VERSION 1.0

19 OCT 18

RYAN **GEORGE** / U1091311
ISAAC **HERTWECK** / U1081284
ANDREW **JOHNSTON** / U1040508
GREGORY **JONES** / U1023488

CSC3600

ICT PROFESSIONAL PROJECT

WEB BASED IMAGE ORGANISER

FINAL PROJECT REPORT

SUPERVISOR: A/PROF STIJN DEKEYSER

VERSION HISTORY

VERSION	COMMENTS	DATE
0.1	Initial Template Created	3 Oct 18
0.2	Methodology and Project Process Added	7 Oct 18
0.3	Costs Analysis Added	9 Oct 18
0.4	Project Outcome Added	12 Oct 18
0.5	Added Appendix Documents/Executive Summary	14 Oct 18
0.6	Adjusted Cost Analysis	16 Oct 18
0.7	Added the Individual Log Sheet Summaries	17 Oct 18
0.8	Added the Conclusion	17 Oct 18
0.9	Formatted and Ensured Consistency	19 Oct 18
1.0	Signed Initial Release	19 Oct 18

MEMBERS CONTRIBUTION STATEMENT

Signee	Student ID	Contribution (%)	Signature	Date
Ryan George	U1091311	22.9%		19 Oct 18
Isaac Hertweck	U1081284	25.4%		19 Oct 18
Andrew Johnston	U1040508	25.2%		19 Oct 18
Gregory Jones	U1023488	26.5%		19 Oct 18

CONTENTS

VERSION HISTORY *1*

MEMBERS CONTRIBUTION STATEMENT *1*

EXECUTIVE SUMMARY *3*

METHODOLOGY *5*

METHODOLOGY STATEMENT 5

JUSTIFICTIONS 5

DISCUSSIONS 5

PROJECT PROCESS *6*

TEAM ORGANISATION 6

TEAM STRUCTURE AND ROLES 6

COMMUNICATION AND MEETINGS 6

DOCUMENTATION 7

PROCESS 7

PROJECT REPORT *9*

PROJECT OUTCOME 9

COST OF THE PROJECT 12

CONTRIBUTION DISTRIBUTION *15*

CONCLUSION *16*

REFERENCES *17*

APPENDIX A: MEETING MINUTES AND CORRESPONDENCE *18*

ZOOM MEETING MINUTES 18

MESSENGER MEETING MINUTES 22

KEY MESSENGER SCREENCAPS 24

PRESENTATION LINK 30

EMAIL CORRESPONDENCE 31

APPENDIX B: ACTIVITY LOG SHEETS *37*

GROUP SUMMARY OF ACTIVITY LOG SHEETS 37

GROUP CONTRIBUTION BREAKDOWN 38

EXECUTIVE SUMMARY

Mark IV Tech is developing a Web Based Image Organiser to allow for users to search, edit and view images and their metadata. The team consists of 4 developers all using online collaboration tools to communicate and develop the software. The client specified requirements for the project that had to be met, and we at Mark IV Tech have delivered a prototype on-time and below budget.

An agile software development process was used with the scrum methodology. This was beneficial for the online team as they could work on functions individually and then test them straight away. The team leader assigned tasks to the members based on their skills, with development split into front-end and back-end developers. For the report writing all members contributed and reviewed each others work.

Communication throughout the project was excellent. The main method used was Facebook Messenger, which all members would usually reply to within 24 hours. Zoom video conferencing and email was used to communicate with the client. One downside was that the Messenger chats could become unstructured and disjointed, with answers to questions becoming drawn out and not succint. Going forward this could be resolved by setting out clear rules in regards to communication platforms.

Actual development on the prototype consisted of using GitHub for collaboration and version management. All members used the 'XAMPP' software package to test the website on their own computers. The front-end design utilises the Bootstrap framework, jQuery, CSS and JavaScript in order to present a clear and concise webpage to the user. SQLite 3 was chosen as the preferred method of storing and querying database information along with PHP and AJAX for the back-end. This stack of software proved successful without any limitations being found.

The project was originally budgeted for $70,199.75, however this was later found to be an error. The corrected amount is $20,129.00. Total expenditure has been $19,749.13 which results in a budget underspend of $379.88. Analysis on the costing has found, for future purposes, less time should be allocated to programming and more labour resources to discuss and develop designs. Additionally, estimated costings should be triple-checked to ensure the calculations are correct. This was further exacerbated by the team not having any prior experience on the usual costs of developing software.

