SOFTWARE REQUIREMENTS SPECIFICATION

FOR

Share Karo App!

Version 1.0 approved

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1. Introduction

1.1 Purpose

The primary goal of this project is to solve the very basic problems that students face in regular hostel life. I myself have had many a tough situation searching for a particular movie across the cross section of the hostel as torrentz sites are blocked by the University WiFi. Not only movies, also TV series and novels and books are things which can get students to waste a lot of time searching for.

1.2 Document Conventions

This SRS was inspired and written along the IEEE convention guidelines. The document is written in simple "Times New Roman" font type with font size 11 so as to make the document comprehensible and lucid. The document presents equal priorities for each requirement statement. The high level requirements are however highlighted wherever required.

1.3 Intended Audience and Reading Suggestions

This document is tried to be made in a very transparent and lucid manner so as to reach out to all members of students and teachers and all sorts of software developers. It also targets the people in the marketing genre and the class of content developers. This whole document will bridge the gap between the final product and the simple problem solving implementation..

1.4 Product Scope

The scope of our Project idea and implementation lies with the student fraternity of NIIT University. The students of NIIT University who stay up late night to watch movies and TV series. The students who like to read novels till very late. The bookworms who find the NIIT University library too small a place to satisfy their hunger for knowledge.

1.5 References

This System Requirements Specification document majorly refers to IEEE standards of documentation. The Use case documents are designed over Argo UML software and derived from the same.

The references are:

1) https://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwiD9syNjpbPAhWLt48KHbmQCUAQFggdMAA&url=http%3A%2F%2F

www.csse.monash.edu.au%2F~sitar%2FCSE4002%2FLectures%2Fsrs_template-1.doc&usg=AFQjCNF2DZX7_wbYlZyeAcrgjpYYTOhF6g

2) http://searchsoftwarequality.techtarget.com/answer/Software-requirements-specification-and-the-IEEE-standard

3) https://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&uact=8&ved=0ahUKEwiD9syNjpbPAhWLt48KHbmQCUAQFggvMAM&url=https%3A%2F%2Fredmine.studenti.famnit.upr.si%2Fattachments%2Fdownload%2F138%2FIEEE%2520Standard%2520SRS%2520Template.doc&usg=AFQjCNEZkGaUM7s_C5yXUV6hbbgJ3kfQhw

4) https://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=6&cad=rja&uact=8&ved=0ahUKEwiD9syNjpbPAhWLt48KHbmQCUAQFgg6MAU&url=http%3A%2F%2Fitech.fgcu.edu%2Ffaculty%2Fzalewski%2Fism4331%2Fwritingsrs.doc&usg=AFQjCNFCiaSyICS3fjOGPtLJAZxBmAXPJA

5) https://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjI7PuqjpbPAhVJPY8KHeydDTkQFggbMAA&url=https%3A%2F%2Fwww.ibm.com%2Fdeveloperworks%2Fcommunity%2Fwikis%2Fform%2Fanonymous%2Fapi%2Fwiki%2F336d1dbb-5203-4eb3-8542-f4a2d1af056c%2Fpage%2Fd9b0b712-ac9d-43ac-b430-0bc76b7edc31%2Fattachment%2F921e2bcf-2349-42d3-976b-0e23f7d6ff61%2Fmedia%2Fsrs%2520format.pdf&usg=AFQjCNG5oXPXYDtLmBCD1S1bdInIIDQ5Og&bvm=bv.133178914,d.c2I

6) http://techwhirl.com/writing-software-requirements-specifications/

7) https://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=10&cad=rja&uact=8&ved=0ahUKEwjI7PuqjpbPAhVJPY8KHeydDTkQFghTMAk&url=https%3A%2F%2Fcs.gmu.edu%2F~dfleck%2Fclasses%2Fcs421%2Fspring10%2Fproject%2Fsrs_template.doc&usg=AFQjCNFLKrMJFVl2haJg_G4905Q2PCddnQ&bvm=bv.133178914,d.c2I

2. Overall Description

2.1 Product Perspective

The Perspective of this Project has been centralized to the issues faced by the hostelers in their daily life. This sort of softwares and apps are already available in other colleges like IITs and BITS Pilani, on their respective University scales. Since our NIIT University is in its fledgling state, the implementation of this idea can give a boost to the name and fame of our college, as such a sharing app is an indication of the unity that lies in all the students here. The students who support each other in a college far away from the luxuries and amenities of the city. This app is intended to unite the students here in Neemrana and intends to make them feel at a home away from home.

