ASSIGNMENT 3: OUR IT PROJECT



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S3721552

Tech Support

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TEAM PROFILE

TEAM NAME

Tech Support

PERSONAL INFORMATION

Marcel Nowosiak - S3539505

I was born here, however, my parents are from Poland, and naturally, I have inherited that rich culture (and language) despite being a Melbournite from birth. Apart from my passion for Information Technology and computing, I am a HUGE American football nut, both as a fan and as a player.

Dhrumil Vaseta - S3719240

Born in Gujarat, India but I've been living in Melbourne since 2013.

I speak 5 languages including: Gujarati, Hindi, English, Marwari and Punjabi. English being my third language. Yet, the most fluent language I can speak.

I love playing and watching cricket in my free time. It's something that I'm immensely passionate about and just enjoy doing.

Joseph Heifetz - S3722140

I'm an 18-year-old high school graduate of Russian/Jewish heritage born and raised in Melbourne. I speak both English and Russian and play both Trombone and Guitar as well as some piano. I have a younger brother and pet cat named Ron. In my spare time, I enjoy playing video games and making music as well as going on bike rides, watching Soccer and American Football.

Omar Adnan - S3721552

I'm currently a student at the Royal Melbourne Institute of Technology(RMIT) and am currently doing a bachelor's in information technology. I was born in Pakistan but migrated to Australia 10 years ago. Coming from an Urdu speaking background,

I was quickly able to learn the Arabic language and then English coming to Australia.

My main hobbies are mainly based around Sports. I see myself as a very Sporty and competitive person regarding any matter. Ideally, I look at myself as a decent cricketer yet still can perform well in Soccer and Aussie Rules.

GROUP PROCESSES

In the last assignment, the group worked exceptionally well. Despite there being an issue with one of the team members, the effort that the majority of the group members put in was outstanding. Every single one of the members wass handed specific tasks that they had to finish in approximately 3 days prior to the deadline day. This could've been accomplished if one of the members didn't decide to bail at the last minute. It was at this moment where the other 4 members co-operated and compiled information for the task that hadn't been done. With a little bit of editing here and there, the final copy of the Tech Support Team Profile was ready!

Having gone through a close call to a catastrophe, the group decided to expel the group member that was the instigator of the cause. The name of the group remains the same (Tech Support) as it can be seen as an irony to both the field and the multicultural group itself. Additionally, as there is a very long period till the deadline is due, the group has planned to finish off Assignment 3 with a week to spare for final touches.

CAREER PLANS

Tech Support has a variety of identities that are passionate in different sets of fields within the IT community. Starting with Marcel who wants to be a Level 3 Support Technician. Marcel loves his cars, therefore, wants to develop a software that involves a system of trading cars. This exact idea of a software called "CarTrade" is our current team project as it is the most prominent in terms of being developed quickly. Similarly, Joseph, who wants to be a Mobile Developer, has an interest in developing a mobile application that will provide real-time, crowdsourced, peer to peer tutoring services from tutors in a user's immediate vicinity. On the other hand, Dhrumil wants to be a Cloud Network Engineer with an idea of building an "umpire" that is accurate with decision making in sports such as Cricket by utilising the concept of artificial intelligence or normally, "Robots". Similarly, Omar has an idea that involves the sport of cricket, yet he wants to make a game that idolises the

concept of “Augmented Reality.” Coincidentally, Omar wants to be a VR Rendering Developer.

Each individual has a different choice of a subcategory in the field of IT. Dhrumil’s luxuriant desire of becoming a Cloud Network Engineer confides his passion for the category of Cloud Networking. Cloud Networking being the ever-growing concept that deals with the security side of IT. In comparison to this, Omar’s rich choice of wanting to be a VR Rendering Developer identifies the upcoming future. The future that will consist of devices being run on virtual reality and augmented reality. The future that consists of games moving on from controllers to real-time body movements and users experiencing in-game features as if it’s in reality! Conversely, Joseph’s customary passion in becoming a Mobile Developer can be considered as a common category yet is high profile due to the competition in the department. Mobile developers also include the trait of knowing the current technology and having an ideology of always looking to advance year-in-year-out. On the other hand, Marcel’s substantial desire of wanting to be a Level 3 Technician is also seen as very standard, yet through the eyes of professionals is considered as “high standard”. With the belief of being a Technician, it is evident that Marcel will be required to have an exceptional level of knowledge regarding the “behind the scenes” and the hardware side of the computers/smartphones.