The prototype created is best used in a non-commercial environment, as there are limitations present in the prototype. These include:

- The size of each image directory.
- Using larger image directories may take the software significantly longer to scan through.
- Images must be stored in JPEG/JPG format.

If further funding is approved these limitations could be fixed with additional time.

Key recommendations found throughout this report include:

- Clearer rules for Messenger conversations.
- More set video conferencing times with the team as well as agendas being set out.
- Triple checking of budgets and labour required to ensure estimations are closer to actual costs.

The key findings in this report will help with future project management and development by the company. As the first project Mark IV Tech has taken on, it has delivered the prototype on time and to budget. Going forward, the company will be able to take on bigger projects for clients with team members learning from their experiences.

METHODOLOGY

METHODOLOGY STATEMENT

Mark IV Tech implemented an agile software development model to carry out this project. The methodology chosen was scrum.

The user made a list containing must-have functionality and desirable functionality. The team leader then selected a system requirement for each member to develop and then implement it. Progress of each backlog task was discussed in daily scrums. The team leader kept the team focused and informed throughout the whole project. Once the component was implemented, tested and completed by the group the team leader would delegate the next lot of tasks.

JUSTIFICTIONS

The scrum methodology was chosen for the agile software development model because it was adaptive to changing user requirements and wishes. Team members lived in different states, some had jobs, and therefore the waterfall method was not an option, with the software completion date being too short. One negative aspect is that due to the lack of documentation, there were a couple of occurrences where two team members carried out the same task.

The scrum framework manages work by dividing it into short sprints, while always maintaining the product in a potential shippable state (James 2018). This methodology allowed the team to create a modularised piece of software that could be easily tested, and components could be easily re-developed to a point it met the user's expectations. Another negative aspect is that throughout the project, some members spent too much time on specific tasks.

Throughout the entire project cycle, the team leader kept the members focused on the goal he set for each. A minor negative aspect was that in some instances, feedback took a period of time due to each member being in different states and teamwork hours not in unison.

DISCUSSIONS

The team had an initial meeting with the user (Stijn) to get a starting point for user requirements. The team leader broke the project down into multiple tasks and assigned each member a task. This document was loaded onto Google Drive for all members to see. Each team member completed the component and loaded it onto GitHub for all members to test and give feedback. The team leader was constantly on Messenger communicating with members, discussing progress, and if assistance was required. Once all members were happy with the component, the next set of tasks or system requirements were then assigned by the team leader. The results achieved were exceptional but in future, phone and video chat as the main communication tool would be far more efficient when dealing with complex tasks.

PROJECT PROCESS

TEAM ORGANISATION

All forms of team work were organised by utilising Facebook Messenger, Google Docs, and via email. Members would discuss availability, proficiencies and weaknesses in terms of coding, report writing and software experience which would provide vital information when organising teamwork.

The team leader Mr Hertweck was an essential figure in ensuring teamwork was consistently applied throughout the whole project cycle. He would assign two members to a task if there were time constraints or felt a task required skills from two different members that exhibited them. If a member needed help with a task they would use Messenger to ask a member with the required skills to help. This assistance could have been by experience, providing previous study material or collaborating via GitHub.

A negative to this was when the Messenger chat became cluttered or a member was busy for the day. The member would check the group chat only to find a lot of missed messages that could have been collated into one or two succinct messages. Going forward, the group could be cognisant of this problem and have stricter rules in place.

TEAM STRUCTURE AND ROLES

Mark IV Tech is made up for 4 team members forming a virtual team. There was a team leader, a front-end department and a back-end department for development. The team leader ran the whole project ensuring all members knew each deadline, assigned tasks to members, and kept the team focused and morale high.

The front-end department was responsible for developing a user interface and the flow of the web application. The back-end department was responsible for ensuring that the application talks to the database, saves, retrieves and uses data according to user specifications. For report writing all members were assigned different parts. Then by utilising track changes, another member could check their work and offer suggestions.

This method worked well, as early in the process members were selected for either front or back end development based on their strengths in coding. However, due to the project requiring more back-end development, the workload was not equal during development. This was mitigated by the team leader assigning the front-end members more ancillary tasks and report writing.

