
Software Requirements Specification

for

Finance Management System

Version 1.0 approved

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1. Introduction

This document is used to define all the basic terminology used in this problem domain and shall be further used in all steps. This can be used as an informal Data Dictionary, capturing data definitions so that the use-case descriptions and other project documents can focus on what the systems must do with the information.

1.1 Purpose

The purpose of this document is to serve as an abstract for the finance management system that defines the requirements of the system. This Supplementary Specification lists the requirements that are not readily captured in the use cases of the use-case model. Combined they set up the entire system as a whole. This will serve as a base for all following activities.

1.2 Document Conventions

Throughout the document, the font used is Times New Roman and the font sizes are such that the topic is easily understood and followed as in the case of any conventional document practice. IEEE Standard Software Requirement Specification is used.

Title:

Font Style: Times New Roman
Size: 24

Heading:

Font Style: Times New Roman
Size: 16

Subheading:

Font Style: Times New Roman
Size: 14

Content:

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Size: 12

1.3 Intended Audience and Reading Suggestions

This document is intended for readers that include:

- Project Managers
- Developers
- Testers

- Users
- Students
- Researchers working in this domain.

This SRS is categorized into five sections, viz. Introduction, Overall Description, System Features, External Interface Requirements, Other Non-functional Requirements and Other Requirements. The document will give you all the details of the project that has been laid down after very careful analysis.

1.4 Product Scope

The application brings all the services offered by a bank and much more at the click of a button. The public can log in to their respective accounts across various finance entities and conduct transactions, check investment opportunities and track all expenses across platforms. This all under one roof concept helps the common individual keep in check all expenses and weed out the unnecessary expenditures and save more. The insights provided by the statistical analysis on the account give useful information about spends, savings and future financial planning. Also various vendors have their services listed which helps the customer compare all deals on the spot and take a quick and informed decision. There is also a basic learning section, aimed at beginners as well.

Benefits:

- Encompasses all branches of finance management under one application, something not in the market yet. A one stop shop for all requirements
- Positive impact on environment as paperwork is eliminated. Also, transport and various factors use less natural resources.
- User friendly automated tool
- Cost Effective
- Increased market penetration and competition to all competitors
- More secure than some earlier methods of conducting said services

About Software:

- Easy to use GUI gives the user a sense of ease and comfort
- Light on the phone, no excessive usage of space and battery
- Input Validation can be performed
- All access is restricted by use of a variety of passcodes (password, pin, patter, fingerprint, etc.)

1.5 References

- Standard IEEE 830 recommended practice for software requirements specifications
- Google Material website. (<https://material.io/design/>)

2. Overall Description

2.1 Product Perspective

This product is a new, self-contained software that is not part of any product family. It is a fresh idea inspired by discrete observations in day-to-day life.

The users have a client interface that gives them an option to log-in or register for the services. In this page people can sign-up and avail services. If the details provided are correct the user can proceed with all further activities.

The administrator will have an administrative interface which is a GUI so that he can view the entire portal system. He will also have login page where he can enter the login particulars so that he can perform all actions like monitoring all aspects of the application. This includes giving updates on all details provided and also an update on any legislative changes introduced by the government.

The portal make all information available at one place. Helps user to know about finance management, policies, expense analysis, tutorials etc.

2.2 Product Functions

The application shall also have the following facilities:

1. Track of Daily Expenses
2. Smart Assistance and Statistics on handling and allocating money in the right sectors to ensure maximum growth and stability.
3. Linking of bank account with the wallet to ease the transfer of money
4. Easy auditing of expenses and ease if paperwork flow
5. A quick tutorial of all services provided so that the user is not overwhelmed by the vast resources at his/her disposal.
6. An alarm on the expenditure limit set for a month or financial year
7. Analyse all expenses and suggest cost cutting alternatives

2.3 User Classes and Characteristics

The entity which updates all the new content on the application for the user to use and are allowed to make changes to the application as per needed.

User:

The entity that uses the service provide the administrator and the company ties up with them alike. They can exploit the entire range of services

Service Provider:

The entity communication with the company to ensure that their product/service are represented on the application and are getting sales.

Business Head:

Ensures various Service Providers put up their products on the application to ensure growth of the application.

Guidance Counsellor:

Curates the tutorials for all facilities available on the application and also the basic crash course on finances. This branch also handles customer support.