There aren’t many common elements between the group member’s choices of ideal jobs. However, there can be a certain correlation created between a set of members having an interest in a similar idea. Both Marcel and Joseph have an interest in developing a software/application that can be used for the comfortability of the users that find it difficult to get either their cars to be sold/traded or with finding certain tutors within the area. Two different ideas, yet the idea of building an application/software can be seen as a similarity between the two member’s goals. Similarly, Dhrumil and Omar have a deep interest in the sport of Cricket. With both having the ideology of Cricket being an underrated sport and coincidentally wanting to sustain the concepts that are **THE FUTURE** including Robots and Augmented Reality. This time around, the two members have an interest in the same sport, yet the concepts and ideas are different. But, both wanting to utilise the utilities of tomorrow!

TOOLS

GROUP WEBSITE LINK:

http://www.techsupport.com.s3-website-us-west-2.amazonaws.com/

GROUP GITHUB LINK:

https://github.com/josephheifetz/Tech-Support

GROUP GOOGLE DOCS LINK:

https://drive.google.com/drive/folders/1QdPl9qSWO4-fPlIgzv2Zu3rrNa62RVtS?usp=sharing

AUDIT TRAIL AND GENERAL COMMENTS:

We divided all the sections for Assignment 3 to each individual, once all the work was done they would upload all their files and relevant information on to the GitHub repository. The audit trail on the git repository and google drive folder was primarily used to share the individual work to the final editor. These websites were then received by one of the group members to collectively build the final group report. Using GitHub for sending and receiving codes and files made it easier for everyone as it allows to upload large files, that can't be sent anywhere else. This helped the final editor build the final report in quick time effectively as well as efficiently. We also used to google drive to upload our work to our group's folder. The main reason for the group to use Google drive instead of GitHub was that Google drive is much more familiar to everyone and it is easy to use and understand even when you first interact with it. On the other hand, GitHub was extremely difficult to understand and use. That's why most members made changes on google drive but at the end submitted all the files on GitHub. Later, all the files were downloaded by one of the team members and formatted it into a professional report. Google drive assisted the whole group to keep track of what each member is doing and if their work is meeting the group requirement of quality and quantity data. This was later used to give feedback to each team member.

PROJECT DESCRIPTION

Project Description Overview

Our project is a web-platform marketplace for users to trade vehicles with other users. The project is to build a website (using something like Ruby on Rails) with a back-end database sufficient for users to search for exactly what they want and – through personally contacting them - organize a swap and transferal of registration with each other.

Ideally, this would be a suitable alternative to listing their cars on GumTree or CarSales and simply noting that they are "interested in swaps for *x, y* and *z*" – in their description. Instead, they would create their listing using elements from CarSales (ticking boxes and detailing modifications and other minor details) and attaching their preferred makes and models – with the ability to search by these details.

The outcome of this project would be a completely new platform tailored to motoring enthusiasts, who don't have the opportunity to quickly and *easily* find a suitable swap for their cars.

The motivations for this project are simple – there is no platform in the market which specifically facilitates swaps of motor vehicles. If you were to look around any of the multiple online car communities (FaceBook pages i.e BoosTed, Melbourne Honda Club) almost EVERY second car sale advert mentions an interest in swaps – be it as an added alternative to a set sale price or only interested in swaps. Current IT trends show that online marketplaces are getting narrower in scope and their targeted demographics – serving a niche and local userbase. Building a project like this, shows a future employer that one is capable of building a back-end/front-end website and code in Ruby on Rails which is an employability-boosting skill.

