

RMIT University

COSC2196

Introduction to Information
Technology

Assessment 3

Group 13

Team J



It starts with a letter J

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1 Team

1.1 Github

1.1.1 Repository

<https://github.com/Jordan-Uhe/Assignment-3>

1.1.2 Webpage

<https://jordan-uhe.github.io/Assignment-3/Assignment%203/website/index.html>

1.2 Scope

The scope of this document is to provide the reader an overview of where the project is completed to. This will help the reader understand what the group has completed so far, and what else needs to be done. By reading this document, the reader should be able to have a fair understanding of the applications capabilities and its potential developments goals.

1.3 Team Profile

Our Group or team J is made up of 6 members, we have a variety of backgrounds, educational levels and industry experience. We have variety of IT disciplines that interest us as well as different learning and personality types. The common thread that binds us together, is that we are all interested in technology in one form or another and we are all pursuing further academics and professional experience and qualifications. Working in a group is always challenging until you find your groove, and personality types need to be considered. Don Vu is an aural learner good at listening, he is neither introverted or extraverted and tends to be agreeable. He is observant and not judgmental, which makes him a good fit as team leader. James Eland is a little on the introverted side but is agreeable and conscience with are good team attributes. Jonathan Hazell is a hand on person and tends to be introverted but negotiable. James Parker tends to be extroverted and very agreeable, prefect for selling our product. Stefan Siotos is observant and a thinker, a little turbulent but keeps everyone on their toes. Jordan Uhe is agreeable and imaginative. So, in general our group was a good mix of personality types with no excesses in any direction, this led to smooth and effective dialogue. Educational wise we were at a variety of stages, some of us either starting a degree or had completed several years towards a Diploma. Don Vu has several IT certificates, Azure Web Services, CCNA, and MSCA. Work experience and IT experience was important in delegating various portions of the project to group members. Stefan Siotos has experience with software development at a vet important when developing a software app, James Parker is experienced in social media marketing, Jonathan Hazell has 20 years as Linux Systems Engineer, and Don Vu has multiple years' experience as an IT Administrator. Each person's experience was helpful in assigning them a role to in our project. As for future employment, everyone was interested in pursuing a technology related job, which was to be expected. All jobs related to Cloud infrastructure in some form or another if not directly. Don Vu is interested in IT Service manager position, a position that demands a wide range of skills. James Eland is interested in a position as an IT Analyst, James Parker is interested in being a Project Manager and implementing vendor applications. Jonathan Hazell is looking at a job as a Linux Engineer, which fits in with mot of his work history. Stefan Siotos is interested in Machine learning and Jordan Uhe's desired job is Cloud Operations Manager. Looking at the psychological profiles that each member did, you can see a correlation between the results and their job interests. Working together as a group is not easy mainly due to personality differences and

experience. Group J was comprised of individuals that were mostly middle ground, did not fall to either extreme and were mostly agreeable, conscience and had a desire to see our project come to completion. We each had experience in some form of technology so parts could be given to each member. As the project progressed group members became much more active and participated more. In the end we formed a very cohesive group that participated well.

1.3.1 Student ID

1. Don Vu - s3398720
2. James Philip Eland - s3909450
3. Jonathan Hazell - s3908219
4. James Parker - s3905759
5. Stefan Siotos - s3894025
6. Jordan Uhe - s3907253

1.4 Group Processes

The group worked relatively well in Assignment 2, our meeting schedule was designed in a way that would allow each member to actively participate in the course lecture and tutorials and also have time to attend the meeting. As a result, we kept the same meeting schedule.

The group meets twice a week (mainly Mondays and Saturdays) our main form of communication is Team's video call which occurs twice a week. During the week if we need any additional support or questions answered, we can contact each other via email or Team's messaging.

The process for workload in the group is kept the same. The group goes through the assignment together on the first meeting, clarifying issues and uncertainties. The group then decides which parts they would like to do or which parts suits a member best, the part or parts is then allocated to that member and is expected to have it done by the agreed date.

During the teaching period, members can ask each other for help and if others are willing, they can assist. If not, the group will come together and work through that part together to accomplish that section.

1.5 Career Plans

All members of our team had different career plans but there were some similarities between our plans, the main similarity is that all jobs are centred around the IT field. Some people's plan aligns closer than others and some people don't have similarities with anyone. James Parker and Don Vu both plan on being in a managerial role however James is planning on working as a Project manager and Don is wanting to work as an operations manager. Jordan is planning on working as a cloud operations manager which aligns with Jonathon who is a Linux System administrator both roles require experience and skills in cloud operations and server management. Jordan and Jonathon differ from James and Don by one main point which is where Don and James want to manage teams and operations James and Don would rather do a more hands on role. Stefan is planning on going into the Machine Learning field which is currently more of a research and learning role compared to the others and James Eland is planning on working as an IT analyst which is more closely aligned with Jordan and Jonathon.

