Our IT Project (Assignment 3)

**Assignment 2 Doc:** [**https://docs.google.com/document/d/1I3rOkZcCWFCuxoLN3OpV\_arUbfIHf-xPmMh\_GsAQc9U/edit?usp=sharing**](https://docs.google.com/document/d/1I3rOkZcCWFCuxoLN3OpV_arUbfIHf-xPmMh_GsAQc9U/edit?usp=sharing)

**Assignment 2 GitHub:**

[**https://github.com/DharalPatel/RAD-DJ**](https://github.com/DharalPatel/RAD-DJ)

**Github:**

[**https://github.com/DharalPatel/IT-Project**](https://github.com/DharalPatel/IT-Project)

**Team Profile**

**Team Name:** RAD-DJ

**Personal Information:**

**Danny Pham:**

My background is Vietnamese but i was born here in Australia. I graduated from Keysborough Secondary College, and is currently doing a course in Information Technology at RMIT. My hobbies are playing video games, playing badminton if i have the chance, watching TV shows like The Flash and Agents of Shield. I also like to take photos and building computers. Fortnite squad up. My IT Interest is in Networks and Cloud Computing.

My experiences in IT has been doing Computing in Year 11 and doing work experiences in Year 10 at a computer repair shop.

**Jaidyn Jong:**

I was born and raised in Melbourne, Australia, with my background being half maltese and timorese. I completed my year 12 studies at Copperfield College, where I graduated in 2016. Currently, I am studying a bachelor’s degree in business, majoring in economics and finance and am in my second year of the course. In my downtime, I enjoy spending time playing sports and catching up with friends, working on cars, as well as playing video games and watching YouTube videos. In relation to IT, I am interested in programming, analysing databases, networking and cloud computing, where I have been taught the basics of these skills in my year 11 and 12 studies where I took IT related subjects.

**Ryan Harris:**

My background is that i’m half irish and half Australian, but i was born in Sydney, Australia, and have lived in melbourne for as long as i can remember.. I graduated from Brighton secondary college in 2017. I am currently in my first semester of studying IT at RMIT. I’d say that my hobbies would be playing video games (both PC and ps4) as well as watching tv, and by tv i mean netflix, stan and youtube. IT wise, i’d say i’m pretty interested in programming and creating programs using this, and i have had very little experience with IT in my junior years.

**Dharal Patel:**

I was born in India then migrated to Australia at the age of 14 where I completed my VCE in Maribyrnong college 2017. Currently, I am studying Bachelor of Information Technology at RMIT. My hobbies include playing Cricket and video games and I spent most of my time watching Youtube and Netflix. My career ambition is to become the very best programmer thus I code and program in my spare time. This passion of mine started back in high school when I was taught basic coding in my IT classes.

Link to website: <https://s3-ap-southeast-2.amazonaws.com/s3719882/index.html>

**Group processes:**

Our group worked very well in Assignment 2, as the assignment was done on time and to a high standard, so not much will be changed in this assignment, except for adding in a more cohesive timeline for the report in order to complete Assignment 3 on time, as it is more complex than the previous one. We also want to make sure that in assignment 3 everyone commits to Github and also pulls request as we didn’t had any pull any requests in assignment 2. And we also want to improve our communication as we lacked a bit in communication in assignment 2.

**Career plan:**

The ideal jobs for each group member are relatively similar in terms of being IT related, with the exception of one of the jobs being the Economic Regulator. Some of the common elements and general skill sets that each of the ideal jobs require are communication and problem solving skills which are the main elements which sets the jobs alike. As for what differentiates each position from one another, three out of the four IT related jobs (Support Analyst, Software Engineer and Systems Admin) obviously require a degree of knowledge in IT specific areas such as JavaScript and SQL, whereas non-IT pathways like the Economic Regulator would not demand skills in these areas. In terms of what sets the IT related jobs apart, a support analyst should also have troubleshooting skills as a key skill in addition to the basic IT requirements, similarly to the software developer. A system admin on the other hand must also be detail oriented and have a structured way of thinking much like the software developer. After having received feedback from our previous assignments, we are all likely to still pursue our ideal jobs, knowing that at present, they are likely to still be in great demand.