COMMUNICATION AND MEETINGS

Communication throughout the whole project was exceptional because of the democratic management style adopted. All members were encouraged to communicate and use multiple platforms to achieve this. However, in some instances, due to the complexity of the issue or task, the platforms used were not adequate. The length of time to discuss an issue or explain a view took longer

than it should have. Finally, availability of each member was mixed as members had to balance work-life and family along with development.

For future collaboration, phone calls or regular video conferencing could have provided live discussion and would have been far easier to discuss complex issues and tasks. As half of the team were in a different state, face-to-face meetings were not possible. In future it would have been beneficial to be located within travelling distance.

All team meetings were organised 3 to 4 days in advance and the video conference would be run on the Zoom platform. These meetings were extremely successful because every member was able to easily discuss or bring up any difficulties they were having. Furthermore, it was far easier to discuss project direction and tasks requiring help through verbal communication, compared to instant messaging.

To keep meetings on topic, an agenda could have been loaded onto Google Docs where each member could have added to. That would have given the team an approximation of meeting length and ensured that all required topics were discussed. The team meetings were short and concise due to time constraints. For these, meeting minutes were taken and scribed for future reference.

DOCUMENTATION

The group benefited from the platforms used which supported full history of conversations and changes. This allowed members to read through the chat history before re-asking similar questions. GitHub also allowed members to see committed changes and the version history, thus allowing them to know exactly what stage of development it was up to. Design documents such as the Database schema and the outstanding requirements list were centrally stored and shared using Google Documents.

All meeting minutes and summaries of fortnightly conversations have been attached to this document as Appendix A.

PROCESS

Other processes that were employed by the team include the following:

- Task Management
- Quality Management
- Change Management

Project Quality Management was ensured by adopting an open work culture as well as using a peer review system. This system worked well as it ensured that all members were aware of each other's work, enhancing consistency as well as fostering a peer learning environment.

Change Management was governed by group discussions within the scrum and using files on Google Docs to identify and record proposed changes. GitHub's desktop application was also used to track and monitor changes through its "History" function. This desktop application was very easy to use and gave good visibility of changes that had been made to the project. Any undesired changes could be easily

found and undone. The use of GitHub branches further assisted change management as new features could be developed and then be tested in isolation before being merged into the active branch.

Document configuration management was achieved using an embedded version table. This table was included at the beginning of the document and was updated when any changes were made. This process worked, however it provided no way to know if an old version was saved over a newer version. An improvement to this document version control would be to also have a separate version control register. If a new version was replaced, it could be identified and rectified.

Task management was maintained through the use of an Excel based task tracking tool. This tool was used to by the project manager to assign and monitor task status. The tool displayed who was assigned to a task, when the task was expected to be completed, who was to review the task and the current status of the task. This tool was effective as it was very easy to read and provided feedback to the project manager as well as team members to the current state of the project.

PROJECT REPORT

PROJECT OUTCOME

Mark IV Tech was recently assigned the task of creating a web-based image organiser in the wake of Google Picasa, a similar service that was discontinued in March 2016. A number of software requirements were specified by the client in the original project plan. These requirements included but were not limited to:

- Read/Write SQLite database.
- Ability to set a root directory according to user selection.
- Extract all metadata from user selected root directory.
- Save edited metadata back to the image.
- Default view to display all thumbnail images within the repository.
- Sort thumbnail images according to date (newest to oldest).
- Perform a simple single field search for images according to user input.
- Responsive GUI.
- User-friendly interface.
- Maintain data integrity.
- Operate across multiple platforms and devices.

Using an agile methodology for our development cycle, we are happy to report that we have successfully fulfilled the requirements of the client, as well as including some additional features throughout the development cycle. We believe that the final product delivered is both high in quality and user-friendly. Some of the additional features included are:

- Re-sort images by date (oldest to newest).
- Perform complex multiple field search for images according to user input.
- Allow user to update fields of image metadata.
- File system metadata synchronised with database data for each user request.
- Dynamic scanning of image directories.
- Additional database information.

The web-based image organiser was designed with usability and functionality in mind. The front-end design utilises the Bootstrap framework in order to present a clear and concise webpage to the user. SQLite 3 was chosen as the preferred method of storing and querying database information, due to the nature of the project. This allows the user to run the software solely using an Apache server.

It is recommended that users take advantage of the “XAMPP” software package when using the web-based image organiser, as it is available on multiple platforms and was primarily used by the development team when creating the software.

