Software Requirements Specification

for

Lost and Found

Version 1.0

Prepared by Team-2

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Client

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Revision History

Name	Date	Description of Version	Version
● Abitha Thankaraj ● Aparna Jairaj ● Ahamed P.A ● Sanath Davis	27-01-16	The first version of SRS	0.1
● Abitha Thankaraj ● Aparna Jairaj ● Ahamed P.A ● Sanath Davis	01-02-16	Updated version of srs	1.0

Introduction

1.1   Purpose

The purpose of this Software Requirement Specification(SRS) document is
to present a detailed description of "Lost and Found", a mobile application to aid the NIT-C
community to report and recover lost property. It will explain the purpose, the features, the
interfaces of the system, the constraints under which it must operate and how the
system will react to external stimuli. The document will also explain the functional
and non-functional aspects of the software.

1.2   Document Conventions

For terminology used, refer Section 6-Appendix A: Glossary.
Priorities of requirements have been specified with the requirement statement in further
sections(Section 4).

1.3   Intended Audience and Reading Suggestions

The intended audience for this document are the users and developers of the software.

1.4   Product Scope

This Lost and Found system is designed for Mr. Kurian Jacob who wishes to improve the current
'Lost and Found' management system in place at the National Institute of Technology, Calicut. This
app creates a platform to report missing and found property. This eliminates the need for a
mediator and a traditional "Lost and Found" desk.

1.5   References

830-1999 — IEEE Recommended Practice for Software Requirements Specifications. 1999.

2. **Overall Description**

2.1   Product Perspective

This product aims to replace the "Lost and Found" desk at National Institute of Technology, Calicut. It does so by providing a platform for users to post details of their missing articles and browse through posts made by other users who have found lost property. The app relies primarily on e-mail communication between the two parties through their NIT-C e-mail IDs and optionally Facebook and/or contact numbers. This way, lost items can be reclaimed without the intervention of a third party.

2.2   Product Functions

The app allows users to
- Post details of lost items
- Post details of found items
- Resolve their own posts
- Subscribe to categories of lost articles
- Browse through "Lost" and "Found" feeds
- Manage their user profiles
- Report inappropriate posts and users

2.3   User Classes and Characteristics

The user is expected to be a member of the NIT-Calicut community with a valid institute email ID, working Internet connection and an Android device.

A user may be a finder and/or a seeker.

A finder can post details of found article under the relevant category (which will appear in the "Found" feed).

The seeker can post details of the lost article under the relevant category (which will appear in the "Lost" feed) which may optionally include a reward.He/she can also subscribe to relevant categories for notifications that will be received when another user posts under that category.

In general, a user can browse through both the lost and found items posted in the lost feed or found feed.He/she can also mark a post or another user as spam. He may also manage his personal profile as well as his notifications.

2.4   Operating Environment

The software requires an Android platform.The device must support Android version 4.0 and above Integration with the NIT-C mail system (preferably Gmail) is mandatory for communication and validation. It will also require the optional integration of Facebook for contact details.The app relies on Google Maps to specify the exact location where the article was found.

2.5   Design and Implementation Constraints

The system will be implemented primarily through Android Studio.

2.6   Assumptions and Dependencies

• There is a requirement of Internet.
• The app is supported on Android devices.
• Users are required to have a NIT-C email id for registration.

3.   **External Interface Requirements**

3.1   User Interfaces

On logging in with an institute e-mail ID, a user is automatically directed to his homepage.The homepage shows the posts under the subscribed categories.
A user may then navigate to different sections of the app though a navigation bar.

This user profile page contains the profile details he wishes to share with the rest of the community through the app including his name, address, contact number (optional) and a link to his Facebook profile (optional).

Under the "Lost" section, a user may *post* to the app, the details of his missing item specifying the time of loss and the category it falls under.An optional reward may also be specified.

In the "Found" section, a user may *post* to the app details of the item found with time and and optionally the location where it was found .

Each above mentioned "post" would comprise of the detailed text, category, time,location(optional) and a click-able link to the author's *profile*.

A seeker may then *subscribe* to a relevant category within the "Found" section, to receive a *notification* with any new post.