2 Project Description

2.1 The passions, interests and skills of your group

Our group comes from a very diverse skillset and mindset in relation to IT. Some already has industry certification and already have a job in the IT industry; whereas some are in an unrelated field and wish to gain entry into the industry.

Regardless of where one stands in the industry it is always the advanced technology, the breakthrough and revolutionary technology that intrigues the team and makes them want to learn more about it.

2.2 IT industry trends

The trend in the IT industry now is about convenience and AI; the smarter the technology is, the less smart the user needs to be to use the technology to complete their desired task. As a result, the technology needs to become more sophisticated and complex to make up for the shortfall.

The idea of advancing technology is so that it can do more, cost less and take up less space and time. To do more, the technology needs to be smarter or at least capable of learning so it can eventually do more for the common man to do less. Cost less is a major concern for the common man as if there is an advanced technology but no one can afford it except for the extremely rich; then its not really being used by the general public. Lastly taking up less space and time, advancing means to be portable as well. For example, now a full sized i7 laptop can be in a size of a hand-held gaming console.

2.3 What would assist you in your career plan

Working through this project will allow members of the team to take part in a project plan, do project work and gain project experience.

This will particularly help the members with management roles as their career goal as it will develop their management skills in regards to time, funds and project milestones.

3 Overview

3.1 Topic:

The project Eavesdropper was intended to help people get information of certain websites and be able to be one of the first people in the world to know about the changes to the website. The website could be anything the user would like it to be and be useful to everyone in their personal way. By having this chrome extension, this would significantly help people to get the information they would like to get and get notified when something in the website has been changed.

The outcome is to have people get what information from their chosen websites as soon as the website has been changed. This will have people get informed about changes a lot quicker rather than people scrambling and refreshing pages all the time. This will allow people to discuss about certain things sooner and be able to create hype for the product or event that is going to happen. This chrome extension will also grow from people using it and talking about it.

3.2 Motivation:

The motivation of Eavesdropper is because of the fact that people would be interested in limited edition items, a new TV series or whatever the consumer is interested in. People who might have forgotten when a certain item would come out, those people will get reminded and be able to

purchase what they would like or even watch the latest episode without getting spoiled of anything. Eavesdropper will be able to inform a future employer about how useful the information that the chrome extension is and how it is able to inform the user about the website getting an update to the website.

3.3 Landscape:

There are many other web alert extensions that are out there and really useful in their own way. All of these web alerts do the same thing as our chrome extension but have their own features to it. For example, visualping, buzzbundle and talkwalker alert. The difference with our chrome extension is that it is not just limited to certain areas of the internet. Our extension covers the majority of different areas of the internet. It does not just notify you on your desktop when you are using the internet but the extension is also able to inform the user through email and text. The extension would send you a link to the website and inform you what has changed. It can even highlight the area where the change has occurred.

4 Detailed Description

4.1 Aims:

The specific aim for the project is to “Unite people with updated information”. This aim will allow people to have the most updated information on their chosen websites and have people be able to be informed wherever they may be. The aim of uniting people with the most updated information will get people to know what is happening around the world or what is happening in a certain hobby or whatever the case maybe, in which people can get more knowledge of it a lot easier.

The first goal is “Find the trends”. By finding the trends of something. For example, shoes. If we are able to find what is trending and what people are talking about in the shoe industry. Then we are able to access what is happening and be able to create the technology that will help benefit for the shoe industry and find the best solution possible for all the people who want to either buy or read information about a certain shoe. This goal is expected to be one of the main priorities of creating this chrome extension. This will give us information on how we are able to create the extension and be able to use the known information and use it for different industries and people are interested in.

The second goal is “Create the extension”. This goal will lead us into creating the extension. It will allow us to actually start on creating the chrome extension and be able to experiment with different areas of the chrome extension. For example, creating a user-friendly UI and how the code works for the chrome extension.

The third goal is “Link the user and extension”. This just simply means to be able to create a link between the user and the website. In which it could be through email, text message or a web-alert. This will then create a link from the user and the desired website that they have chosen to get this notification and inform them where the change has happened. By creating this link between the user and the chrome extension, it will then get the user to use the extension for other websites and be able to get even more information that they would like to get.

4.2 What are the most important parts of the Project?

The most important part of the project is to be able to create a link between the user and their chosen websites. This is really important because of the fact that the user needs to get notified that a change in a website has in fact occurred. With no form of being able to link the user and the website then the user will not be able to know when something has changed. This will then make the chrome extension obsolete and pointless.

