

Client Requirments of Project NITC SPLIT BILL System

Prepared by

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1. Goals

Hang out with friends and try new cuisines without worrying about accurate billing or money transfers.

2. What's Happening!

it Can be stressful and even embarrassing when you hang out with a group of people, order something, then when the receipt comes everyone is perplexed because they are uncertain .

3. Domain Analysis Document

3.1 Purpose: It belongs to the “Bill Management” Domain. Actually, we love to try new cuisines every week. However, it can be stressful and even embarrassing when you hang out with a group of people, order something, then when the receipt comes everyone is perplexed because they are uncertain how much every person should be paying. So the main motivation to develop this application is to divide the expenses individually.

3.2 Customers and users: This application is totally developed for helping NITC peoples such as Students, Faculties and other members to Split Bills whenever they travel or going somewhere in the group and want to split expenses among them fairly.

3.3

Glossary:

| Term | Definitions |
|----------|--|
| Database | Collection of all the information monitored by this system. |
| Hardware | Hardware refers to the physical components of system. |
| Software | Software is a collection of instructions, procedures, documentation that performs different tasks on the system. |
| Bill | A statement of money owed for goods or services applied. |
| Expense | Expenses are the amount paid for goods or services purchased. |
| Group | A group is a number of people or things which are together in one place at one time. |

3.4 Competing Software: Splitwise App., Splid ,Tricount.

4. Problem Statement :

1. It will be an android app where NITC members or groups can divide their expenses among each other.
2. The application remembers the total expenses and there will be no miscalculations in expenses since it will keep track of all transactions.

3. This application help us to add our expenses and split it among different people. The app keeps balances between people as in who owes how much to whom.

5. Motivations:

- Living in big cities like Indore and Delhi with tons of recreational visits.
- Food events.
- Easy payment options (phone wallet apps etc).

6. Frustrations

- Embarrassments and awkwardness that come with trying to split bills fairly.
- Payments options are plenty but non provides it all.

7. Stakeholder:

1. NITC members and Groups.

8. Design and Implementation Constraints

This product is an android based application, so we are using android studio here. Java programming language will be used here. For data management, we are using Firebase firestore DB. Software Development Life Cycle will be followed.

8.1 Assumptions and Dependencies

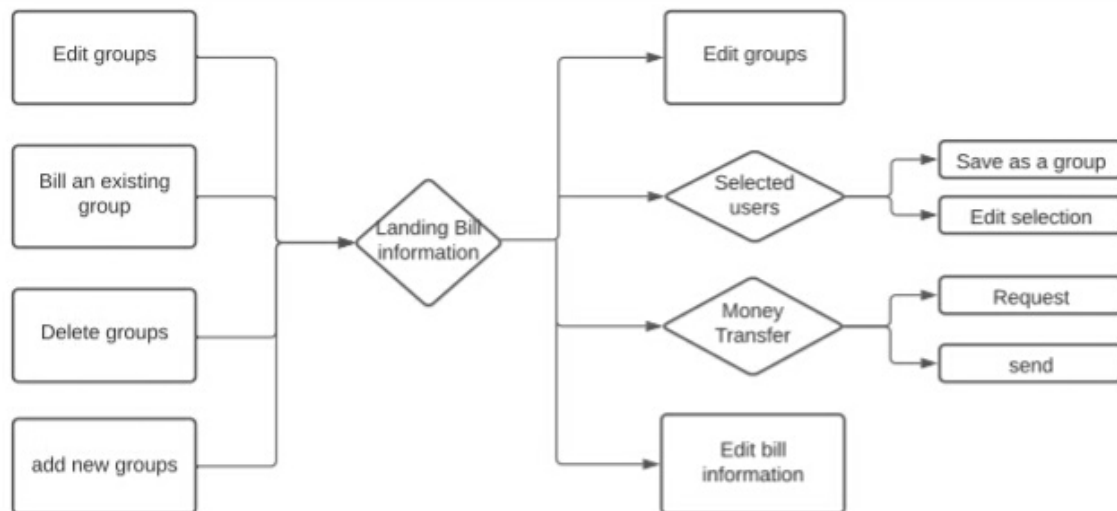
Assumptions

- The Application is available 24x7.
- All users are part of NITC and have a NITC mail ID.
- All users are using a device with OS android 7.0 or above.

Dependencies

- For Using this application User must join Group .

9. Workflow Diagram



10. Functional Requirements:

F1: The system shall allow new users to register to the application using their NITC mail ID.

F2: The system shall allow user to Add new groups.

F3: the system shall allow user to edit groups.

F4: The System shall allow user to delete groups.

F5: The System shall allow user to Bill an existing groups.

F6: The System shall allow user to Select friends to split.

F7: The System shall allow user to Request Money Tranfer.

F8: The System shall allow user to Request Money Send.

F9 : The System shall allow user to Edit bill Information .

F10 : The System shall allow user to save Bill into temporary Card.

F11: The System should have a capability to show expenses for a single user as well as balances for everyone.

F12: When asked to show balances, the System should show balances of a user with all the users where there is a non-zero balance.

11. Non-Functional Requirements:

11.1 Performance Requirements

- The System must be able to run concurrently on multiple android devices.
- Queries on the DB shall be performed faster (in less than 2 seconds).
- UI should be lightweight and does not take too much time while Requesting and sending Money.
- The System must be capable of storing a large amount of data, including user's details, amount and events.
- The System should give updates timely.

11.2 Safety and Security Requirements

- Every user must have to log in with NITC mail ID before Making any Group.
- it will not handle any cash transactions nor it does it link to personal banking details making it safer then other applications.

11.3 Software Quality Attributes:

11.3.1 Availability

The system shall be available to all the users 24X7.

11.3.2 . Correctness

All Calculations Should be done Correctly.

11.3.3 Response Time

The system shall be capable of executing the functions within a few seconds.

11.3.4 Recoverability

There is no recovery for this application. The machine can handle zero failure and optimum output on its own.

11.3.5 Reliability

The system should be stable because failure will lead to loss all data or History. It should be ensured that the machine has not crashed more than 1 time in a week and the backup would not have to be completed.

11.3.6 Reusability

The application will be built using Android Studio, in which we will use OOPs using JAVA, so that the same code can be reused to get a submission.

11.3.7 Platform

The application should be able to run seamlessly on version 7.0 and beyond android platforms.

12. Optional Requirements:

- A way to add an expense name while adding the expense. Can also add notes, images, etc.

13. Hardware Interfaces:

No additional hardware interface is needed. A mobile device capable of running an android application is sufficient.

14. Software Interfaces:

As it is a standalone app, no additional software interface is needed.

15. Similar Software:

1. Splitwise App.

Difference:-

1. Adding Participants without Having to enter their Mobile number or email
2. The Activities list doesn't Show Dates .