Any user has the option to *flag* a post (occurring in either section) as inappropriate. In addition, he may mark another user as spam by visiting his profile and marking him as an inappropriate user.

In addition to the "Lost" and "Found" section, each user has his own "Homepage" where he can view, manage and *resolve* any post that he administers.

3.2   Hardware Interfaces

The "Lost and Found" app is supported only on Android devices (with GPS preferred).

3.3   Software Interfaces

User log-in is authenticated using NIT-C email. These campus specific e-mail IDs are part of Google's email hosting for college communities. Further, the app relies on Google Maps to specify the location where the article was found.

3.4   Communications Interfaces

The app communicates with the user via the NIT-C email provided.The users can communicate with each other via details provided on the public profile of the user namely, NIT-C email, mobile number(optional) and Facebook profile(optional).

4.   System Features

This section outlines the use cases for each of the active users separately. The two actors in our scenario are the Finder and the Seeker. The use cases common to both are specified under "Common".
We list out the use cases with the assumption that a user has been successfully logged in.

4.1   Finder : Use Cases

4.1.1   Post Details

FINDER

    i)   Description and Priority

The Finder navigates to the "Found" page, selects the "New Post" feature and can post details of the article that they have found. Each post is a form that contains the following fields -

a) A text box where a user may elaborate on the details of the found item
b) A timestamp
c) A drop down list where he may pick a relevant category

Priority : High

ii)   Functional Requirements

Use Case name	Finder - Post Details
Trigger	Finder clicks on "New Post" in the "Found" feed
Precondition	The user log-in is authenticated against their NIT-C email ID and password
Basic Path	-The User logs in. -He navigates to the "Found" feed. -He clicks on the "New Post" button, makes his entry and clicks "Submit".
Alternate Path	None
Post Condition	The system stores this information and the user is redirected to the" Found" Feed
Exception path	If the user abandons this operation before clicking Submit, the entry will not be updated in the database.
Other	None

4.2 Seeker : Use Cases

4.2.1   Post Details

SEEKER

    i)   Description and Priority

The Seeker navigates to the "Lost" page, selects the "New Post" feature and can post details of their missing property.
The layout of the post is similar to the one specified in section 4.1.1 (Post Details)
        with an additional field: Reward(optional).

Priority : High

    ii)   Functional Requirements

Use Case name	Seeker - Post Details
Trigger	Seeker clicks on "New Post" in the "Lost" section
Precondition	The user log-in is authenticated against their NIT-C email ID and password
Basic Path	-The User logs in. -He navigates to the "Lost" section. -He clicks on the "New Post" button, makes his entry and clicks "Submit".
Alternate Path	None
Post Condition	The system stores this information and the user is redirected to the" Lost" Feed

Exception path	If the user abandons this operation before clicking Submit, the entry will not be updated in the database.
Other	None

4.2.2 Subscribe

SEEKER

    i)   Description and Priority

A seeker has the option to "Subscribe" to any category in the "Found" feed. This way he will receive notifications when any new post has been made in that particular category.

Priority : Moderate

    ii)   Functional Requirements

Use Case name	Seeker - Subscribe
Trigger	A Seeker clicks on the "Subscribe" button in the "Found" feed and picks a category
Precondition	The user log-in is authenticated against their NIT-C email ID and password
Basic Path	-The User logs in. -He navigates to "Found" Feed. -He clicks the "Subscribe" button.

	-He then selects the category of his interest and confirms
Alternate Path	None
Post Condition	The system stores this information and the user will now receive notifications with every new post in the category of his interest
Exception path	If the user abandons this operation before completing it, the entry will not be updated in the database and his subscription will fail.
Other	None

4.3   Common : Use Cases

These functionalities are common to both Seekers and Finders.

4.3.1   Manage Profile

user

    i)   Description and Priority

The users can decide how much of personal information to share with the public here. The details associated with a User Profile include - Name (Public), e-mail ID (public), contact number (optional), profile picture (optional), address (optional) and a link to his/her Facebook profile (optional).