4.3 Which parts should have priority over the others?

Creating the extension is the top priority of the project is creating the chrome extension. The team should dedicate most of their time to the creation of the extension itself. This is because that without creating a good quality chrome extension then people will not use it and will use other chrome extensions. By having the chrome extension completed and ready-to-use, consumers will then come to our project and use it because of the fact that it is completed and has been the team's main priority

5 Plans & Progress

5.1 How the project began

The project began as a university assignment where 6 individuals were tasked with creating or developing an IT project. The group decided on the plan to develop a Chrome Application In which it allows users to track websites of any changes and if there are changes, alerts the users via email, text message or SMS.

The idea seems achievable at that time and was one of the major underlining factors in selecting this for the assignment theme. As we progressed through there was many constraints from knowledge, skills, teamwork, time and to financial commitments. As we submitted our assignment 2 for this unit, the idea was more achievable once we had done some research. As a result, the continuation of the developing application to become an active live application in which users can subscribe or purchase.

5.2 What your project will do?

The project aims to target a certain niche in the market. Groups such as bargain hunters and collectors where they need to continuously search for deals or items that are in high demand. This will help these collectors or hunters to be notified when these items are available or have changed status.

We aim to develop this project into a working solution to meet market demands from a user's perspective. There are many options out there, but they are predominately checking if the website is live or not by performing routine pings to the website address.

5.3 How will you do it?

The project is in its development stage right now. The group aims to have at least the development, staffing, backbone, features, UI (rough ins) available for investor considerations. Once all components are carefully considered and identified all the "what's" and "how's" we will need to go out and seek potential investors to assist us in funding the project. The project requires funding as there is certain skill sets, we do not possess in the group. We require funding to build the physical backbone of the application as well. Things such as servers, licencing, computer to host etc...

5.4 How has it progressed –

5.4.1 Development

Overall, the development of the project has progressed smoothly. As all projects there were bumps and dead ends at the start but the overall result has been achieving results. Development is always the hardest part in creating a project; there are so many ideas and different avenues in which the project can develop. Luckily, the decision in the group was unified in the very early stages and the end goal was clearly defined.

Currently the group has been able to design the basic concept of the backbone infrastructure. Using Linux as the core, the CTO with his years of experience and knowledge will be the lead for this development and implementation.

The UI will be managed by our development manager Stefan who will decide on the development team and how the team should be housed. Whether the project will be completed with UI developers in house or be up for tendering by external contractors.

5.4.2 Staffing

Staffing levels are currently very limited, as it consists of the members currently involved in the initial project.

- Don VU as the CEO
- James Parker as the CMO
- Johnathan Hazel as the CTO
- James Eland & Jordan Uhe as the Developer

As there are other parts to the project that needs attention the group will require skills and experience that their current members do not have.

The idea is that the group will develop and plan as much as practical and the remainder of the work will either be outsourced to tender or addition resources will be hired to complete the tasks.

5.4.3 Backbone

The backbone of the project is designed to operate on Linux platform with a SQL database. Hardware requirement are minimal, so the requirement for powerful hardware is not required. The application can operate and be hosted on a medium specification computer built as a server. More detailed information regarding this setup can be found in the Tools section.

5.4.4 Features

Features of the application will be allowing users to take a snapshot of the webpage they wish to monitor. The application will notify the user when the website has an update, whether it be price, quantity or availability.

The user can subscribe to more premium services to monitor more webpages and specifics of the webpage. This premium subscription can be broken up into Tier one, Tier two, Tier three and Tier four, and the duration of the subscription can be from One month, Three month, Six months, One year.

The monetary tag has yet to be determine and will be evaluated on the amount of features the application can present to the user. Once we are able to determine this, most likely in the UAT phase; we will then determine the pricing for each Tier/Month.

5.4.5 UI

The UI is the most important part of the developing stage, it needs to be simple, user friendly and efficient for the user.

The UI is going to be straight forward and effective as to what each feature does. It needs to provide easy access to self helps or the support team for assistance.

The specifics of the UI are still being developed and the group hopes to have it done before the presentation to potential stakeholders. This way the stakeholders can have a visual knowledge of what to expect in from this project.

5.4.6 Dead ends

The restrictions we currently face is of two things, the ability to access the service/hardware and financial support. We require the financial support from our investors to further progress with the project. Up to this point, our ideas and plans have been all paper based.