LIMITATIONS

The software we have created is best used in a non-commercial environment, as there are limitations to the size of each image directory. Images must be stored in JPEG/JPG format, otherwise they will not

be scanned and updated by the software. Using larger image directories may take the software significantly longer to scan through, depending on the size of each directory.

SCANNING IMAGES

Users can select multiple directories to scan images from, and can later remove the stored database, effectively removing all image directories used by the software. Please note that the “Browse Images” page, simple search, and “Advanced Search” page will redirect the user to the scan page until at least one directory has been added to the software. The application also stores the last scan time so only images that have been modified since this scan will have their metadata read-in. This ensures a more efficient scanning algorithm with less wait time for the user.

BROWSING IMAGES

Users can view their image library in this section, and can modify image metadata by clicking on an image and changing information stored in the metadata fields. The default image library view is sorted by year (newest-oldest), but can be changed to sort between (newest-oldest) or (oldest-newest) by using the “Sort Images” button at the top of the page. Any metadata changed within the information fields must be saved first in order to be used by the search functions. This user saved metadata is stored directly onto the image, with a new file scan subsequently run to ensure the database remains synchronised. This allows the data to persist after the database is deleted.

DATABASE INFORMATION

This section of the software allows the user to view information about the database, such as the path of their image directories, the number of images stored in the library and the size of the database. Users can also delete their current database on this page, which will remove all photos from the image library on the software. If multiple directories are stored, they can also be individually removed by clicking the “Remove” button next to the corresponding directory path.

SIMPLE SEARCH FUNCTION

Users can search for metadata keywords stored within the image library by using the simple search function located on the top-right of each page (*Note: simple search function is not available on the advanced search page*). Parts of keywords will also return results e.g. searching “fire” returns results with stored metadata “firetruck”.

ADVANCED SEARCH PAGE

Users can search specific metadata fields using this page. Please note that if multiple fields are used, any results returned will be exclusive, not inclusive. Dynamic dropdown fields are used to select specific camera manufacturers and/or camera models. If a manufacturer is chosen first, the camera model field will be updated with the respective models for that manufacturer. If a model is chosen first, the manufacturer’s field will update to that model’s respective maker. These fields can be reset by using the reset button located directly below the dropdown fields.

OTHER FEATURES

If individual images are removed from a root directory (outside of the software), they will also no longer show up on the image library. On the contrary, if an image is added to a root directory, they will also be added to the image library. If no directories have been selected, the user will be prompted to add a directory and will be taken to the “Scan Images” page where they can add one.

FUTURE UPDATES

Mark IV Tech uses GitHub in order to collaborate on their projects. The current release of this application can be found at https://github.com/Gregory1999/CSC3600/releases/tag/v3.2 .Most of the source code has been commented on and structured properly so that it can be built upon and easily understood by other developers.

COST OF THE PROJECT

This project has had a total project expenditure of $19,749.13. The initial plan anticipated an outlay of $70,199.75, this total however was caused by an uncaught error in which the total labour costs were incorrectly multiplied by four; the corrected estimated expenditure was $20,129.00. The project has therefore underspent anticipated (corrected) costs by $379.88. The cost of each project is broken down and displayed in the below tables. The Labour table (Table 01) sources its data from the task log summary shown in Appendix B.

ID	Phase	Hours[4]	Cost (Business Analyst Rate[1])	Cost (Programmer Rate[2])	Cost (Project Manager Rate[3])	Total Phase Cost
1	**Initialising**	26.75	$997.33	$0.00	$505.81	$1,503.14
2	**Discover and understand the details of the problem**	49.5	$2,067.63	$0.00	$566.51	$2,634.14
3	**Create the project plan.**	37	$1,435.18	$0.00	$606.98	$2,042.15
4	**Design Components**	70	$0.00	$2,450.00	$0.00	$2,450.00
5	**Build all the program components, integrate and test.**	107.5	$0.00	$3,762.50	$0.00	$3,762.50
6	**Monitoring and Controlling**	36	$1,118.95	$0.00	$1,052.09	$2,171.04
7	**Deploy**	29.25	$875.70	$0.00	$910.46	$1,786.16
Totals		**356**	**$6,494.78**	**$6,212.50**	**$3,641.85**	**$16,349.13**

Notes:

1. Business Analyst Hourly Rate-$48.65 (PayScale 2018).
2. Programmer Hourly Rate-$35(PayScale 2018).
3. Project Manager Hourly Rate-$80.93(PayScale 2018).
4. Phase hours sourced from Task Log Summary, refer Appendix B.