2.2 Product Functions

The functions that product is capable of performing are:

The major objective that we intend to implement is the simplicity in functionality. Starting from a basic login page with the credentials provided by the University. After successful login the user/student will land up to a profile page where he can view the different sections of the novel, books, notes, movies and TV series. The users are supposed to upload all the genre of movies and TV series that they possess. That list would be stored on the database of the app. Then if a student would require any book or TV series or movie of any genre, he/she would put a request for it and then based on the values of the database he would get the contacts of all the students possessing that object and they would be able to contact them directly for the required book/movie/novel/TV series.

2.3 User Classes and Characteristics

The actor in our project would be the students who would be interested in updating their profile or getting hold to new movies or books or TV series. The user class is the student itself with his attributes being the year of study, his branch, etc. The maximum user base will be of the students who would love to use this portal to make their life easier. Other users can be teachers, parents or local society people near the NIIT University campus itself.

2.4 Operating Environment

Our objective is to make this software cross platform on Android, Windows and iOS. The website version will be useful for the windows or OS X based laptops while the app version will be operational on the Android and iOS devices.

2.5 Design and Implementation Constraints

The design of the app and software is centered around the problems faced by the students of NIIT University. Thus, the app is locale or location specific, which means that to implement our same software in IIT Delhi or Kharagpur won't be easy as their set of problems and their lifestyles must be way different than ours. Thus, I believe that this is one of the major flaws in our app of not being universal like Facebook or Google. Though they are the giant players in the software industry, it won't be wrong to atleast think and dream in their direction as even as beginners. Even if we manage to think in their direction 5%, it would be a victory on our parts. Another constraint which I want to overcome and is one of my main objectives of this project, is to make the design responsive using jQuery and bootstrap libraries, and also keeping in mind the minimum RAM usage.
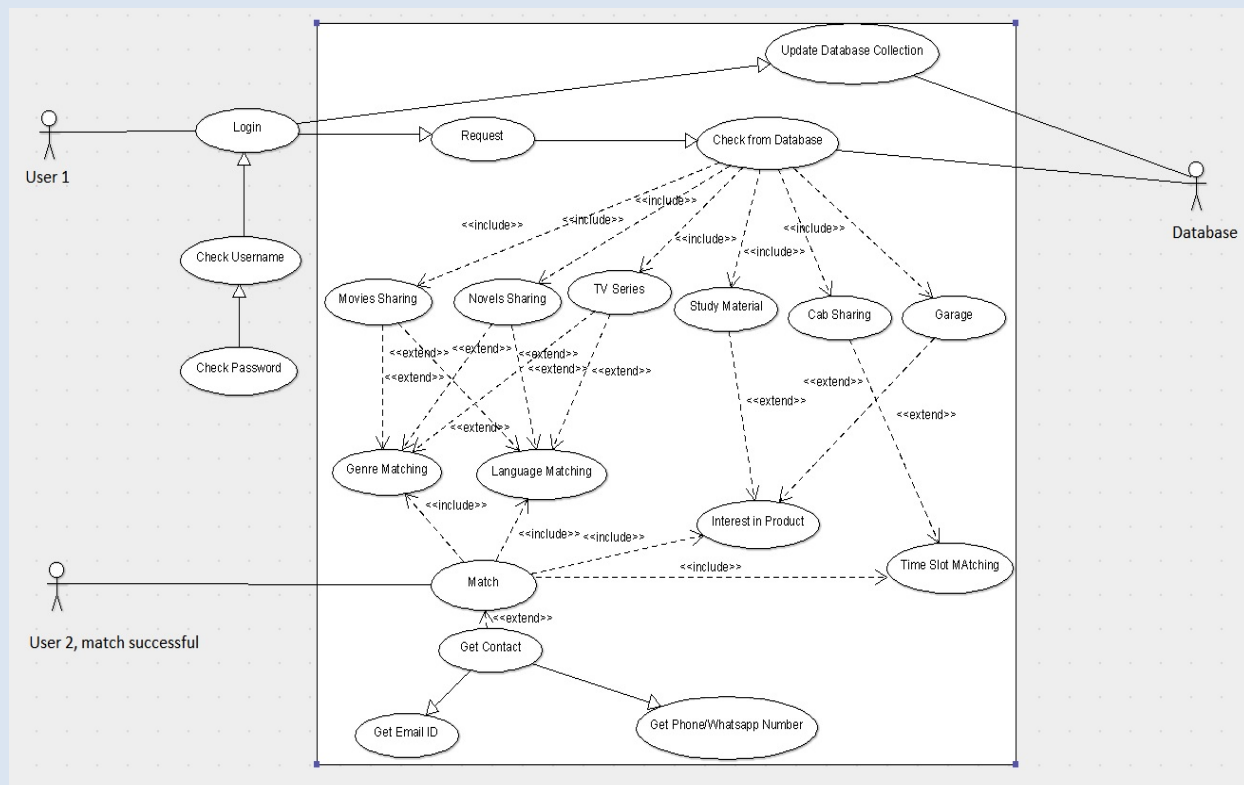
2.6 User Documentation

The app is designed to be completely lucid and comprehensible for the users and will be a self-start guide within itself.