5.5 Outstanding items/Future Plans

Future of the project are once we have delivered our sales pitch to potential investors and receive some funding; The plan for the future of the projects is as below:

1. Hire the required staff with required skills OR outsource the work to a contractor.
2. Build the backbone and infrastructure of the application/s
3. Develop the UI and application
4. Test the application
5. Evaluate and change from the results
6. Update and change application
7. BETA test with live users
8. Final evaluation
9. Live Rollout

We will initialise by building the backbone of the application as per our plan. The backbone will be a steam line setup with linux based systems to host the application. Once we have set up the servers to host the application, we will need to get the application developed. Under the UAT testing phase, evaluation phase and re-development phase and rollout.

6 Roles

Although our group has contributed in all aspects some people have stepped up in certain roles more than others so we have designated rolls for each individual. The roles we have chosen we believe are essential in founding a good tech startup these roles are Chief Executive Officer (CEO), Chief Marketing Officer (CMO), Developer, Operations Manager, UI Designer and Chief Technical Officer(CTO).

6.1 Chief Executive Officer

Chief Executive Officer this is a role that everyone in our group could fit under as we were all part of the major decisions of our team. We have given this role to Don as he has been assigned chair of our team and has had the most responsibility in decision making due to him being the chair. Don also has experience in the IT sector so he is a good fit to chair and lead our team in the CEO position. The CEO's main roles will be setting up our direction and strategy, implementing our goals and plans.

6.2 Chief Marketing Officer

James Parker has been assigned the role of CMO, we have elected James into this position due to his marketing background. Before working at team J James was working at a Fitness company and he specialized in marketing. The key roles of a CMO are User acquisition, focusing on brand identity, marketing and research and analytics.

6.3 Chief Technical Officer

Jonathan Hazel has been assigned the role of chief technical officer this is a role that we have all contributed to as we have all worked on the early stages of developing the product and deciding which tools and programs we will develop the program on. We have chosen to assign Jonathon hazel to this role this is due to his experience in the IT field with over 25 years of experience as a linux/unix sys admin working at large companies like IBM, Texas instruments and AT&T he is well suited for the role of chief technical officer. The main roles of a CTO are developing product infrastructure, focusing on how the backend team can increase revenue and making sure we hit technical deadlines.

6.4 Operations Manager

This is a role that has been shared equally throughout the group, we have all contributed as there hasn't been one person who stood out to take this roll. The key roles of the operations manager to create the structure and processes of the team, reviewing logistics and HR and making sure that everything flows smoothly.

6.5 Developer

James Eland and Jordan Uhe have been assigned the rolls of developer this is due to their focus on the website part of the project. The key roles for James and Jordan will be to Code and design the software, maintaining and implementing new ideas as well as coming up with ideas and improvements and maintaining the website.

6.6 UI Designer

This is another role that has been worked on by all members of the group however we have assigned Stefan as head of this role this is due to everyone having different creative styles and design philosophies so we believed that it was better if we all contributed but one person who is Stefan will make the final design choices as to not cause arguments and push us further away from achieving our goals. The key roles of the UI Designer are to present drafts and sketches to the other team members, create the flow of the program, create design ideas and create a user interface that aligns with the user requirements of the program.

7 Scopes & Limits

The core function of this program is to check if a website has been updated and notify the user. Therefore, the first major Goal of the project to is implement a basic version of the desired final project which covers the core of checking if a website has been updated and then making a notification pop up on the computer.

To do this we will first design a non-functional mock-up of what is to be the final product and from that all features, but the core will be removed so that what is built to achieve the first major checkpoint is completely functional without any broken parts and could be a final product even if it does not include all promised functionality, but still has room to have more features implemented without a major redesign.

The second major feature would be more notification methods, such as text message and email.

The third major feature would be an improvement on how the app checks if a website has been updated, with instead of checking the whole website for a change a singular change or variable can be specified.

The fourth and final planned major feature would be the inclusion of a premium subscription option which can have the website checker run remotely on the cloud, so that the person does not have to have the computer on to be updated.

At this point our 4 versions timeline is only a guide to what and when something would be implemented, how the program gets improved will most likely be affected by how the users react to the program in the testing phase.

(Picture design > Website checker > More available methods to send notification. > More detailed website checks > Ability to run the website checker remotely on a server.)

8 Tools

As out lined in our earlier assignment Eavesdropper is a web-based chrome application that allows users to track websites for releases of their most desired items. The program will regularly check the HTML code of a specific website that the user has chosen. You can have Eavesdropper check for pre-set conditions of the code so that you only get notifications of items that interest you. Eavesdropper

is designed for customers that are in the market for specific items and are only interested in availability and price changes of these items. Our program enables users to set parameters, so they are not flooded with irrelevant notifications.

