

## Individual Contribution Report

Week One: Formally met the group members and worked through team-building activities, I believe this was a great start as it helped me to identify our group's strengths and understand how much I can contribute to my group. My weaknesses that I wish to improve upon is my time-management abilities, my confidence and anxiety. I aim to do this by engaging and making contributions in group discussions, meeting deadlines and maybe being involved in the project pitch. During the team-based activities I contributed significantly in the sessions, breaking the problem down so that each member understood my thought process. The most difficult part during the activities was trying to sync with each member, trying to understand their viewpoint (since each member had their own way of thinking). I figured members of my group may hide key contributions by staying silent, so by constantly asking questions I was able to get a strong idea of my peer's views, strengths and weaknesses. After meeting the team members, we immediately created a WhatsApp group to keep contact. The project theme and constraints were finally released on February the 8<sup>th</sup> 2019. For week 2, I should start thinking about what role I can assume and start brainstorming ideas I can think off and sharing it to the group, to base the project on.

Week Two: We began by setting up a shared platform for all members of the group to use so we can work on documents simultaneously. The platform we all voted on was Google drive [0]. We also began using Trello as an interactive board to track our progress and used Slack as a channel for communication [9]. I took the initiative to create a project proposal template that would briefly describe the project and its relevant constraints according to the assessment. I believe this was critical so that members of the group can easily and quickly add their ideas onto the form. It also helps the prevention of losing ideas since vocally suggesting an idea may be forgotten or perhaps not heard as members may talk over them as briefly mentioned in our lectures. I then added two ideas onto the document. My first idea being the recipe idea and second idea being an e-market application that makes use of location awareness (see initial project ideas sheet for more information). I believe these ideas are key foundations which as a group we can build on to create a concrete working application with useful, essential features if selected.

To conclude the week, we had a group meeting on the 15<sup>th</sup> February 2019 (minutes were recorded at each meeting). During the meeting we assigned roles, I took the role of a front-end developer since I enjoy UI designing and understand that UI design alone can make a significant difference to our client's view of the application. I also have great experience with firebase and showed the group what I can do by showing my android application coursework from the previous academic year. Brainstorming ideas during the meeting was quite challenging and was quite arbitrary, so I suggested an ideology learnt from the workshop on 'Design Thinking' which focused on a different perspective to a solution to a problem. The idea was to simply focus on a group of individuals and create an empathy map and identify an area for which we can develop an application for. I also suggested the idea of using a prioritization grid [1] (have impact to user on the y axis and feasibility/time on the x axis) to select a project idea for our final proposed solution. We decided to extend a deadline to the 18<sup>th</sup> February 2019 to pick a project idea. This weekend I will take the lessons learnt from the 'Design Thinking' workshop and think of a more innovative problem which we could find a solution for.

Week 3-4: During the time leading up to our group meeting on the 18<sup>th</sup> of February I had updated the recipe idea with a list of features and information to show that the project has met the constraints. At the meeting we all took turns pitching our ideas to the rest of our group, discussing how it meets the constraints, discussing the application's features and benefits to society. After each proposed pitch we critically evaluated the feature discussing strengths, weaknesses, improvements and the impact it will have to users. Through a voting system and a series of discussion the recipe idea was picked. For the following week I began working on the project proposal with another member of the group, upon finishing we had everyone in the group to peer review the work. I believe that I gained clear insight on how a group should make decisions knowing what exactly should be considered and the implications of them.

Week 5: At the meeting held on the 26<sup>th</sup> February we focused on deciding on the technologies [2] (detailed in our FAR, implementation section) and discussed the engineering of our application. We considered the LESP (Legal, Ethical, Social and Professional issues) lecture slides when deciding the technologies, this is one of the reasons why Firebase was ultimately selected since it covers most legal, privacy and security concerns. This week, as a front-end developer I should aim to create sketches of the application as well as designing a few logos for our application.

Week 6: I created a few sketches of the UI for each feature, the sketches were appropriately labelled and had descriptions. They detailed user actions giving us an idea of how exactly a user would use the application. After completing the sketches, we worked on more professional designs using Marvel [3] [4]. Deadlines were always met on time, I believe that this was because of Trello [5], we wrote our user stories and sprints on Trello, which is a real-time, interactive board giving us an indication of what is completed and what isn't. I would use something like Trello again to help understand the progress being made in future projects. At the end of the week, me and two other members of the group presented our project to our sponsor and to members of other groups. The project pitch went well, however I found myself to be quite nervous and hesitant, again as stated in week 1 this is an area of improvement that I must work on.

