Software Requirements Specification

for

NITKART-Buy and Sell at NITK

Version 1.0 approved

National Institute Of Technology Karnataka, Surathkal

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Revision History

Name	Date	Reason For Changes	Version
-	-	-	-

1. Introduction

1.1 Purpose

The SRS will provide a detailed description of the requirements for NITKART-Buy and Sell App at NITK. This SRS can leave a whole understanding of what's to be expected from the recently introduced system that is to be made. The clear understanding of the system and its functionality will allow for the correct software to be developed for the end user and will be used for the development of the further stages of the project.

1.2 Document Conventions

The document is prepared using Google Docs and has used the font type 'Times New Roman'. The font size that has been used to type this document is 14pt for the headings and 11pt for the corresponding body. Standard IEEE template is the template used to recognize the appearance of the document and its flow.

1.3 Intended Audience and Reading Suggestions

This document is made by keeping in mind different types of readers. This document will be useful for different audience in various ways.

Audience	Use
Developers	They will use this document as a guidance for design and implementation phase.
Managers	They will see all the constraints are covered properly. Time and cost is within limits or not.
Marketing Staff	They can use this document to make advertisements for this android app because by reading this document they will know what the system will do? How this system is different from others.
User	By reading the SRS they can ensure whether their needs are being met by the App or not.
Testers	They will test the implementation of the project according to the SRS base.

Documentation Writer	They will use this document during the documentation of the project.

1.4 Product Scope

The System developed will enable the users(residents of NITK) to buy and sell commodities in NITK Surathkal. It may be Electronic items, Household items, Books, Cycle, etc. Since everyone is leading a busy life, time means a lot to everyone. It requires lot of time to travel to a particular shop to buy the goods or sell their products.

1.5 References

- IEEE. IEEE Std. 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

2. Overall Description

2.1 Product Perspective

The NITKART - Buy and Sell at NITK project is a new, self-contained product intended for use on the Android platform. NITKART App enables us to access information related to the products posted by the users. Exchange of commodities in NITK can be eased in a systematic way through the App. Users can buy and sell goods or products online just by visiting the app. The seller needs to post the publicity by attaching description of the product(including the pics) and his/her details. The buyer will get the contact details(of the seller) if he/she is inquisitive about shopping for the merchandise. Hence each the parties have to be compelled to reciprocally believe the value of the merchandise and therefore the time of the meeting (either to look at or get the product).

2.2 Product Functions

- Serves static data related to the users.

- Serves up to date dynamic data related to the products.

2.3 User Classes and Characteristics

User	Characteristics
System Admin	It will be the system administrator. He will maintain the overall App.
Buyers	It includes the users who seek for products.
Sellers	It includes the users who sell the products.

2.4 Operating Environment

NITKART is a software application, which will be limited to the Google's Android Mobile operating System. The application is not resource- or graphics-intensive, so there are no practical hardware constraints. The app will rely on several functionalities built into Google's API, so ensuring appropriate usage of the API will be a major concern.

2.5 Design and Implementation Constraints

The primary design constraint is the mobile platform. Since the application is designated for mobile handsets, limited screen size and resolution will be a major design consideration. Creating a user interface which is both effective and easily navigable will pose a difficult challenge. Other constraints such as limited memory and processing power are also worth considering.

2.6 User Documentation

- A brochure will be provided describing the functionality of the App.

2.7 Assumptions and Dependencies

- The Admin will provide the APIs to get information about buying and selling of products at NITK.

- The project requires a host and server, google play store developer account to publish the app.

- The server should support given software dependencies.

3. External Interface Requirements

3.1 User Interfaces

- The Mobile Application will have a intuitive and clean home interface following Google's Material Design.

- Mobile App will also have different fragments for Buy, Sell and User profile. We propose for the app to have minimal yet sleek UI with home page highlighting important information about the products.

- Below are some representational pictures for the Mobile App UI……(to be added at the end of the project)

3.2 Hardware Interfaces

- The Android Application will be compatible with devices having version 6.0 Marshmallow or later.

- Wearable devices will not be supported with this application.

3.3 Software Interfaces

- We propose to use of Django Rest-API for fetching the product and user information.

- For designing Android App we will be using Java as our preferred language for development.

- Most of the softwares used will be Open Source.

3.4 Communications Interfaces

The Communication Network must have:

- Fast and reliable network medium.

- Secure protocols.

3.5 IDE Interfaces

- JetBrains Android Studio for Android Dev and JetBrains PyCharm for Django.

4. System Features

4.1 <u>User-related Information</u>

Use Case Name	User-Related Information
Actor	User
Overview	This use case is about user information.
Pre-condition	The internet connection is working. Server is not down.
Post-condition	Information about the user who will use the app..

Typical Course Of Events

Actor Action	System Response
User request for user detail	App will generate the page.
User will fill the required fields	App will post the information.

4.2 <u>Buying of products at NITKART</u>

Use Case Name	Buying of products
Actor	User
Overview	This use case is buying at NITK
Pre-condition	The internet connection is working. Server is not down.
Post-condition	Details about the product should be displayed.

Typical Course Of Events

Actor Action	System Response
User views the product and the relevant information.	App will generate the page.

4.3 <u>Selling of products at NITKART</u>

Use Case Name	Selling of products at NITKART
Actor	Seller
Overview	This use case is about statutory rules and regulations for passengers.
Pre-condition	The internet connection is working. Server is not down.
Post-condition	Details about statutory rules and regulations for passengers in Airport should be displayed.

Typical Course Of Events

Actor Action	System Response
User posts the product and the relevant information.	App will generate the page

4.4 Other Features

Following are the features to be considered irrespective of the above given System Features.

Features	Android App
Scalability of the Application	Medium
Level of UI	Polished
Users & Accounts	NIL
Dates & Locations: - **Calendaring** - **Display of custom maps**	✓ ✗
Admin, Feedback & Analytics - **User Admin Pages** - **Usage Analytics** - **Crash Reporting** - **Performance Monitoring**	✓
External APIs and Integrations - **Connect to one or more third party services**	✓

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- Data in the database should be updated within 2 seconds.

- Query results must return within 5 seconds.

5.2 Safety Requirements

- Under failure, system should be able to come back at normal operation in one or two hours.

5.3 Security Requirements

- All external communications between the data's server and client must be encrypted.

- All data must be stored and protected.

5.4 Software Quality Attributes

- The App is easy to use.

- All the features present in the App are easy to locate.

- The App uses simple English so that the user does not get confused with the terms.

5.5 Business Rules

- System Admin - It will be the system administrator. He will maintain the overall Database.
- Users - It includes the people who will view buy and sell products.

6. Other Requirements

Currently there are no other known requirements for the project. However this may change in the event of unforeseen circumstances encountered during the duration of the project.

Appendix A: Glossary

Term	Description
SRS	Software Requirements Specification
IEEE	Institute of Electrical and Electronics Engineers
User/Customer	Person using the App.
API	Application Program Interface
GUI	Graphical User Interface
IDE	Integrated Development Environment

Appendix B: Analysis Models

- Not yet done as the application is still in requirement phase.

Appendix C: To Be Determined List

- Not yet done as the application is still in requirement phase.

Project Budget Estimation

Number of Team Members	2
Price (per hour)	NA
Number of working hours per day	2 hrs
Total price (per day)	NA
Number of working days per week	5 days
Estimated number of months to complete the project	3 months
Total Price	NIL