**Tools:**

Team Website:<https://dharalpatel.github.io/IT-Project/>

Team Github: <https://github.com/DharalPatel/IT-Project>

**Project Description**

An app for your dog(s) that allows you to:

* Track walk time/ length
* Remind you of feeding times
* Give recommended information for dog breed
* Information about the dog will be shared across all devices

The app will consist of:

* Main screen:
  + Will have a sign in page
  + This will be where you can "add" your dog to the device, you register the dogs age, breed, name and gender
  + Will also be a feature to "share" a dog across multiple devices
    - Useful for families or dogs with multiple people looking after it such as a dog walker

* Walking screen:
  + Will first have you select your dog, or multiple dogs and start the walk
  + Before starting the walk, there will be information about the dogs recommended walk length for their expected size and breed. For example "Muttons is a German Shepard who is 4 years old and so needs about 30 minutes. The app can also take into account the weather in this info (optional)
  + Will be a button to begin walk, which activates a timer and a pedometer.
  + After the walk, there will be a button to "end the session" this will display a map of where you walked, as well as the overall time and distance covered
* Feeding screen:
  + The times for feeding a dog will differ between each owner individually, so the owners will be prompted to select their dog and enter their preferred eating times.
  + The app will also give recommended serving sizes depending on the dog breed
  + After entering the preferred eating times, the app will then set an alarm 10 minutes before this scheduled time to remind the owner to feed the dog. Can be turned off or changed to a push notification
  + After feeding the dog, the owner hits a button that checks off the dog and signifies it as " fed", so now every member of the family can see that the dog has been fed

**Topic**

Our Assignment 3’s group IT project will be an application in conjunction with a device that has the functionality to monitor your dog’s main attributes. The main components that the device will encompass is a GPS tracker, a step counter and a thermometer that attaches to the collar of the dog, the device will have the ability to communicate with the app on your mobile device.

The application will allow the user to monitor the amount of physical activity the dog has completed, notify the user when the dog needs to be walked based off of the GPS tracker, allow the user to check off if the dog has been fed or not, and the ability to observe the ambient temperature around the dog to see if the dog is at any risk of overheating.

**Motivation**

The motivation for this project was based off of Ryan’s personal needs, as well as the needs of many dog owners, as it can sometimes be hard to keep track of your dogs health, especially when there are multiple members of the household. The project is important as it can help owners more closely monitor their dogs health and ensure their well-being by taking action when necessary. To a future employer, working on this project would show our group members ability to create and plan an app/ IT project, as well as show them that the group member are able to work on a project that they necessarily don’t have stakes in, or aren’t as interested in as Ryan, which is an important quality for potential employers to look out for.

**Landscape**

Here are some similar apps:

* Dog walk by Tractive (highest “competitor”)
* Map My Dog Walk
* Dog Walk Tracker & reminder by Halcien labs
* Dog Log by apps for good UK
* Hungry dog tracker & reminder by Halcien labs
* Pet diary by Behrang Javaherian

However, most of these apps are solely focused on dog walking or dog feeding, and not both at the same time, unlike our proposed app. The most polished and highest rated app was the Dog walk by tractive, it had a sleek and stylish design with many functions similar to what we would like to implement. A main point of difference our app would have to other one’s available, would be the tracking of walks and eating schedules in the same easy to use app, as well as the linking of multiple owners/ devices to one dog or multiple dogs, which would be essential for a family trying to use our app. It can be expected that this app can be created to be able to stand out from the rest.

**Detailed Description**

**Aims**

Our aim is to provide an application which will enable you to track your dog’s food and walk schedule. We aim to provide our users with an application which will allow the user to keep track of their dog’s health and wellbeing, whilst taking the complexity out of an everyday pet owner’s life in tracking these daily tasks. The app will be able to inform them about this information and will also remind them to feed their pet if they haven’t been fed. The app will allow to track dog’s walk by using GPS which will be fitted in the dogs collar. The GPS will be connected to their mobile devices and will allow them to start their dog’s walk at a particular time or location. Alongside this feature, it will also display the recommended duration of the walk based on the pet’s characteristics such as its breed, weight and age. For example, a German Shepherd may require a longer exercise period than a chihuahua.