Like a lot of small start-up businesses, we have a very tight budget so money for software, and hardware is limited. In addition, we want to develop our application on a small desktop or laptop initially but will be easy to scale as business expands. Everything we need for the development of our services and applications can be done using opensource software. Open-source software is software that is free to use and change as long as the changes and code are issued back to the original maintainer or maintainers (The GNU Operating System and the Free Software Movement, 2021) Free or opensource software is ideal for our purpose since it requires no initial financial output. We will be using what is called a LAMP stack, and open-source application and coding stack. LAMP stands for Linux, Apache webserver, MySQL database and PHP or Python for coding, and we will look at each part separately.

Most the world's web servers run on Linux developed by Linus Torvalds (torvalds - Overview, 2021) as do the worlds data centres. There are countless Linux Distros or Distributions, each with there own offerings, but for our purpose we will use CentOS 8 (The CentOS Project, 2021) which is a fork of RHEL (Red Hat Enterprise Linux) (RedHat, 2021). Red Hat is the one of the oldest and most successful Linux distributions but is now a commercial operation Like Microsoft. CentOS is a direct fork of RHEL and includes nearly all its features free of charge. We will be using CentOS 8 which is a very stable, scalable platform that can easily be migrated to the cloud. CentOS 8 is running the 4.18 kernel which is far from the newest Linux kernel, but CentOS, like RHEL, is all about stability for production systems (The Linux Kernel Archives, 2021). The Kernel is the heart of system, so stability is key. Major changes include a changeup to the YUM (RedHat - Sysdamin, 2021) package manager, which is now based on the DNF. While it maintains the same command-line interface and stable API for sysadmin and DevOps integration these changes should make YUM faster so all system packages can be upgraded to the latest and most stable version. For developers, besides Git 2.18, CentOS offers these version control systems: Mercurial 4.8 and Subversion 1.10. Python (Python.org, 2021) 3.6 is now CentOS's default Python implementation, even though 3.8.10 is the latest release. There are several other default languages included in the build, Node.js 10.1, PHP 7.2, Ruby 2.5, Perl 5.26, and SWIG 3.0. The CentOS GCC compiler is based on version 8.2. It includes support for more recent C++ language standard versions, better optimizations, new code hardening techniques, improved warnings, and new hardware support. So, we have a very stable operating system with built in programming languages and compilers.

Since we are a web-based application, we need a webserver CentOS 8 comes with 2 web servers, Apache HTTP Server 2.4 is the latest stable release (The Apache HTTP Server Project, 2021) and is licensed under Apache License 2.0. Apache is probably the longest running webserver and is an excellent feature packed webserver. The other option is and NGINX with the most stable release 1.18.0 and release under BSD licence 2. NGINX (NGINX, 2021)is a far newer web server around since 2004 and is a high performance easy to configure, more light weight and flexible web server that can also be used as a load balancer, mail proxy service and a HTTP caching service. Due to our limited budget on the physical hardware, load balancing and caching are good inbuilt options that reduce overhead. Of the two servers NGINX will be our choice.

As a we based application, that tracks the changes in price and quantity of rare items for fee paying customers we need a data base to keep track of information, such as customer names, payment history items of interest. By keeping relevant information on our customers our app can be more finely tuned and tailored to the interests of a variety of users. Individual users require different information, and it is important to keep track of this information. As our system improves and evolves, we will be able to offer more options for the customer to refine their parameters for a better experience. One of the features of our app is to send SMS messages or an email to notify the customer of any changes. To store this information, we need a database. CentOS 8 comes with

several data bases but for our needs we will use MySQL version 8 (MySQL, 2021). MySQL is an open-source relational database management system it can be tailored to deploy cloud-native applications it is very scalability, secure, reliable. In its simplest form it is easy to set up and configure and has a native web interface for administration and enable a web interface to display user information. There is one caveat to MySQL is that it now owned by Oracle (Oracle, 2021), but it is free to a large extent. MySQL can be used freely within a web site MySQL license can be used free of charge for all projects that themselves run under the GPL or comparable free license. Since our application is built and uses open-source product, we can use it under the GPL licence (The GNU General Public License v3.0, 2021).

In order to keep our clients informed of changes in their items of interest we need to send an email or SMS message. For this we will use another opensource application called iRedMail (Huangbin, 2021). iRedMail is a single package email server that scales from a single user to a company. It uses Postfix SMTP mail server version 3.5.10 released under IBM opensource license 2.0. (The Postfix Home Page, 2021)

. Postfix currently comprises 33% of the worlds Internet mail servers. iRedMail uses secure connections, POP3, IMAP over TLS (transport layer security) for mail services, and web mail access webmail with HTTPS. Emails are encrypted in transit using TLS, and passwords are encrypted and stored in SHA512 or BCRYPT (Berkley Standard Distribution). The package includes a data base package of your choice, Anti-Spam, Anti-Virus protection, and a Web Admin Panel for easy Administration. The Postfix SMTP (simple message transfer protocol or MTA message transfer agent) can be configured to not only send email notifications to users but also SMS messages to their cell phone or number of their choice. As stated iRedMail is free but does provide a paid for professional support service.