There are few similar products available – the closest is GumTree. Only in creating listing can you ever specify that you would like a swap, in which the sale price is replaced with the text "Swap/Trade" – further necessitating a specification of what one would like in the description, which requires being on the listing's page to begin with. The main point of difference with the proposed 'CarTrade' is that it is

allowing the users to search for exactly what they want, returning only the vehicles that match potential swaps with what they currently own – and leaving all of the finalizations up to the users contacting each other.

DETAILED DESCRITION

Aims

Provide a robust platform for people to swap their cars.

We plan to achieve this by creating an online marketplace where users can sign up and create listings where they will accurately describe the characteristics of their cars with an intuitive template. Moving on, a user will then be able to search for a car that they in-turn wish to swap for – where a list of vehicles will be returned, looking for the initial user's car for swap and offering that same initial user's choice of car. Because of the scale of this project, the aim's goals are broken down into functionality that will be implemented along the way.

Set up the project's code base.

The first goal is to implement the main architecture for the website. In the case of this website project we are planning to use Ruby on Rails – so using that to set up the back-end characteristics (views/models/controllers) is incredibly simple, utilizing scripts that get the project up and running for you. This is obviously the first integral hump of the project, as it cannot exist without it.

Implement user database and pertaining functions.

The project will store data in two main databases – one for the users/sessions and another for the listings themselves. As most marketplaces nowadays all require accounts in order to store details and safely manage communication – it becomes a given that so would ours, not only because it is now common practice but because it also ensures a secure connection for users to communicate with one another.

Create and manage a database for storing listings.

The key feature of this marketplace is obviously the ability to create a listing and view the listings of other users. This is done through creating a database and implementing the ability (in the form of - well forms) for the user to input their cars details and any pertaining image files, in the end creating a record in a huge listing

database. This is the first half of our main goal of a complete product, the next being the ability to search.

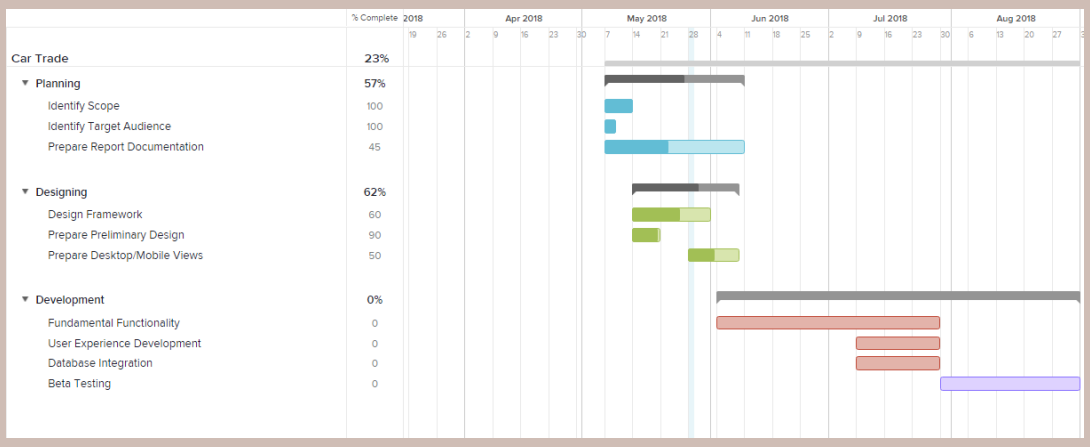
Implement listing search function.

The second half – and arguable most exciting part – of the whole process is being able to actually view all the listings with shared swap interests. This would mean creating a function in which the user's search terms are queried on the main listing database and returns all results pertaining to those terms. This is obviously a **major** goal in the project, and is expected to be a part of the finished product.

Give users the power to communicate through the marketplace.