Week 7: Whilst the documentation team were working on the audit report, I started implementing the logging system and setting up firebase. The finished feature was then pushed on to Gitlab [6]. From this point onwards our group and I focused on completing user stories which have been assigned to them. One of the issues I was faced with when starting the project was how exactly everyone was going to work on the application simultaneously. The solution was to use Gitlab (as mentioned in previous meeting) [7], it allows members of our group to merge solutions together thus enabling us to work on the project simultaneously. This is something that was quite new to me and is widely used in the industry, so it was great to learn it and gain some practical experience.

Week 8: Before the break we met up on the 19<sup>th</sup> March 2019 to go over what everyone had to do. During this time, I further improved the design of the login system and created the forgot password functionality. By this time, I had finished my allocated design tasks and finished designing the logo of the application. The logo was created using paint, I used the shape and pencil tool to meticulously edit the logo to achieve what I wanted, after finishing in order to remove the pixelation I converted the logo from PNG into an SVG effectively smoothing the logo, achieving an aesthetic appeal [8]. This is a tedious method and is something Graphics Designers in the industry wouldn't use. Although it did the job, it would have been more practical to use software's such as photoshop, gimp or illustrator. The rest of the week consisted of maintaining code and peer-reviewing another member's code. I found that following the same commenting guidelines allowed us to easily understand each other's code. During this time, the group carried on working on the user stories and adjusting the PDD.

Break: During the Easter holidays I implemented my assigned tasks on Trello. As I came to the filtering task, I found a huge issue, this was to do with the limitation of firebase. I found that firebase real-time database was quite limited with querying data, the solution to this was to use cloud firestore [2]. With cloud firestore I was able to chain statements together to filter the list of recipes based on the user's ingredients. I immediately proposed the changes to the group, and we went ahead with the change. This costed us a lot of development time as we had to change all code relating to firebase and switch it to cloud firestore. The procedure was quite straight forward though a lot of time was taken in doing so. This mistake could have been avoided if we had researched thoroughly on the alternatives of firebase, taking a note of the disadvantages and advantages of firebase and checking if it meets our requirements fully. I believe the situation could also have been avoided if we had pre-planned the filtering process since a lot of time was wasted trying to implement the feature. At the end of the break, I made sure the application was suitable for the beta release, fixing any bugs and errors that would occur.

Week 9-10: This sprint began with a group meeting where we allocated each member of the group with an even distribution of work to maximise our total marks for the final audit report. A member of our group had already broken down the report into sub sections, each major section was then assigned to a member of our group, we also discussed about peer-assessing and proof reading, a pivotal group task which had to be done before submitting the report. My part was to write the implementation section of the documentation. After completing the implementation section of the report, I began polishing the app and then helped with unit testing ensuring that each requirement worked as expected.

Lastly, after the deadline we took the opportunity to present our application in a science-fair fashion to business opportunists, it was a great experience where we pitched our idea and answered technical questions. Overall, I believe I performed quite well and answered the questions appropriately when asked. I believe there was a huge improvement in my confidence and speaking ability from the project pitch.

## Appendix:

- [0] Google Drive, Available from: <https://www.google.com/intl/en-GB/drive/>
- [1] "Prioritization Grid:A Brief Introduction", appfluence, Available from: <https://appfluence.com/productivity/prioritization-grid-brief-introduction/>
- [2] Final Audit Report, Section 5.1 Implementation: Choices of Tools and Technologies
- [3] Marvelapp, Available from: <https://marvelapp.com/>
- [4] Final Audit Report, Section 4.7 User Interface
- [5] Trello, Available from: <https://trello.com/en-GB>
- [6] Gitlab, Available from: [https://gitlab.eps.surrey.ac.uk/users/sign\\_in](https://gitlab.eps.surrey.ac.uk/users/sign_in)
- [7] "How to create a merge request", Available from: <https://docs.gitlab.com/ee/gitlab-basics/add-merge-request.html>
- [8] Final Audit Report, Section 4.8 Logo
- [9] Slack, Available from: <https://slack.com/intl/en-gb/>