The last item is what are we going to run our application on. By choosing the components we have in that they are not resource intensive, we can get away with running our project on a late model desktop or laptop for portability. We would need something like a 11th Generation I5 processor or AMD Ryzen 9 4900HS with a minimum of 16 GB of DDR4 RAM with expansion to 32GB of RAM. A minimum of a 500GB hard drive, preferably 1TB SSD would be preferable, cost being a factor. Graphics should be reasonable, but since this is not a graphics heavy application, we are more interested in memory, storage and processor. There are numerous laptops and desktops that fit our requirements for around \$2000.

So, we have put together a very comprehensive software and operating system tool kit. It is reliable, flexible, well documented, has hundreds of thousands of developers worldwide and scalable. All the components we have selected are used by major companies the world over. It is not resource intensive, so our hardware output is minimal, and all components are free. This way we can develop an app that delivers what we intend it to do.

9 Testing

This Project will be split into inhouse testing and community testing.

The inhouse testing will further be split into developer testing and functionality testing. The developer testing will be as each feature or stage of the program is added, every part which interacts with it will be tested to ensure no bugs and errors appear and that the program is being built towards the intended direction. The functionality testing will be conducted by the non-programming/developer members of the group, they will test to see if the program actually works as intended and is intuitive for them to use, they will suggest any changes which appear to be needed in the to the interface such as changing the position of information and buttons and the removing and adding of them, as well as any visual and auditory changes needed to make the program more enjoyable to use so that the program can be improved.

If it is functional and intuitive for developers to use then the community testing will start, the testing is meant to see if people without any in-depth idea of how the program functions can operate the program without much hassle, for a program as small as what we are making, most people with experience with computers should be able to operate it without a step by step guide, because it is know that most people don't read the manual anyway. It is called community testing because we will be using members from our friend and family groups because the program is meant to be useable for all genders and ages, so family members will cover the targeted demographics. The community testing group only needs to consist of 5-10 people, which we will monitor when they use the program to see what they intuitively want to do, and we will ask them at the end for feedback about what they find annoying with the program, what they like, suggestions, and would they use it, this is a small selection of the possible questions we will ask.

10 Timeframe

	Jordan	James P	Don	Stefan	James E	Johnathan
Week 7	Began planning for A3 and access what work i have been assigned	Began planning for A3 assignment and selecting sections to create	Started planning and drafting the allocated sections	Began planning for A3 assignment and dividing people into roles	Began planning for A3 and created documents for given parts and create a GitHub Repo	Started developing layout and ideas for my assigned pieces, and reference material.
Week 8	Decide scope of project	Writing up and completing personal content for A3 (Interview and Crypto piece)	Started planning out the sections that was allocated to myself	Began writing up the parts I was divided for assignment 3	Completing the given parts of A3 (Aim and Overview). Updating GitHub	Started working on my personal ideas for the project, the outline for overall group view and Cloud Computing piece
Week 9	Research testing phases Testing section of report	Researching skills required for our project	Started writing sections that were allocated.		Finalising everything and making sure everything is done	Finished Cloud Computing section, started working on the physical and software requirements for our app.

Week 10	write Testing section of report	Working on our group A4 written content	Reviewing written sections and starting formatting documents.	Dividing everything for assignment 4, begin working on my parts of assignment 4(roles, risks and skills and jobs)	Work on A4	Set up a test machine with OpenSource software to test whether development could be accomplished without user license fees.
Week 11	Make repository run as a website	Script for A5 group presentation written and finalised	Formatting documents and going through A4	Finalising my parts for A4	Finalise parts for A4	Produced a network and systems diagram of intended computer and network layout.
Week 12	Finish presentation video and connect website	Final idea and artefacts pitched and finalised	Finalising the Assignment , preparing for submission.		Prepare for submission	Finalized any unfinished sections and put the finishing touch to them.

