶ MaSakura ⟶ Add to Extensions ⟶ Done.

8. Conclusion

Many respondents enjoyed the idea of the ‘MaSakura’ extension as a way for them to explore new anime/manga, keep track of the anime/manga they’ve read or watched, accumulate points from doing something they already enjoy to buy anime/manga from online or their local anime/manga store as a result from the survey. Similarly, respondents who may not enjoy animé answered this survey and seemed well inclined to the unique features provided by MaSakura. The base idea is to increase one’s enjoyment of a hobby by adding convenient features suitable to their niche needs.

In addition, an extension such as this may open the gates to participants who may be interested in watching anime/reading manga but might not know where to start looking. This opportunity would promote the beauty of Japanese culture through engaging visual learning, while expanding the perspectives of a new audience.

The motto of the MaSakura product is as follows: “Make the product, for the people”. Overall, designing and creating this project was a fun experience. The process was quite the struggle with many twists and problems, but in the end, all obstacles had been leapt over and the journey was over. One day, the hopeful dream may come through.

9. References

User and System Test Requirements

Software Extension Definition

Our Project Ideas and Explanations

Some Pictures We Used for the Project

Survey

Site used for mock-up demonstration

Site used for searching for images

Survey Summary