2.7 Assumptions and Dependencies

Our basic assumption while coming up with this idea has been that students would be willing to login and see requests and share the movie or book that they have with their fellow campus mate or hostel mate. Considering the fact that hostel students are a notch above on sharing, this assumption of ours won't backfire. Our dependency thus directly becomes the willingness of the students to share which wont be a problem according to me as hostel students love sharing.

3. External Interface Requirements

3.1 User Interfaces

3.2 Hardware Interfaces

The front end user website will be based on universal tools like HTML, CSS and JavaScript. Even help of Bootstrap and JQuery libraries will be taken to make the website more responsive. The backend will be made on the NodeJS framework, while the database will be built on MongoDB structure. The web and server client would interact using the RESTful API.

3.3 Software Interfaces

The software is built with the definition of following frameworks:
1) The database is designed using the Mongo DB framework.
2) The languages (HTML, CSS, JavaScript, NodeJS) are built upon the Visual Studio 2015 Enterprise software.
3) The software is majorly designed upon the Microsoft Windows OS. However, it is created as a cross-platform forum to work over Linux and iOS as well.
4) The Node JS framework: Integration with other Visual Studio features and 3 rd party tools. (NodeJs, JavaScript, HTML, CSS, and JSON support)
5) Communication protocols, like the RESTful API that interface between the front-end and back-end codes.
6) Apache Cordova Tools to make the software cross platform

3.4 Communications Interfaces

The requirements associated with the product are:
1) Login details: E-Mail and password based login
2) Cross platform on all browsers, i.e. Mozilla Firefox, Google Chrome and Microsoft Edge.
3) Login and user integrated information via forms created by JavaScript.
4) HTTP is defined as the major communication standard.

4. System Features

This section details out the organization of the functional requirements for our product by system features, the major services being provided by the product.

4.1 Movie Sharing

4.1.   Description and Priority

This section of our app will be our major take away from Share Karo. Students and movies in hostels are like human beings and respiration. They cannot be separated. Thus, when a student will want to watch a movie which he doesn't possess, our app will come to his rescue.

4.1.2   Stimulus/Response Sequences

- The user can log in and put his genre and linguistic preferences on the app. The movies are going to be categorized into many different languages and genres so that the user can update the movies they possess.

- If a user needs to search for a movie, the user can match the genres with the ones already uploaded and make a request to the people with the same genre listed.

- If one user matches with other one and they are willing to share contacts, the contacts are shared and the smooth process is thus initiated.

4.1.3   Functional Requirements

Sequence number	Requirement	Service provided	Constraints
ID 4.1.1	**Sign up**	**Allows user to login**	**Compulsorily required**
ID 4.1.2	**Update movie preferences like genres, languages.**	**Lets people reach out to you looking at your list.**	**Needs to be correct in order to stimulate exchange process**
ID 4.1.3	**Look up for needed movies**	**Helps to find people with similar interests.**	**The user with matched interests should be willing to share the contact.**
ID 4.1.4	**Post a request to a particular user**	**When matched, the user can post request to a particular person**	**TBD**

4.2 Novel Sharing

4.2.1   Description and Priority

People generally tend to undermine the power of novels and books in the University. There are many book worms and avid readers who indulge in reading a variety of books during their past time. This feature of the app would connect all these avid readers and bring them to one platform so that they could share their books and knowledge.

4.2.2   Stimulus/Response Sequences

- The user can sign up and put his/her novel collection on the app. The novels are going to be categorized into genres and languages so that the user can update the novels they own.

- If a user needs to find a novels, the user can match the genres with the ones already uploaded and make a request to the people with the same genre listed.

- If one user matches with other one and they are willing to share contacts, the contacts are made visible.

4.2.3   Functional Requirements

Sequence number	Requirement	Service provided	Constraints
Req 4.2.1	**Sign up**	**Allows user to login**	**Compulsorily required**
ID 4.2.1	**Update novels preferences like genres, languages.**	**Lets people reach out to you looking at your list.**	**Needs to be correct in order to stimulate exchange process**
ID 4.2.3	**Look up for needed novels**	**Helps to find people with similar interests.**	**The user with matched interests should be willing to share the contact.**
ID 4.2.4	**Post a request to a particular user**	**When matched, the user can post request to a particular person**	**TBD**

4.3 TV-Series Sharing

4.3.1   Description and Priority

Binge watching TV series is a favourite time pass of students. Whatever is the series, they need to finish in 1 or 2 days. This is where our app comes in and helps them to share the TV series list that they possess. The users can simply login and see which other users have that

particular TV series . They could get hold of that user and transfer that series into their laptop and finish it off in 1 or 2 days and increase their checklist of TV series.