Table 01: Labour - Time and Cost Estimation

	Resources	Cost
Software	Virtualisation	$0.00
	GitHub	$0.00
	PHP/MySQL/AJAX	$0.00
Hardware	Desktop PCs x 4	$2,400.00
	Internet Access (Project Duration)	$1,000.00
Total Cost		**$3,400.00**

Table 02: Resource Cost Estimation

Title	Cost
Total Resource Cost	$3,400.00
Total Labour Cost	$16,349.13
Total Project Cost	$19,749.13

Table 03: Total Project Expenditure

Title	Cost
Planned Expenditure (Corrected)	$20,129.00
Actual Expenditure	$19,749.13
Expenditure Delta	-$379.88

Table 04: Project Expenditure Comparison

The graph in Figure 01 displays a comparison of the planned labour hours (in red) and the actual hours carried out during the project (shown in blue). From the graph it is shown that there are two phases which where inaccurately forecasted. The project team only required 43% of the anticpated programing and testing hours and exceeded the design phase hours by almost 6 times.

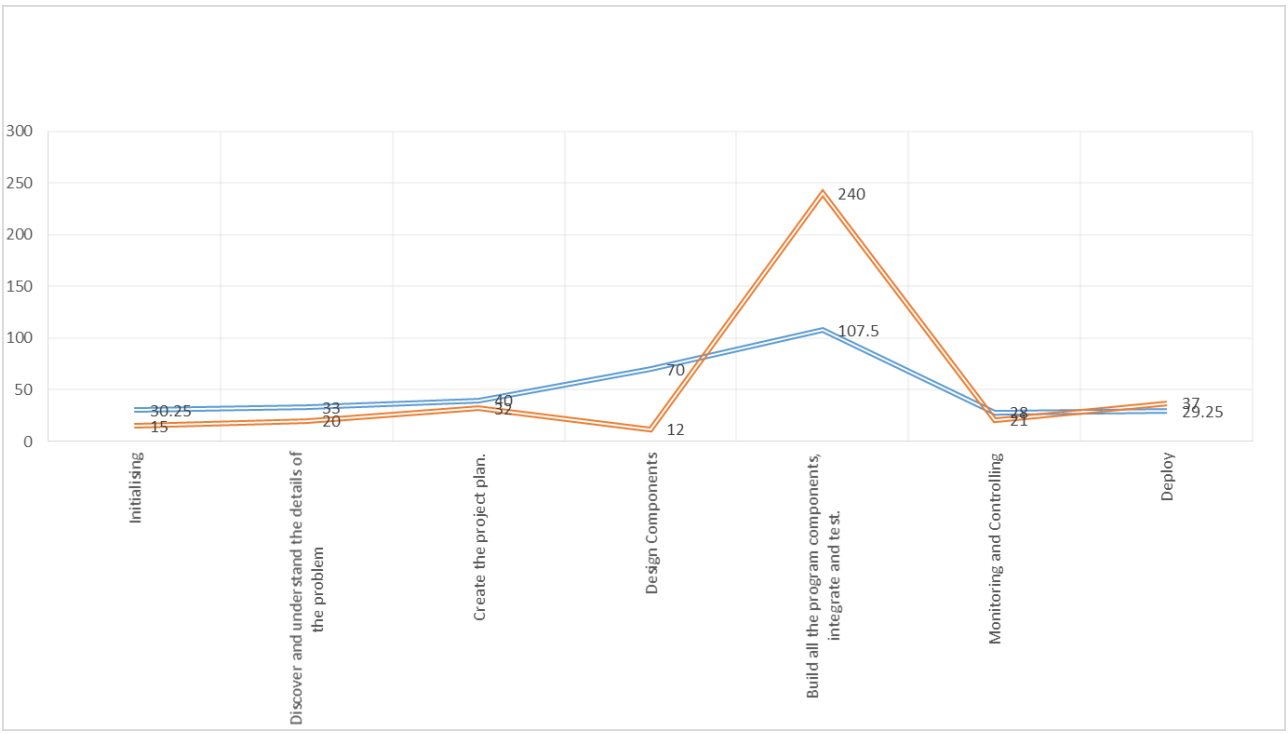


Figure 01: Planned vs Actual Labour Comparison

The graph in Figure 01 highlights the first costings lesson learnt, which is to not underestimate the time required to carry out the projects design, especially when working within a team. Most university assignments have been individual activities, so less time is required to create and communicate design details, with more time spent coding. It was noted through this project that extra time is required when working in a team environment, to discuss and specify the proposed design. In future projects this team would actively proportion less time to programming and allocate more labour resources to develop designs.