2.4 Operating Environment

Server side requirements

Processor- Intel Core Dual Core

Hard Disk- 40 GB

RAM- 1 GB or higher

Operating System- Windows XP or above

Servers:

Web Server- Tomcat

Database Server- Microsoft SQL Server

Client side requirements

Operating System- Android or IOS or Windows XP or above or LINUX or MAC

Browser- Internet Explorer 7 or above

Mozilla Firefox 8 or above

Google Chrome

Safari 4 or above

2.5 Design and Implementation Constraints

- Login and password is used for identification of registered users.
- User must keep their password confidential.
- User must keep their own individual login-id.
- Only Administrator could undergo addition and deletion of User Account.
- Only Administrator can perform reports on the user login sessions.
- Regulatory Policy should be adhered to by the developers when designing the software.
- All the documents at visitor's portal are copyright protected.

2.6 User Documentation

- FAQ Section question list
- User manuals document describing functionalities with corresponding screen details.
- Online Help

2.7 Assumptions and Dependencies

There are a few factors that could affect the components of this system:

- Commercial law is volatile and can change from time to time, restricting sale of some goods under online platforms.
- Vendors may drop out of displaying their product due to changed norms, bankruptcy or other various reasons
- The market at that time also defines the usage of certain parts of the application.
- Any fraudulent activity in a section can deter users from the platform
- Changing rules, regulations and laws can be a great dependency in the amount of trade conducted.

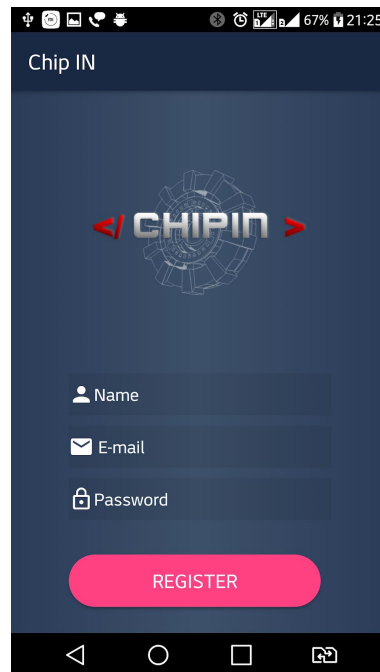
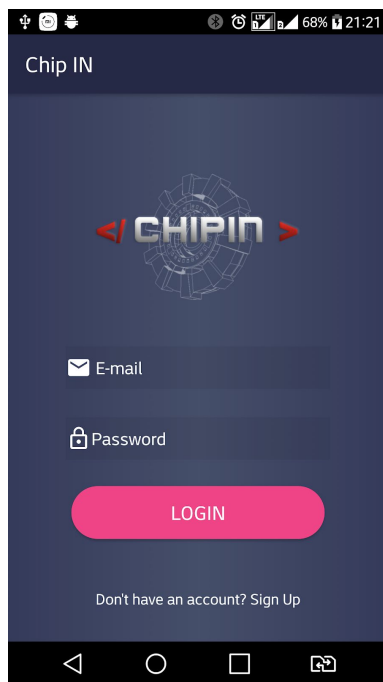
The project can be affected if these scenarios occur . Assumptions and dependencies are an integral part of the project and development of project

3. External Interface Requirements

3.1 User Interfaces

- The user interface must be user friendly.
- It must be simplified and self-explanatory.
- All the procedures must be simplified.
- There must be robust error message system if user commits some error.
- It should visualize and explain the basic motivation behind this application.
- The system has a standardized user interface for all types of user.
- The UI shall permit complete navigation, submitting information, queries using keyboards and touch combination.

1. Login and Register: This is the basic functionality for entry into the application, which allows easy access to the functionality.



2. Creating a new group, Viewing Group Details and Viewing the Transactions that happened amongst the group and adding a new member to the group:

Add Group

TextView Travelling

No. of Members 4

CONFIRM

Username of participant 1

Username of participant 2

Username of participant 3

Username of participant 4

CONFIRM PARTICIPANTS

Participants

Jainam Shah
jcshah98@gmail.com

Jack
jack@beanstalk.com

Aman Framewala
amanframewala@gmail.com

Ansh Bilimoria
ansh@gmail.com

Yash Dani
yash.dani.98@gmail.com

Add Members

E-mail:

Enter E-mail

ADD

Travelling

jcshah98@gmail.com Taxi ₹30

amanframewala@gmail.com trial ₹256

jcshah98@gmail.com idli ₹23

amanframewala@gmail.com dosa ₹56

jcshah98@gmail.com pani ₹32

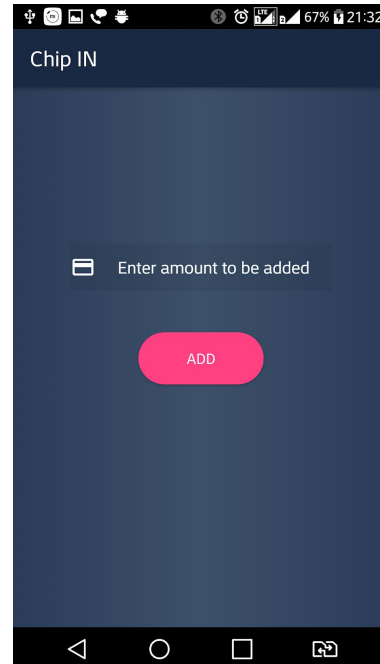
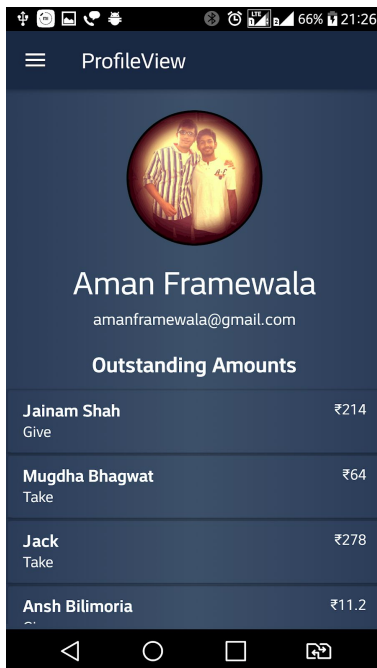
ansh@gmail.com cab ₹56

yash.dani.98@gmail.com trip ₹3000

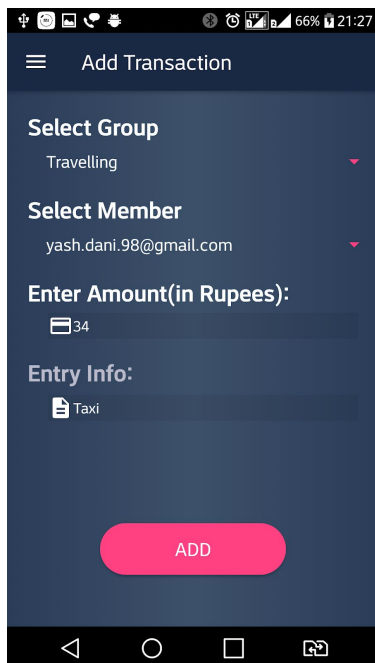
yash.dani.98@gmail.com Taxi ₹4

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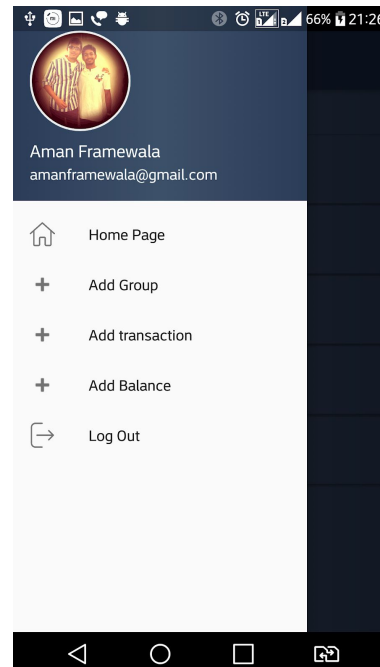
3. Viewing User Profile and the net Transactions, and Adding money into the wallet



4. Adding a new transaction



5. Navigation Bar



Various Interfaces:

1. Login
2. Register
3. View Expenses
4. View Pending Transactions
5. Set Limit for Month / Year
6. Linking the bank account
7. Help Section / Smart Assistant
8. Side Navigation bar
9. Admin Panel
10. Add new admin user, etc

Thus the above screens allow the user to move seamlessly through the application. The navbar links the various screens of the application and stays on most general screens of the application

3.2 Hardware Interfaces

The above application is an android application that works on any android device above Android 6.0 onwards. :

- The server side deals with all the transactions and linking of the backend
- Internet access is required for using the applications and making modifications in the database
- The user needs to login to ensure usage of the application and its features
- The device storage shall cache the information on the local storage to allow access to the current records at all times, even when offline

3.3 Software Interfaces

- The login and register functionality works through a specialized authentication module.
- The linking with the bank is a connection to the banks REST API, which requires extreme security measures
- There shall be a module to handle the functionality relating to the transactions [i.e. New Transactions, Pending Transactions]
- Viewing the entire data i.e. analysis of the spending and suggestions for change in the spending patterns shall be calculated and displayed as charts and graphs