Week 13	Enter initial testing stages of the User Interface (UI)and identify features that may need to be altered or substituted. Begin learning how to program our project.
Week 14	Construct high level analysis of issues identified and distribute work between groups.
Week 15	Implement new changes to the UI developed by group into the final version, ready for user testing/trials.
Week 16	Make appropriate amendments to the UI based on the prior tests, begin constructing database
Week 17	Finalise UI and programming portion of our group begin programming.
Week 18	Continue programming, create ABN, file patents, begin constructing marketing plans.
Week 19	Continuing further programming. Setting up new user testing for the final product. Begin process to upload into Chrome Web Store
Week 20	Analyse results from user testing and implement necessary changes

Week 21	Gain approval for Chrome implementation. Begin finalising programming for both the Chrome extension and individual program.
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11 Risks

There are many risks with beginning a start-up tech company, some things that are specific to us would be capturing a market, beating our competitors as well as making sure we aren't infringing copyright or a patent, passing the chrome app approval process. The reason capturing the market poses a large risk is there are already products similar to ours and without customers however we are planning to overcome this risk and turn it into an opportunity by targeting a more specific market and offer services more tailored to the customers that we want. The chrome app approval process shouldn't pose to much of a risk as I believe our app will fall within the guidelines but the approval process may still take up to a week so that could pose a risk to things like our launch date as it may be delayed depending on how long it takes the app to be approved.

12 Group Processes and Communication

The group will continue to do what they have done in Assignment 2. The form of communication is via video call using the application Teams. The meetings will be taking place with a minimum of two calls per week. As the individuals live in different areas in Australia, the only logical option is to meet using technology.

The contingency plan for non-responding members of the group is to use a three-strike rule. First strike is not attending the scheduled meetings, a follow up email is sent to the user CC'ing the team advising of what the meeting was about and the agenda. Also checking up on the member to see if there are any issues and if the group can help in any way. If no response, another email is sent a week later. Three days after that if there is still no response, the group will meet with an emergency meeting to divide the work that member was in charge of. The leader will then notify the relevant people from the university.

13 Skills & Jobs

The four positions we would hire would be two JavaScript Full Stack developer, a Chief Financial Officer and a UI Designer.

13.1 Java Script Full Stack Developer

We will be hiring two JavaScript Full Stack developers this is to speed up the process of creating the web app and due to our team currently not having that much developing experience in JavaScript or other programming languages.

The ideal candidate must have experience in creating other chrome apps, and experience with back-end technologies like

- Java-JEE, Spring boot, Hibernate, JPA.
- Grails 2.4.4
- Groovy.
- SOAP and strong API integration.

And front-end technologies

- Angular JS
- Bootstrap 3

The ideal candidate must also be able to work within a team and with stakeholders.

13.2 Chief Financial Officer

We will be hiring a Chief Financial Officer as this is a role we have not currently accounted for.

The key responsibilities are Raising capital, manage cashflow, providing financial leadership and data analysis.

The ideal candidate will be

- CPA Qualified
- Have Strong analytical skills for problem solving
- Experience building strong financial oriented teams.

13.3 User Interface designer

We will be hiring a UI designer due to our current team not having the required experience to develop the product to a place we are happy with.

The key responsibilities are design and prototype user experiences and user interfaces, help incorporate relevant data from customer feedback to help inform design decisions, created digital style guides.

The ideal candidate will have

- Strong attention to detail
- Experience with design tools such as Figma, Sketch and photoshop
- Hands on experience with design processes.
- A deep understanding of user-entered design and strong analytical abilities.

14 Group Reflection

14.1 Don Vu Reflection

The group atmosphere has improved since assignment two. Things are running more smoothly as everyone is aware of their expectations and how the group operates.

I think the group can improve to be more effective by meeting more often. This will allow the group to bond more effectively and work in more unison manner.

The thing that was very surprising for me was then the results came out for Assignment 2, the group read the feedback and was very accepting of the results. There was no blame or questions asking about the assignment but rather a lot of self-reflection. Self-reflection areas in which could of done better and how to future proof the assignment to gain more points.

14.2 James Philip Eland Reflection

The team has worked together really well and communicated with each other better from the previous assignment in my belief. We all managed to get our parts done and emailed the group with our parts a lot sooner and which allowed everyone to know where we are up to. This led to the team being able to focus on editing the documents sooner. Throughout the duration of this assignment. We all learnt from our mistakes and grew upon from that and stayed positive. We all volunteered to do certain parts of the assignment that we all felt comfortable with and asked each other questions about each other's parts to grasp a better understanding of what was happening. This was caused due to the group being relaxed and comfortable with each other.