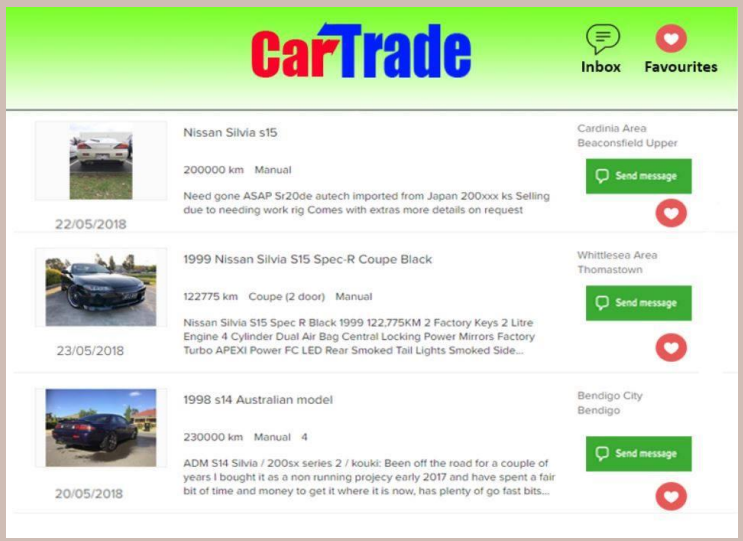
The last detail of our project is to implement a communication protocol via email, similarly to how GumTree has their own interface for messaging between users – but **also** sends copies of the messages to the users. This is a final goal and would be considered by the team as the finishing touch.

Plans and Progress



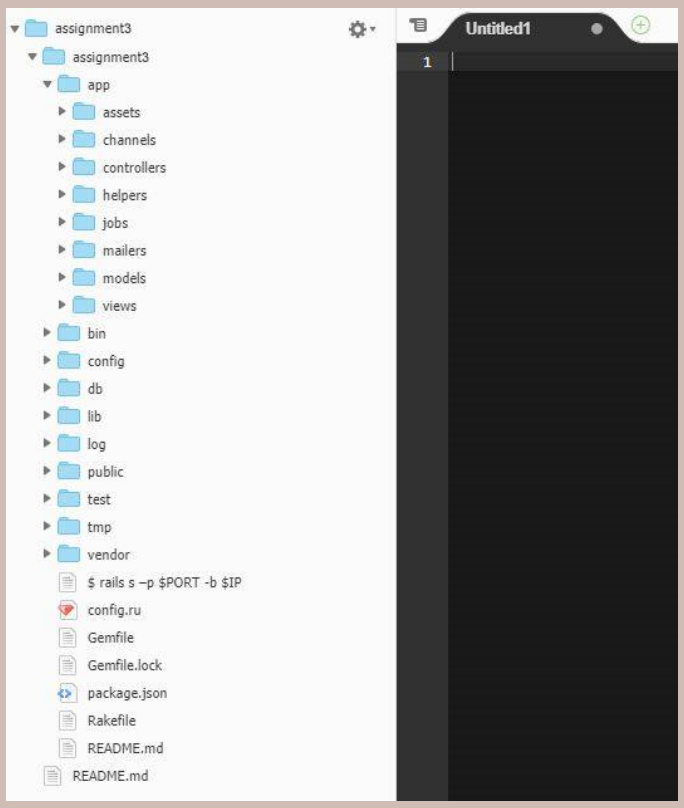
With the timeline of our project we were theoretically looking to start the development next week, intersecting the first week with the completion of our report. As you can see, the report was a little behind, however we were somewhat ahead of schedule with designs - drawing up a rough idea of how our project will present itself. Currently, we are finishing our report and getting it ready for submission, while development has taken a halt – thanks to exams.
We have however, finished mock-ups for a couple of different views:

As you can see this first one is a rough idea of how a logged-in user would create their listing - taking key details such as the make and model as well as the transmission and number of kilometers the car has done along with a few photos. Ideally, the bottom half of the page would only reveal itself when the first forms are filled in, drop-down box selections are made and at least one photo is uploaded.



Here is a simple mock-up for what searching for swaps would look like. In the listing mock-up you would see that our example user is looking for a Nissan Silvia (with several constraints) - and this is displaying all Nissan Silvias available, looking for a swap with the initial user's listing's Make, Model and other details that the returned listings' users were looking for as well.

