**Bill Sharing App**

Split And Track The Easy Way

**Abstract:**

The main aim of the team is to develop an Android application to split the bill, track bills and other shared expenses spent among the friends of group of people and make sure everyone is paid back the correct amount. Using this app we can create groups add friends to the grouped created. We can add and edit the expense in the group created to share the expense between the people, will let you know how much you owe and how much u get. Push notifications will be triggered once an expense is added to let us know the updates. We can add the bill image to the expense added to show the expense.

**Tools Used to build the application**:

* **Build tool :** Gradle
* **Continuous Integration:** Jenkins
* **Quality Assessment Tool:** SonarQube
* **Testing tools:** Jasmine,JsTestDriver,Selenium
* **Logging:** Log4javascript

## Different phases of project:

### **Sprint 1:**

* + **Scrum Masters:** [Chad M. West](https://gitlab.com/u/cmwest)
  + **Goals:** Aiming to develop a sample application which will be the best technology for our project.
* Set up the project in Github.
  + **Pair programming teams:**

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| Chad, jayasree | Ayush, Anusha | Manoj, Eashwer |
| Data bases schema | Android Basic UI | UML and Requirement Analysis |

* **Achievements:** Our team came up with designing the Login Screen and creating a database schema.
* **Challenges faced:**

1. Unable to assign jobs as we didn’t know the team members’ expertise (Who is good at what).
2. Communication gap, as few members were new to working with the others.
3. Confusion about which tools to be used.

* **Things learnt:** How to use the team in a proper way by understanding each person's expertise and assigning tasks in such a way.

### **Sprint 2: (In progress yet to be updated)**

* **Scrum Masters:** Anusha Kondam
* **Goals:**

1) Designing the Registration Screen.

2) Creating a Dummy App.

3) Working on the server side programming

* **Pair programming teams**

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| Eshwar, Manoj | Chad and Aayush | Anusha, Jayasree |
| Registration Screen | Test cases, Login and Registration | Registration screen server-side coding, Jenkins integration. |

* **Achievements :** Designed the registration screen and successfully worked on Jenkins integration.
* **Challenges & Backlogs:** The complete functionality of registration screen was not implemented.
* **Things learnt:** Who to work on the backlog activities.

### **Sprint 3:**

* **Scrum Masters:** Aayush
* **Goals:**

1) Develop Login and Registration Functionality

2) Perform Testing

3) Server side programming

* **Pair programming teams**

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| Eshwar, Manoj | Chad and Ayush | Anusha, Jayasree |
| Registration and home Screen | Login, registration functionality and unit tests | Server side programming for login and registration screens, Schema testing |

* **Achievements:** Successfully completed Login, registration functionality and respective server side programming. Testing for the developed functionality.
* **Challenges & Backlogs:** Coordination was little rough but we managed to successfully pull it together without compromising the pace of development.
* **Things learnt:** Team is getting along with android development, learning Hibernate, and Server side programming.

### **Sprint 4:**

* **Scrum Masters:** Manoj
* **Goals:**

1) Develop the home screen functionality

2) Develop the logout functionality

3) Perform the unit testing server side

* **Pair programming teams**

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| Manoj | Aayush and Eswar | Chad | Anusha | Jayasree |
| Fixing the database issue, adding validation and logout functionality. | Developing the home screen, adding groups, friends, user lists and minor changes in login screen. | Login methods and worked on the app. Unit testing for server side. | Changes to group creation. | Server side programming |

* **Achievements:** Successfully completed Logout and home screen functionality
* **Challenges & Backlogs:** We need to implement the actual bill splitting functionality.
* **Things learnt:** We need to speed up the things to complete the project on time and make sure that everything works fine.
* **Overall Learning:**
* Scrum meetings the team had made it a point to meet at least twice a week for about 10-15 minutes, to work closely on to project.
* User stories are captured from an end-user perspective from the initial team discussion and the requirements are prioritized based on the team discussions.
* Documentation was done for the project maintaining the dashboard tracker to hand over the work and project update to next scrum master. The tracker also talks about the tasks performed and the roles of team members, achievements, things learnt and backlogs were also mentioned in the tracker.
* XP programming practice like Pair Programming is implemented where people worked together towards a common goal.
* Test driven development was implemented to ensure the quality of the code and refactoring of the code.
* Continuous Integration was performed, to detect problems early so that updates can be shipped easily.
* Refactoring code was performed to simplify the design in the code without changing its behavior.
* Product Backlogs, list of all things that needs to be done within the particular sprint which are carry forwarded.
* Release plan, which focused on the velocity at which the project was going, by seeing how much work was done per iteration