I believe that we have improved all aspects from what we needed to work on as a group and as individuals. We all have improved pretty quickly which allowed us to produce a better dynamic in the team and a better group project that we have produced

14.3 Jonathan Hazell Reflection

Team J has been an exceptional team to work with, and it has been an interesting 3 months or so. When the group first formed and started to work together, people were naturally a little nervous working with unknown people from a variety of backgrounds. For some of us this was the first time we had had to organize a group project. What kind of personalities did group members have, outgoing argumentative, easy going or even aggressive and obnoxious? Would they be interested enough to play a part in the assignment, add interesting and innovative ideas, do their share of the work and attend meeting regularly. At the beginning of the project things seemed a little strained, which is to be expected since none of us knew each other, but I have noticed over the last 12 weeks members are far more relaxed and the project has seemed more of something to enjoy than a chore. Group members have made a regular effort to attend our weekly meetings, certain individuals have stepped up to the plate and taken on extra work. Communication between members is important and communication between us certainly improved as time progressed which enabled us to work more efficiently and effectively especially when each group member knew their assigned parts and communication about what was missing, what was needed to complete the project was greatly improved. Overall, we seemed to work well as a group, meeting went well, problems were resolved quickly, we communicated effectively, and we completed the goal we set ourselves.

14.4 James Parker Reflection

For our second assignment together, I feel as though overall our team worked very well together with each person carrying an equal as possible workload. Our overall communication picked up, with people getting better at conveying ideas around the group and putting up their hand when they need help. Often other team members would gladly step in to help wherever possible. We also have taken a much more measured approach this time around, ensuring that we are finishing far ahead of schedule for hand in and sending in drafts to our lecturers for their review. The only thing I feel could be improved would be a possible third mid-week meeting where we can catch up on our progress so there isn't such a large gap of time between our existing Monday, Saturday catch ups. One thing that was surprising was the fact that we are so ahead of schedule and have worked so well together despite living in different states across AUS. This caused me to learn that within a group, if there exists good communication and solid work ethic from all parties, great things can be achieved. As a team overall, I feel that this assignment took what already worked for us in assignment one and made it even better!

14.5 Stefan Siotos Reflection

I believe our team really stepped it up for assignments 3 and 5. Some of the things that we improved on from assignment two was our communication and our planning. During assignment two it felt at times that we weren't sure where other people were up to however that changed in assignment 3 as we increased our communication and if people were falling behind or struggling, they made sure to let the group know. Planning was something that partly let us down in assignment two as we had put our own personal deadlines too close to the assignment deadline this caused us to really struggle as we didn't have time to fully reflect on what we had done and it was a mad dash to get it submitted on time, during assignment 3 we still put personal deadlines in place but they were much earlier in comparison to assignment two this allowed us to go back reflect improve and adapt based on what areas we felt needed it. I think overall our group improved greatly and believe we would continue to improve if there were more assignments ahead of us, we also wouldn't have been able to perform as well if certain people didn't step up in certain areas such as James Parker doing the video presentation and Don creating the UI.

14.6 Jordan Uhe Reflection

This is the second assignment this group has done together, and because of this we have done a few things differently, firstly we appointed Don as the leader and meeting coordinator, this was because

we had trouble with scheduling last time. We also divided up all the work at the start and marked down who was to do what, this was so that we did not have a rush at the end if more work happens to be assigned to someone because of a problem. In this project I was given a writing part, video editing part, and website launching part. The last 2 parts were dependent on other group members, and that caused me to be hurrying to finish this assignment in the last 5 days of the assessment period, this is not good practice, this increases everyone's stress levels and lowers the final quality of the work. Though saying this, it is not the fault of the people which my parts are dependent on, because they must also wait till the whole group finished the written parts before they could do their own. What I think would have fixed this is if the work is divided not just on length and difficulty, but also when all the parts needed for that section will be done and how long the person will have to complete it

14.7 Group Reflection

After receiving the results from Assignment 2, the group was determining to obtain a better result in this Assignment. We quickly identified what areas we needed to improve on and ensured that there was enough time to complete each task as well as time to fix any issues.

In this assignment we further developed our project into something that we can use or pitch to our providers. We were able to complete the backbone and UI designed but with limited time and revenue this was where we stopped. Although the task stopped there, the team was able to provide support for each other and achieve our objectives. We believe as a team we improved our team work and communication skills as well as our collaborative skills. Furthermore, the group improved on their own personal skills, whether it be writing, designing or planning.

This time around, there seem to be minimum or no hesitation when work was divided up, and as it seems no hesitation when help is needed. The group understands that each person has their own commitment and limitations and is willing to put their hands up and help out whenever needed.

We learned as a group that no one individual is perfect and capable of completing a group assignment by themselves. The task may sound small, but the milestones are large. This carries onto the real-life situation where even small tasks are done in teams of 2 or more. This helps to mitigate any risk of mistake or lack of skills.

This team has been a great team to work with and from this unit, the members of this team were able to grow and perfect their skills further.

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