Team Number: 104-1
Team Name: SARJnT
Team Members:
Shanaia Buggy, Amirul Mohd Zahari, Richard Terrile, Jake Hugenberg, and Tyler Tomlin

Application Name: TripSplit

Application Description:

TripSplit is a group budgeting application that allows for small or large groups of people to fairly and easily divide group costs for trips. For example, a user embarking on a spring break trip would be able to create a group called “Spring Break 2020” and add people who are going on the trip to that group. Members of the group who pay for shared expenses will be able to log said purchases, with a short description of what the purchase was for and the amount spent. The application will keep track of the total group expenses for the duration of the trip, as well as how much each person in the group has contributed thus far. At the end of the trip, users will be able to see who owes money, and who is owed money. One possible feature is a customizable view of contributions to date for the trip. Some possible views could be a pie chart, a leaderboard, other types of graphs, or a simple feed logging the history of the trip.

A user would be able to be a member of multiple groups at once, and to manage and view their debts and contributions efficiently across multiple groups. Someone creating a group would have the option to add their friends via phone number or email, and to see shared friends or related transactions. A user who purchases or downloads TripSplit would avoid the frequent possibility of one or two members of a group paying more than they should by consolidating the potentially complicated or tedious mathematics into an easy to read, customizable display. This would save the user time and effort, and eliminate the possibility for arithmetic errors or negligence to result in an unfair distribution of expenses for a group. Our application would also have the option to redirect to a secure payment service such as Venmo or Paypal.

Vision Statement:

For groups of people who want to efficiently and fairly divide shared costs, TripSplit is a budget utility that cuts out the tedious nature of paying numerous people small amounts by consolidating group costs into an customizable format that clearly displays how much each group member has contributed and is owed. Unlike the primary competitive alternative, Splitwise, our product will possess more of a social media interface that will encourage the users to interact with other users within the group. TripSplit will also offer a more simplistic layout that will allow users to effortlessly navigate about the app with no trouble.

Version Control:

Project Code Repository: https://github.com/tyto111/projectCode

Meeting Logs Repository: https://github.com/tyto111/meetingLogs

Milestone Repository: https://github.com/tyto111/milestones

Development Method:

We will be using the waterfall development method. Our first phase is designing the specifications of our application. Figuring out its features, uses, and user management mainly. The next phase is designing the system that we will use to implement all of our features from the first phase. This will help us understand what hardware and what software will be needed to complete our application. In the next phase, we will develop units for individual functions in our application to make sure they work, these will be the classes and functions that are used throughout our applications features. These units include the data structures for storing people, groups, and money amounts for each trip. For the next phase, we will create the overall architecture that will take advantage of our units from the last phase. This will establish a bare bones version of our application that can be tested to find any faults and bugs that we can fix. After the bugs are hammered out, the next phase involves reworking our application to look nice and user friendly so that it can be tested in the real world by customers. The final phase is maintaining the software after it is public so as to make sure the user experience is perfect.

Communication Plan:

Our group will use Google Docs to manage various documents required for the project. This tool will be utilized for drafting, editing, and finalizing the documents in real time. This also makes it easy for any of us to add upon the group's documentation. As long as our group members have an internet connection, Google Docs will be accessible for whenever we need it to be. We will also be using GroupMe to send messages within our group. A common use for this would be giving updates to the rest of the team about what each member will work on. It is also useful to inform the group if anyone has to be absent from a meeting. Our shared Github repositories for version control will also allow for remote collaboration on project code.

Proposed Architecture Plan:

Database to store total trip costs, as well as individual user contributions. We will also need to potentially keep track of several groups per user and manage all of those simultaneously. Data such as the group feed and group contributions will need to be stored for potentially multiple weeks at a time. This will be viewed as a progressive web app, so it can be downloaded to a phone or viewed on any internet browser. The app will allow users to create group budget trackers and users can input items. The backend will be data structures keeping track of everything that the group logs, the data will be stored for as long as necessary until the group is done and all debts are paid. Technologies used will be Java for the mobile app and HTML and CSS for the web application.

Meeting Plan:

Day/time: Tuesdays 1:00-3:00

Mode: Face to face
Location: Benson library