Priority : High

    ii)   Functional Requirements

Use Case name	Common - Manage Profile
Trigger	User navigates to his profile/ homepage and clicks on the "Manage profile" button
Precondition	The user log-in is authenticated against their NIT-C email ID and password
Basic Path	-The User logs in. -He navigates to his Profile. -He clicks on the "Manage Profile" button -He then makes the necessary changes and clicks on the "Save" button
Alternate Path	None
Post Condition	The system updates this information and refreshes the User Profile page.
Exception path	If the user abandons this operation before clicking Save, the entry will not be updated in the database.
Other	None

4.3.2 Manage Subscriptions

user

i)   Description and Priority

A user can manage his subscriptions which will be listed in his homepage. He can click on a subscription and "Unsubscribe" if he wishes to.

Priority : High

ii)   Functional Requirements

Use Case name	Common - Manage Subscriptions
Trigger	User navigates to his profile/ homepage and clicks on the "Manage Subscriptions" button
Precondition	The user log-in is authenticated against their NIT-C email ID and password
Basic Path	-The User logs in. -He is directed to his homepage. -He clicks on the "Manage Subscriptions" button -He clicks on Unsubscribe to remove the subscription to a category that he had previously subscribed to.
Alternate Path	None
Post Condition	The system updates this information and refreshes the Homepage.
Exception path	None
Other	None

4.3.3   Browse
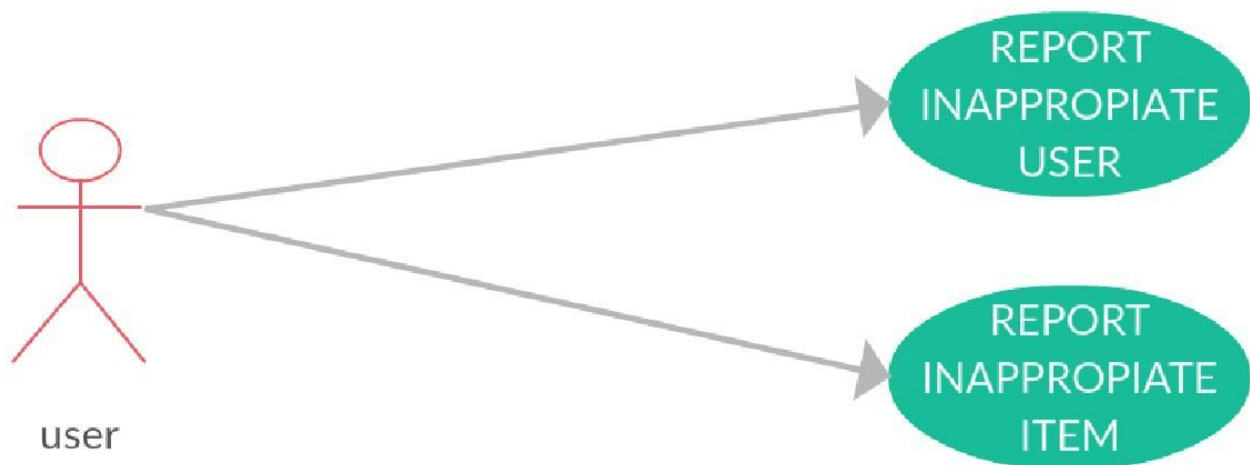

user

i)   Description and Priority

The User navigates to the "Found" feed or the "Lost" feed , where the user may view all the unresolved posts made in the respective feed.

Priority : Medium

ii)   Functional Requirements

Use Case name	User-Browse
Trigger	User navigates to "Found"/"Lost" feed
Precondition	The user log-in is authenticated against their NIT-C email ID and password
Basic Path	-The User logs in. -He navigates to the "Found"/"Lost" feed. -He can browse the feed
Alternate Path	None
Post Condition	User may view the feed
Exception path	If the user abandons this operation by going back, he is taken back to his homepage .
Other	None

4.3.4   Report

i)   Description and Priority

The User can flag a specific post/user as inappropriate. This prevents spamming in the app and misuse of the app.