**Goals**

One of the goals will be to ‘design the application’. The GPS tracker will be connected to the application where all the actions will be performed by the user. So the first task towards creating an application will be to design how it will look like by creating mock-ups. This is where all the designing of the application will be done and it should be designed while keeping the users in mind. This goal will help towards achieving in our aim to make an application that will allow to keep track of dog’s care. Designing the application will the first task in creating the application.

**Plans and progress (Recommended 3-4 pages)**

Our project idea being the dog tracker GPS system as mentioned will be designed and partially implemented to assist dog owner’s with keeping track of their dog’s health and state of wellbeing. This idea came about from Ryan, in order to assist not only him, but several thousands of other pet owner’s in helping them achieve this everyday task. More specifically as to what our project will accomplish, it will enable the end user to be able to keep track of the walking and feeding times and recommendations for their specified dog, based on their breed, weight and age. The app will also specify the length and duration of the walk recommended for the dog based on these characteristics.

In terms of developing any features or outcomes for this project and how far it has progressed, we currently have an idea set out for what this application will feature in each of its screen, for example, the home screen will display a sign in/sign up page in which it will prompt the user to enter in the relevant details such as their dog’s breed, age etc..

**Roles**

**Developer:** Danny, Ryan, Dharal, Jaidyn

**Designer:** Ryan

**Tester:** Danny, Ryan, Dharal, Jaidyn

**Scope and limits (Min 1 paragraph)**

**Tools and technologies**

* Arduino UNO
* Arduino Software
* Wires
* LM35 Temperature Sensor

**Testing (Min 1 paragraph)**

**Time frame (Presented in a table)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Ryan** | **Danny** | **Dharal** | **Jaidyn** |
| **Week 1** |  |  |  |  |
| **Week 2** |  |  |  |  |
| **Week 3** |  |  |  |  |
| **Week 4** |  |  |  |  |
| **Week 5** |  |  |  |  |
| **Week 6** |  |  |  |  |
| **Week 7 (est)** |  |  |  |  |
| **Week 8 (est)** |  |  |  |  |
| **Week 9 (est)** |  |  |  |  |
| **Week 10 (est)** |  |  |  |  |
| **Week 11 (est)** |  |  |  |  |
| **Week 12 (est)** |  |  |  |  |
| **Week 13 (est)** |  |  |  |  |
| **Week 14 (est)** |  |  |  |  |
| **Week 15 (est)** |  |  |  |  |
| **Week 16 (est)** |  |  |  |  |

**Risks**

Some risks that may occur in our project is the incapability of being able to demonstrate the features given, as we have do not have the required experience with Arduinos and mobile application development. However, when implementing the application, it would be likely that professionals within the specific fields of development would be employed in order to assist us in developing our concept, therefore limited the possibility of risks occurring.

**Group processes and communications**

Our group communication will be conducted both in class and out of class. For out of class, we will use the social media platform Facebook, where we have created a messenger group for which we discuss our plans for the assignment. We expect communication to take place at least once to twice a week. As all of our group members are frequently active on this platform, we should have no problems when it comes to no communication from our group members. In order to avoid any project failures, our Trello page will help each member keep track of each individual task which will eventually need to be accomplished, as well as displaying the due dates for each of these tasks.

**Skills and Jobs**

As previously mentioned in the ‘risks’ subsection, we would find that future potential employees with plenty of experience with Arduinos and mobile application development would definitely be a requirement for a position to help take our project to the next level, when it comes to technical expertise. These applicants should also have done previous work similar to that of this project in the past, so that they are exposed to what they are required to do. Another requirement for potential applicants would be someone who has very strong innovative skills, who can employ new ideas and concepts into a variety of different situations based on current needs of consumers. This is to help our project stay up to date and to continuously be on the edge of innovation above our competitors. Someone who possesses great managerial and leadership skills would also be of much benefit for our project so that they may act as our co-leader, as well any other potential applicants whose knowledge and level of expertise in other other fields such as application designing would be of value for our project.

**References:**