*FINAL PROJECT*

Course: **INFO 1113 A13**

**Instructor: Dr. Abhijit Sen**

**Date of Submission: August 3, 2021**

**Team Members: -**

**Chirag Sharma (100396679) – Chirag.sharma@email.kpu.ca**

Website **-** <https://sites.google.com/view/gaujat/home>

Rosheen Zafar(100368216) - [rosheen.zafar@email.kpu.ca4](mailto:rosheen.zafar@email.kpu.ca4)

<https://sites.google.com/view/info1113a13assg1>

Nitin verma – [Nitinverma@email.kpu.ca](mailto:Nitinverma@email.kpu.ca)

<http://google.com/view/nitin-project-work>

**Sharing Expenses**

**Executive Summary**

The world without the financial application do not exist. Money is the only key to our modern life problems. So, we decided to come up with an application to develop an application that regulates all the expenses and manages the expenses. The main concept behind the application came to being because an average person in today’s era is failed to control their expenses which results a debt. The application basically works in a concept where the sender and the recipient have to be in a continues and direct communication.

The new application will be given 6 months premium free which will be useful to the user to know its worth. However, after that there will be a change to the premium subscription of the least amount to allow people to manage and use the application. Nevertheless, the primary goal of the application is to allow easy send and receive of money keeping in mind the regulation of expenses to both sender and the receiver on the other end.

The features of this application are as following: -

* The money that you owe will be witnessed at the first page of the application.
* The money that you must request will be shown next to the money you owe.
* The regular expenses will be shown in the next page for example insurance vehicle and grocery.
* You can also add your friend as well as family member in this application through having there information.
* The application will work as a third party application for instance wise application and Remitly.

Conclusively, there will be a maintenance package that will always be done on a monthly basis which can only be done after the notification of the clients through their email as updates are regular in the field of technology and application so bug fixes will be done after every week.

**Introduction:**

Our application is designed to regulate and manage a person’s expenses in order to prevent debt. The main concept behind this application is being able to easily send and receive money between people. The recipient can request money from the sender which will be displayed on the application page. The application allows users to make groups with their friends or family. It lets the user and their friends to add various bills and keep track of who owes money to whom. Groups are an easy way to split expenses with a particular group of people on an ongoing basis. Our application allows those people in the group to view the group and add expenses of their own.

This application is very useful as it takes away the stress associated with managing your money and expenses. It can be used to split rent, household bills, or travel expenses, whether it be with one person or ten of them.

This report includes a thorough description of our application with the functional and non-functional requirements, a use case diagram, a class diagram, and a sequence diagram. It also includes an interface prototype of our application which will be used by customers so they are able to see how the application would look like if it was developed.

**Requirements:**

## Functional Requirements

1. Welcome Page function: The welcome page will appear only once when the new user downloads this application.
2. Login & Registration function: The registration function allows the user to create their account. The login function will check the stored information from the database system to permit the login requirement.
3. Group creation and control function: user can establish multiple groups for many different purposes. It allows the user to add group members.
4. Create bill and post bill function: The user can store and monitor the bill amount to ensure the multiple bills.
5. Transaction function: Enable all the users to make transactions and payments.
6. Debt record function: To automatically calculate the efficient way for debts and offer different user options.
7. History record function: Automatically records all the transactions and bills for each group. To record all the transactions and payments history.
8. Debt display function: To display all the unsolved debts for different users and groups.
9. Settings function: To allow the users to make modifications and changes based on their preferences.
10. Help function: To allow the users to find the topics and answers related to their questions.

## Non-functional Requirements

1. Debt visualization function: The user can view the group balance and debit when selecting the different group members.
2. GPS location function: Users can set up the billing purposes to remind themselves and group members about the billing details.
3. Receipt function: once the user makes the payment for their bill, the system can automatically generate the related receipt to the user.
4. Email or SMS notification function: This function allow the user to send the notification about payment and bill to the group members based on email and SMS.
5. Tutorial function: This allows the user to watch and check the basic functionalities of this application. To understand how to use this application.

**Use Case Diagrams**

Diagram

Description automatically generated

***Use Case Description 1***

This project works in a simple dimension detail. A sender can send money to the recipient directly. The sender first has to register and log into the system. He or she will be required to enter the bank details, which will directly link to his or her bank account. Then, the sender will have to add the client's request directly from the client, which the client will provide. The recipient needs to add the phone number, bank account details, address, and country to receive money.

When the sender is sending money, they have to have the bank code, address, phone number and then enter the amount they want to send. The system will confirm the authenticity of the information and then do to the recipient and add their information. After that, there will be a transaction after entering the pin. The transaction will have the date, amount, post balances, and address. After the transaction is done, the receiver will have to provide a report of the successful transaction. In conclusion, there should be constant communication between the sender and the receiver of the information so that there is a straightforward transaction of the funds

2nd case diagram

<<include>>

Authorize credit use

**Create** **group**

**Add members to groups**

**Logout**

User

**Receive receipt**

**Pay bill**

**Add bill**

**Login**

**Class Diagram**

**Diagram

Description automatically generated**

**Interface Prototypes**

Diagram

Description automatically generated

**Relational Database Tables**

**Table

Description automatically generated**

Graphical user interface, application, table

Description automatically generated

Table

Description automatically generated

Table

Description automatically generated

**Diagram

Description automatically generated with low confidence**

**Group Links**

Group Github link:

<https://github.com/chinnu246/info1113_group_project>

Trello board link:

<https://trello.com/b/8gdYC9C8/info-1113-a13-assign-3>

Group google website link:

<https://sites.google.com/view/infogroupassignment/home>

**Project experience:**

For this project, there were some parts that worked well and others that did not work so well. Initially, getting started was a little difficult as there were a lot of tasks to complete. By using Trello, we were able to divide the tasks amongst our group to make sure everyone was contributing to the project.

During the project, it was difficult to communicate with all the team members at once as everyone has a busy schedule however, we still managed to complete the tasks. Our group had trouble with GitHub and pushing the changes to the repository therefore, we uploaded the documents directly on our group GitHub, which was easier to do.

As a group, we should have started earlier on the project as there were many tasks that required a lot of time and preparation.

**Conclusion**

Our application was designed to help the user manage their expenses and to be able to share their expenses with their family and friends. The primary purpose of this application is to easily send and receive money between people. The user can add expenses on the Add Expense page which asks for who they want to share the expense with, a brief description of the expense, and the total amount of the expense. Through this application the user is able to organize their expenses in categories to make it easier to know where their money is being spent. They can add categories like ‘Grocery, Bills, Rent, and Insurance payments.’ This application also allows the user to make groups with other people to add various bills and keep track of who owes money to whom. Creating groups is a convenient way to divide expenses between people on an ongoing basis.

This application is very handy as it keeps track of all your expenses and makes it easier for the user to manage their money. It can be used to split rent, household bills, group dinners, and travel expenses. This can be done with one person or an entire group of people.

Our project includes a thorough description of our application including the functional and non-functional requirements, a fully developed use case diagram, a class diagram, and a sequence diagram. It also includes an interface prototype of our application which shows what the application will look like for users, if the application was to be developed.

Works Cited

Valacich, Joseph, and Joey George. *Modern Systems Analysis and Design*. 8th ed., Pearson, 2016.

<https://github.com/>

<https://trello.com/en>