Thus far, only the background architecture is in place for the website itself – using several Ruby on Rails scripts that are already in place. As you can see, this is our current file structure, which is typically self-explanatory but in this case it serves as significant evidence of an involved process and some kind of progress following the initial idea and the conception of its design:



Roles

Marcel – *Information Architect*

- The information architect structures the way content is organized across the site, and plans the navigation/front-end experience.

Dhrumil – *UI Designer*

- The UI Designer plans and implements the visual graphics used throughout the website.

Omar – *Web Programmer*

Joseph – *Web Programmer*

- Both Web Programmers are in charge of implementing and configuring the back-end first and foremost, as well as implement the designs and plans brought by both UI Designer and Information Architect.

After the early stages of the development cycle, both UI Designer and Information Architect blend into a more hands-on programming role and instead aid the other two who were initially the only programmers on the team.

Scope and Limits

Scope

INCLUDED	NOT INCLUDED
Create an account/log-in and view responses to listing.	Set a price or offer cash in exchange for cars.
Create a new listing.	See user's locations or phone numbers.
View listings with mutual swaps.	
Contact users with active listings.	
View related listings.	

The key limitation in our project is the time aspect. Unfortunately, a little more than 16 weeks is necessary when it comes to building a project as robust and ambitious as our own – for our web developers to learn Ruby on Rails and effectively create a functioning back-end database could potentially take months. Apart from that, all the technology and knowledge required to build this kind of product is out there and *easily* accessible.

At the time of writing this report, it seems that very little in the way of actual development will be completed – if anything. Thus, we're focusing on making sure the concept comes across as a feasible idea and the process itself is incredibly easy to jump into and get started.

Tools and Technologies

The main software we are using for this project is Cloud9 and GitHub. Cloud9 is an IDE that supports Ruby on Rails and live collaboration – which is very useful for a group of beginners to start this project and help each other out as you go. GitHub as well will be used to keep tabs on our progress and backups of the multiple progressive builds that we finish.

Timeframe

Week1	**EVERYBODY:** Discuss which project we'll do
Week2	**EVERYBODY:** Identify Requirements
Week3	**EVERYBODY:** Identify roles we'll take and smaller details
Week4	**EVERYBODY:** Translate discussions and identified needs into report sections
Week5	Dhrumil/Marcel: Design Interface/Mock-ups Omar/Joseph: Start Presentation
Week6	**EVERYBODY:** Complete and compile sections for presentation
Week7	Marcel: Design Database Dhrumil: Design Interface Omar/Joseph: Build architecture
Week8	Marcel/Omar/Joseph: Develop User/Session portion of code Dhrumil: Design forms and layout
Week9	**EVERYBODY:** Continue user/session handling
Week10	**EVERYBODY:** Continue user/session handling
Week11	**EVERYBODY:** Finish user/session handling
Week12	Marcel: Create/Manage listing database Omar/Dhrumil/Joseph: Work on listing forms

Week13	Marcel: Finish/Manage listing database Omar/Dhrumil/Joseph: Continue listing section
Week14	EVERYBODY: Finish listing functionality
Week15	EVERYBODY: Start search listing functionality
Week16	EVERYBODY: Continue search listing functionality

Risks

The main risk associated with our chosen project idea is that we will run out of time. As previously stated, this is an ambitious project for a group of beginner developers and it is unlikely that we will follow our timeframe closely – expecting that mostly the early processes will take much longer than just a couple of weeks. Another risk is the choice of language may be a little too complex and we as a group may have our hands full when it comes to learning Ruby on Rails.

Group processes and communications

We will be using Slack to communicate between one another separately *and* as a whole group. It accommodates for people to speak in small groups - such as when certain weeks require that 3 people work together, or we work in pairs. Apart from our one class together, time permits that we can meet and discuss our project during other classes and time between them.