The final costings lesson learnt during this project was to be more diligent with the financial calculations. The accounting error within the initial plan was caused by miscommunications during the early phases of the project, before communication paths and norms had matured, and was compounded by the dispersed structure of the project team. The error was then not identified as the team had not had experience in software projects so had little idea of the expected scale of the expenditure. To mitigate this error in future projects the team would employ additional Independent checks and validation for all critical financial calculations.

CONTRIBUTION DISTRIBUTION

Tasks distribution was managed by the team leader who took responsibility for assigning and distributing the team's workload. All tasks were documented within the team's central task tracking tool. This tool gave members visibility of allocated work and task status. As each member had different skills and knowledge, the jobs could not be simply divided. Instead the project lead had to assess the task and balance workloads based on competency and experience. The combination of this tool and a diligent project leader resulted in a fair and even allotment of work.

The distribution of tasks are shown in the below table (Table 05) which uses data sourced from the group contribution breakdown table in Appendix B. This contribution table combines the summaries of each individual's task logs to calculate percentage of each member's effort. It should be noted that there could be discrepancies between how individuals record their task-hours and that the team felt that all members evenly contributed throughout this project.

MAIN TASKS	RYAN GEORGE	ISAAC HERTWECK	ANDREW JOHNSTON	GREGORY JONES
Initialise	7.5%	23.4%	29.9%	39.3%
Create Plan	10.8%	20.3%	41.9%	27.0%
Research	41.4%	14.1%	18.2%	26.3%
Discussions	25.0%	25.0%	25.0%	25.0%
Meetings	25.0%	25.0%	25.0%	25.0%
Design	5.9%	33.7%	56.4%	4.0%
Implementation	19.1%	7.9%	12.6%	60.5%
Monitor and Control	52.8%	36.1%	2.8%	8.3%
Deploy	19.0%	42.9%	15.2%	22.9%
Average	**22.9%**	**25.4%**	**25.2%**	**26.5%**

Table 05: Project Expenditure Comparison

CONCLUSION

Software development continues to evolve. From what used to be a well-thought-out start-to-finish process (such as the waterfall methodology), is now giving way to agile methodologies. These allow teams to plan and respond to issues on an ad hoc basis. Mark IV Tech used an agile software development model with the scrum methodology for designing the web-based image organiser. The key positives of this was that components could be developed and tested by all members. Also, these components could then be tweaked by other members to get extra functionality from them. For this project that was important as the back-end team would create a new function and then the front-end team would add the necessary design features and set it up within the site.

With the team being made up of four members; some in different states, communication had to be all online. This is becoming increasingly easier in society as most people are always connected, whether it be by smartphone or computer. In the group all members had smartphones and could usually respond promptly. However, the ease of communication also highlighted a negative effect. As mentioned in the report, the chat could become cluttered and not succinct when questions were asked. This meant members spent extra time sifting through messages that may have had little relevance. Going forward, clear rules will need to be devised as a way to prevent this.

The agile methodology and extensive communication helped towards delivering a successful prototype. This prototype met all the requirements set out by the client and to the allotted budget. The estimated budget was $20,129, the project came in at $19,749.13, a saving of $379.88. This was a great result for both the client and Mark IV Tech; particularly being the company's first major project. Apart from the original calculation issues, the task logging documentation will be tweaked and used for future projects.

The information in this report has provided valuable insight into the project management process. No significant issues arose; however, the minor issues will be analysed for future projects. Prudent checking of calculations and enforcement of concise messaging on text platforms will be implemented in the future. The scrum methodology proved well for the task and team. For future projects it will be used with an improved and more utilised task tracker spreadsheet. Once these tweaks are applied, Mark IV Tech remains confident it will continue delivering projects on time, to budget and meeting all of the customer's requirements.

REFERENCES

Cowburn, P 2018, *PHP Manual*, The PHP Group, viewed 16 Sep 18, <http://php.net/manual/en/index.php>.

James, M 2018, *Scrum Methodology, Learn Scrum*, CollabNet, Inc, viewed 06 Oct 2018, <http://scrummethodology.com/>.