3.4 Communications Interfaces

- It is a web-database android system, all kind of user-system interaction is presented by the android application, so the communication standard is REST protocol.
- The email shall be used to notify the users of there monthly expenditure and there net balance sheet

4. System Features

Type of User	Function
1. Administrator	<ul style="list-style-type: none">● Add User● Delete User● Administer Logs● Configure Bank Settings
2. Registered Users	<ul style="list-style-type: none">● Login● Change password● View Transactions● Add Transactions● View Analysis● Download information● Set Limit Reminder● Link Bank Accounts
3. Non-registered User	<ul style="list-style-type: none">● View Features● Register

4.1 Authentication

- This feature mainly performs the operation of Login, Register and Logout
- It is of high priority in the system
- Allows the user and admin to be logged in separately

4.2 Process Transaction

- Adding a given transaction that is payment to be made for a given expenditure for a given group
- In accordance to the people involved in the transaction the net transactions between two ppl is calculated
- The above information is added to the profiles of all the concerned parties

4.3 Link Bank Accounts

- Open the bank portal
- Enter the account number
- Verify the OTP
- Thus save details to facilitate easy transactions through the app straight from the bank account

4.4 Creation and Modifications of Group

- In accordance to any transaction in event of some activity, each user can create a group
- These members of the group must be users of the application
- The creator of the group can add or delete members also

4.5 Analyse Information

- The entire list of transactions can be seen
- The transactions with each group, person can be viewed
- The amount to be given and taken is also shown
- Category Wise bifurcation for the expenditure is also done, thus giving insights into where the expenditure happens and thus analyse where there is a need to cut it down
- The entire monthly statement shall be emailed to the user's email address
- He can also download and save the list of transactions that are made in a given time span

4.6 Set Profile

- The user can set up his profile i.e. name and other details
- Here he can also set up the limit that he wants to set a reminder for, i.e. a warning limit and restricted usage limit

4.7 Update Settings

- This feature is to be accessed by the admin only who shall be able to verify the linking of bank accounts
- The changes in terms and conditions for the linking of the wallet to the bank can be updated
- Support for new banks can also be added by the admin
- Revoking of any service

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The system shall accommodate 250 users concurrently; the average session duration must be of 20 minutes.

All the web pages generated by the system must be downloadable in no more than 15 seconds over a 64 Kbps modem connection

Response to queries shall take no longer than 15 seconds to load onto the screen after the user submits the query.

5.2 Safety Requirements

There should be data recovery for the application which helps to maintain backup of the entire data for the user, incase of any unfortunate event. Others include safe entry into the app.

5.3 Security Requirements

- System will be designed as an app, hence the security required shall hold a lot of importance
- The front end shall be accessible to all the users thus some form of the verification standards is required to identify the user is a valid user
- Password change/ reset/ unsuccessful login should be properly addressed
- Confidentiality of information needs to be maintained. For example A user cannot see the contact information until the user is registered
- Facility of unique user number and Password in such a way that unauthorized user can have access to specific terminals and specific options only

5.4 Software Quality Attributes

5.4.1 Availability

The system shall have an availability of 99.99%.

5.4.2 Efficiency Requirements

- For returning customers, the system shall validate 'existing' credit card in system after each log in.
- The system shall automatically compress image files that are too large in size.
- The system will employ on demand asynchronous loading for faster execution of pages.
- The system shall validate if you are a registered user.

5.4.3 Usability Requirements

- The system shall be easy to use.
- The system shall be easy to learn.
- The system shall utilize help bubbles to assist managers, users and administrators.
- The system shall employ easy to locate buttons.
- The system shall prompt customers with friend easy to read error messages.
- The system shall utilize consistent symbols and colours for clear notification.

5.4.4 Maintainability Requirements

- The system shall be easily updatable for fixes and patches.
- The system shall create logs of all changes, updates or fixes that are done to the site.

6. Other Requirements

6.1 Error Handling

If any of the validations or sequencing flows does not hold true then appropriate error messages will be prompted to the user for doing the needful.

6.2 Reliability

Data validation and verification needs to be done at every stage of activity

- Validating user input
- Use of locking mechanism while updating database like transaction processing
- Recovering the transaction using rollback

1. **Availability**

The system is available 100% for the user and is used 24 hrs a day and 365 days a year.
The system shall be operational 24 hours a day and 7 days a week.

2. **Mean Time to Repair(MTTR)**

Even if the system fails, the system will be recovered back up within an hour or less.

3. **Accuracy**

The system should accurately provide real time information taking into consideration various concurrency issues.

4. **Access Reliability**

The system shall provide 100% access reliability.