SKILLS AND JOBS

Lead Developer

The position of lead developer for the project would encompass the oversight and main technical development of the CarTrade website. The lead developer on the project's work portfolio would include all main coding and developmental work surrounding the functions and operations of the system. In considering potential candidates for this position, several key personal and professional characteristics of candidates would be taken into consideration. This would include expertise in

application and website development and fluency in programming languages such as HTML5, JavaScript, Ruby on Rails etc. Furthermore, successful candidates for this position require exceptional leadership qualities, teamwork experience and the unique ability to think outside the box in problem-solving scenarios.

UX Designer

The role of UX designer for the project involves the designing and implementation of the CarTrade system's user interface. The UX designer on the project's work portfolio would include designing, prototyping and user testing all the CarTrade website's interfaces and eusnsuring all features of the system are presented and designed in a visually appealing, intuitive and user-friendly way. In considering potential candidates for this position, several key personal and professional characteristics of candidates would be taken into consideration. This would include deep understanding and knowledge of user experience principles including intuitive user-centred design and interface principles as well as experience in developing prototypes, performing rapid prototyping and using user testing to improve the usability of the website. Furthermore, successful candidates for this position require exceptional leadership qualities, teamwork experience and the unique ability to incorporate creative thinking into UX development.

Project Manager

The position of Project manager for the project would encompass the oversight and management of the development, design and implementation of the CarTrade website. The project manager's work portfolio would include overseeing the technical development of the CarTrade website's functions and operations under the lead developer and managing the implementation and operation of the back-end database as well as overseeing the designing of the website's interface and user experience. In considering potential candidates for this position, several key personal and professional characteristics of candidates would be taken into consideration. This would include deep understanding and experience in project management on both a small and large scale. Furthermore, successful candidates for this position require exceptional leadership qualities, teamwork experience and ability to make judgement calls and critical decisions in a professional environment.

Back-end developer

The position of back-end developer for the project would revolve around the oversight and back-end technical development of the CarTrade website. The back-end developer on the project's work portfolio would include all development and implementation of back-end coding and the system's back-end database to be used

by the functions and operations of the system. In considering potential candidates for this position, several key personal and professional characteristics of candidates would be taken into consideration. This would include fluency and expertise in back-end development specifically in setting up and maintaining a large database. Moreover, successful candidates for this position require exceptional leadership qualities, teamwork experience and the ability to think outside the box in stressful environments.

FEEDBACK

Every member of the group has given their feedback on their performance as well as other team members performance and contribution during this assignment on SparkPlus.

GROUP REFLECTION

- Group Reflection

• **What went well:** The organization of all the files sent by each team member was ideal. All the team members attempted to do the work they were assigned to with their best ability. The use of GitHub and google docs was an excellent and crucial part of keep track of each individuals work and assisted the team leader to set appropriate deadlines for each task. Everyone finished off their tasks in a few weeks. This allowed the final editor to proofread all the work and format all the draft work into one professional report.

• **What could be improved:** Understanding the tasks and meeting the rubric criteria was something that could be improved. Communicating well with each team member and being present in not only the conversation but the tutorial was a lacking aspect of tech support group. Taking individual responsibility for the tasks assigned to them and asking for help when they're unable to do a specific task could've been worked on at the early stages of the assignment process. The ideas weren't shared adequately in the tutorials in person, they were done on a group chat which led to confusion as to who must do what task. The language used in some parts was not sophisticated and professional enough. Overall, communication and cooperation were lacking in our group which led to many tasks left uncompleted or not professionally done.

• **At least one thing that was surprising:** One thing that was most surprising to us was that everyone attempted to do their part. Each individual member tried to complete their task with utmost dedication and attempted maintaining high-quality standards. The second most surprising thing was the use of specific tools that were required to be used for this assignment. GitHub was something that most members of the team struggled to utilize within the first few times they had direct user experience with it. The difficult terminology of GitHub and its distinct conventions compared to other applications or website confused the team members and failed to use it upload their work there.