Priority : Medium

ii)   Functional Requirements

Use Case name	User Report
Trigger	User navigates to the specific post or user to be reported and clicks on the report button.
Precondition	The user log-in is authenticated against their NIT-C email ID and password
Basic Path	User navigates to the specific post or user to be reported and clicks on the report button.
Alternate Path	None
Post Condition	A red dot appears next to the post/ user profile which serves as a spam indicator
Exception path	If the user abandons this operation before confirming, no change is reflected in the system
Other	None

4.3.5 Resolve

user

i)   Description and Priority

Once the Seeker/finder has successfully reclaimed/returned his lost/found property, he must resolve the post to avoid the occurrence of redundant data. It is then removed from the database as well as the respective feed.

        Priority : High

ii)   Functional Requirements

Use Case name	Seeker/Finder - Resolve
Trigger	A Seeker/Finder clicks on a post in his Homepage and checks the "Resolved" box
Precondition	The user log-in is authenticated against their NIT-C email ID and password
Basic Path	-The User logs in. -He navigates to his homepage. -He selects a post and checks the Resolved box. -He is then prompted to confirm his choice with a Y/N box
Alternate Path	None
Post Condition	The system stores this information and the user's Homepage is refreshed

Exception path	If the user abandons this operation before clicking y/n, the entry will not be updated in the database.
Other	None

5. **Other Nonfunctional Requirements**

5.1 Performance Requirements

The system must be interactive and the delays involved must be minimal.

5.2 Safety Requirements

Information transmission should be securely transmitted to server without any changes in information

5.3 Security Requirements

User identity authentication is clinched using NIT-C e-mail IDs for log-in.

5.4 Software Quality Attributes

5.4.1 Reliability
Users can trust this app to claim their missing property without the need of an intermediary, in an ideal scenario.

5.4.2 Availability
This app, once up and running, will be available to logged-in users at all times, given the Android device has sufficient battery and access to the Internet.

5.4.3 Security
The security of the system is based on password-based authentication of the user's NIT-C e-mail ID.

5.4.4 Maintenance
The app will be maintained by the development team. Bug fixes and updates will also be taken care of by the team.

5.4.5 Portability
This application can be installed in any android device with version 4.0 or higher.

6. **Others**

Appendix A: Glossary

Term	Definition
User	Any member of the NIT-C Community with an Android device and a valid Log-in
App	This refers to the "Lost and Found" Application
Seeker	A user who has lost his personal belongings
Finder	A user who has come across and reports lost, mislaid or abandoned property
Mediator	A middleman who collects items from finders and returns them to seekers
Post	A message/ image/ link submitted by a user to the App. Can be of two types- Lost or Found
Categories	A broad classification on the commonly misplaced articles (ie. Wallets, Mobile Phones, Glasses, Watches etc)
Subscribe	Arrange for access to a notification when a new post has been made in a specific category
Notification	A pop-up message displayed to a user based on certain conditions
User Profile	A visual display of personal data associated with each user
Homepage	A space where a user may view and manage all the posts he has made
Lost Feed	A space containing all unresolved posts of type - Lost
Found Feed	A space containing all unresolved posts of type - Found
Resolve	When an item has been reclaimed, this

	function removes it from the Lost/Found Feed
NIT-C	National Institute of Technology-Calicut
Database	Collection of all the information monitored by this system
GPS	GPS, which stands for Global Positioning System, is a radio navigation system that allows land, sea, and airborne users to determine their exact location, velocity, and time 24 hours a day, in all weather conditions, anywhere in the world.

Details of Review Discussion

Proposed Change	Decision	Action Taken	Page Number
Add the optional 'reward' to the functional requirement of the seeker	Approved	'Reward' was mention as field in section 4.2.1	10
Remove the feature 'subscribe'	Motion denied by client. Client in favor of 'Subscription'	The feature was not altered	N/A
Remove redundant use of the use case for 'Resolve' feature	Approved	The redundancy was removed from the functionality of finder and seeker.It was then added as functionality under common user	17
Remove spelling mistakes and indentation errors	Approved	• "2. 3" to "2.3" • "Hompage" to "Homepage" • "them" to "then"	• 2 • 15 • 17
Add Client name to front page of SRS	Approved	Added client name	1

I, undersigned, hereby declare that I approve to the changes made to "Lost and Found" SRS

Client: SRS Review team: SRS Preparation team

Kurian Jacob