4.3.2   Stimulus/Response Sequences

- The user can log in and put the list of the TV series collection that he possesses and is willing to share on the app. Like Movies, the TV series are going to be classified into different genres and languages.

- If a user needs to locate a particular series, the user can match the genres with the ones already uploaded and put a request to the people with the same genre listed.

- When the user gets the match and the person who is willing to share, the contact will be shared and they can immediately exchange the TV series in a hard disk or flash drive.

4.3.3   Functional Requirements

Sequence number	Requirements	Services provided	Constraints
ID 4.3.1	Sign up	Allows user to login	Compulsorily required
ID 4.3.2	Update TV-series preferences like genres, languages.	Lets people reach out to you looking at your list.	Needs to be correct in order to stimulate exchange process
ID 4.3.3	Look up for needed movies	Helps to find people with similar interests.	The user with matched interests should be willing to share the contact.
ID 4.3.4	Post a request to a particular user	When matched, the user can post request to a particular person	TBD

4.4 Study Material Sharing

4.4.1   Description and Priority

This feature of the app is another crucial one as the students look for a variety of study material before their mid sems and comprehensive exams. This portal is basically like moodle, just that students would be able to share their notes here and solutions to some complex problems which can be accessed by all the students so that they could learn faster rather than looking for people to solve their problem. Students can even share their R&D project experiences and tips so that their juniors would do an even better job.

4.4.2   Stimulus/Response Sequences

- The user can log in and put his or her projects and their detailed information and information and tips on the app. The projects will be designated into different courses.

- When a student needs to find the project, he can directly navigate to the course and find the project details of their seniors and fastrack the speed of their own projects.

4.4.3   Functional Requirements

Sequence number	Requirement	Service provided	Constraints
ID 4.4.1	**Sign up**	**Allows user to login**	**Compulsorily required**
ID 4.4.2	**Update their projects to be available for download.**	**Lets people download looking at the list.**	**Needs to be correct in order to stimulate exchange process**
ID 4.4.3	**Look up for needed projects and ppts.**	**Lets user to download their required**	**Simple download**

4.5 Conveyance Sharing

4.5.1   Description and Priority

Students of NIIT University face this issue on a regular basis when they need to go home or return from home. A cab charges between Rs 2500 and Rs 3500 and paying that much for 1 person is highly unreasonable. Thus our app will help to students to connect who are leaving or reaching on the same day or time.

4.5.2   Stimulus/Response Sequences

- The user can login and place his date and time of travel from NU to Station or Airport and vice versa. Then the user can come back and check if anyone matched up with the same.

- When a user finds the similar people who are traveling at that time, he can contact that person and even more people to dutch the huge cost of the cab into 5-6 people.

4.5.3   Functional Requirements

Sequence number	Requirement	Service provided	Constraints
ID 4.5.1	Sign up	Allows user to login	Compulsorily required
ID 4.5.2	Update their travel schedule.	Lets people to pool up conveyance.	Needs to be correct in order to stimulate pooling.
ID 4.5.3	Look up for people with similar travelling plans.	Lets user to obtain contacts of the person for pool.	Contact display.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The performance requirements are stated as follows:
1) The open mindedness of the people regarding sharing things is paramount for the success of the app.
2) Connectedness and trust amongst the app specific location is also important for the success of this app.
3) People would require a simple interface which is light on the RAM of the user's phone or PC.
4) The sign up function (4.1.1, 4.2.1, 4.3.1, 4.4.1, 4.5.1) would become much smoother and efficient if the login would be tunnelled through their University Gmail accounts or their respective Facebook account.

5.2 Safety Requirements

The primary safety feature which any user can question about is the open sharing of the email id and contact numbers. Hence, this information of the user, especially their phone number would be

visible to the user only after the user gives permission to the requester. Only after it gives a yes signal, the app will share the user's privy contact details. The admin of the app could also remove suspicious users or actions.

5.3 Security Requirements

Taking forward the safety requirements, the security requirements are based on them. The security of the user will be the one of the primary motto of our software.

5.4 Software Quality Attributes

Some quality attributes of the app are: flexibility, smoothness, efficient, responsive, portable, cross platform easiness, reliability, testability, usability, robustness, maintainability, availability, correctness and interoperabity. Our objective is to develop and make the software achieve the above attributes.

5.5 Business Rules

The admins of the database have the right to remove or block a specific user and cease their rights to usage in case of any breach of privacy.

6. Other Requirements

Since the app is locality specific, the app can't be generalized across demographics. Thus, it can only be used in physical space areas. The database doesn't require a physical stake hold.