• **At least one thing that you have learned about groups:** Communication and dedication is the key to success for any group task. Even if one team member fails to communicate or produce their work with right intentions then the whole group fails to attain success. Having different types of personalities and attributes in each team member makes a good team. If one of the team member specializes in editing and formatting the rough draft work into a professional report, and the other team member specializes in that same thing, then it's not a good team. For a team to work, each member should be able to do something different than the other member. This is what leads a team to success.

- Individual Reflection

Omar: In assignment 3, the group members of Tech Support worked extremely well together. The co-operation and determination from each individual was at a high standard. Each member was very organized, hence the assignment went along very well and was finished a few days prior to the deadline day. I believe that the information given in assignment 3 compared to the past assignments was a little bit similar and therefore could have been improved. However, each bit of information was completely valid in the sense of copyright and other issues and was constructed with information from a variety of sources that were referenced. One of the most surprising factors in this assignment was the effort that each individual put in and how organized everyone in the group were. The fact, that we had set a timeline many weeks back and that everyone stuck to this plan and actually accomplished every goal before the deadline day, I saw this as a very surprising thing. One thing that I take from this assignment regarding each individual of the group is that when the timeline was set and everyone knew how lengthy this assignment is, they stuck to the plan and completed their tasks and portrayed a different personality of pure

determination. The activity tools acquired such as GitHub were used quite well. Despite, all the individuals being busy with other daily/university problems, they all co-operated in at least updating the GitHub page regularly. All in all, the group members of Tech Support worked diligently, exceptionally and with determination to complete the task at hand, therefore hats off to everyone!

Joseph: During the assignment period the group worked well together and all aspects of the assignment from beginning to end were completed in a timely fashion and to a good standard. All team members took their allocated sections of the assignment seriously and put in the work to make sure it was done. Team communication was also very good resulting in all choirs being resolved quickly and correctly by fellow teammates. The timing of completion of set tasks was good and the group was ready to submit everything all at once and isn't scrambling to put all sections together. One thing that was surprising in doing this assignment was the amount of organisation we needed to make sure each member of the group completed their required work. Group work has taught me the importance of communication and understanding when dealing with a group of people whose actions affect everyone else in the group.

Marcel: I believe that everyone in the group gave their best to finish off their tasks. The instructions and what each individual's role is were clear and a team member was supervising the changes made to the work and assisting other team members on how to improve their work at all times. The team was highly motivated to complete the task and had a good start however by the end most team members lacked maturity and submitted incomplete work or work that was immensely low in standards. Which then impacted other team members because they had to finish their work and couldn't focus on the tasks they were initially assigned. The communication and team meetings were not adequate, and most team members couldn't clear up their doubts regarding the assignment as they didn't attend all the tutorials. The most surprising thing was teamwork and responsibility shown by other team members who took charge and finished all the incomplete work other had left. This maturity resulted in completing the assignment on time while maintaining high-quality standards. The one thing I learnt about groups was that if even one team member doesn't finish their assigned work and doesn't take responsibility for it; then it impacts the whole teams' morale. Choosing the right team members is a crucial part of group assignments which will be considered in the upcoming group assignments.

Dhrumil: The team attempted to do their best to complete the parts they were assigned to do by the team. The deadlines were clear, and interactions and teamwork were present at all times. When other members struggled to finish their parts before the deadline, Omar and Dhrumil took the responsibility to finish their incomplete work or assist them and guide them in a positive direction to complete the task in quick time while maintaining high-quality detail. The dedication of each team member to finish the tasks before the deadlines set for them could be improved. We had 5 tutorials between the day we formed a group and assignment submission date. But, there wasn't a single occasion where I can recall all 5 of the group members being present in the class and discussing the ideas and doubts each of us had about the assignment or their individual parts.

The most surprising thing about this group assignment endeavour was that everybody finished their tasks before or after the deadline they were given. All the members worked immensely well under pressure and took on the challenge of completing their parts in one week. The tasks seemed extremely small in proportions when the work is distributed to all the team members evenly. The way each individual in the group behaved and presented their work using applications or websites never used before is definitely applaudable.

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