PayScale 2018, *Business Analyst, IT Salary*, PayScale Inc, Washington, viewed 10 Aug 2018, <https://www.payscale.com/research/AU/Job=Business_Analyst%2C_IT/Salary>.

PayScale 2018, *Computer Programmer Salary*, PayScale Inc, Washington, viewed 10 Aug 2018, <https://www.payscale.com/research/AU/Job=Computer_Programmer/Salary>.

PayScale 2018, *Project Manager, Information Technology (IT) Salary*, PayScale Inc, Washington, viewed 10 Aug 2018, <https://www.payscale.com/research/AU/Job=Project_Manager%2c_Information_Technology_(IT)/Salary>.

Satzinger, J, Jackson, R, Burd, S 2016, *System Analysis and Design in a Changing World*, 7th Edition, Cengage Learning, Boston, USA.

APPENDIX A: MEETING MINUTES AND CORRESPONDENCE

ZOOM MEETING MINUTES

Minutes-1/18

MINUTES OF MARK IV TECH INITIAL PROJECT CLIENT MEETING 1/18
ZOOM VIDEO CONFERENCE 30 JUL 2018 6:30PM

Attendees:
Mr I. Hertweck PROJECT MANAGER (Chair)
Mr R. George PROJECT TEAM (Secretary)
Mr G. Jones PROJECT TEAM
Mr A Johnston PROJECT TEAM
Mr S. Dekeyser PROJECT SPONSOR

Project Introduction

1. Mr Dekeyser commenced the meeting with a brief introduced of the project. The project was summarised as follows:

    a. The team must create an image indexer and searcher to replace the now defunct google Picasa tool. This tool had the following features:

        1. It was very good at indexing images stored locally on disk and would organise them in hierarchical folders.
        2. The folder names were used by Picasa to extract keywords.
        3. It would also show all images on a time-line with the most recent first and group the images by date.
        4. It had the ability to do searching- Could do simple searching such as looking for a simple tag and could also do more complex searches too.

    b. The project team is to create a photo organiser for personal use. Instead of being a self-contained application, it is to be a web-based application, using the browser as the interface and a local host server.

    c. It is intended that when the user first installs and runs the program, the user will set a directory path at the top of the tree. The application will scan all of the images in that directory and the subdirectories and extract the metadata from the images. This data is then uploaded into a Database and is used for searching the repository.

    d. The application should use standard technologies that it will be portable across Operating Systems.

e. The specific technology choices are up to the team- the team can choose to swap out any component within the web-based application.

Project Development Tools

2. Mr Dekeyser was asked how he would recommend the team set up their development servers in order to collaborate while developing their code. Mr Dekeyser recommended the following in regards to project development tools:

a. Mr Dekeyser recommended using a local host and packaging the source code so that it can be dropped into a similar environment and run. He stated that the team will have to tell instructor what the environment is and how to set it up.

b. In terms of project management Mr Dekeyser highly Recommend using GIT to manage the source code repository. He also encouraged the team to use it in conjunction with Bit Pocket or GIT Hub.

c. Mr Dekeyser identified that there is a server at USQ for GIT but he recommends using the current popular tools.

d. The team was told that they are to share a link with the instructor with read only access so he could view the team's repository of code. Mr Dekeser wanted the ability to check who has been active in submitting code.

e. Mr Dekeyser also recommend that the team look into other popular software development tools to use with GIT for collaboration of our project work.

Organising work

3. Mr Dekeyser recommended that in terms of organising work, this project has three big components. These components included:

a. The first section was the Filesystem component. This component is to consist of scripts that efficiently index the photos in the directory structure, making sure to only index new photos. The team is to develop an algorithm that keeps track of filesystem changes. Metadata that can be changed, should be able to be modified in the user interface.

b. The second major component was the database. The team would be required to design the Database Schema and then implement it.

c. The final component was the Web browser (GUI), which would consist of HTML and JavaScript. This component needs to be responsive, using AJAX so not always refreshing the entire page. It needs to be viewable in both mobile and full browser and can use open source libraries; The team just needs to mention which libraries are used in the projects documentation.

d. These three components could be split amongst the team or could be worked on together.

Communication

4. Mr Dekeyser identified the following remarks in regards to team communication with the instructor:

a. The number of meetings with the instructor is entirely up to the project team. He simple asked to have an email at least once a fortnight, listing the teams progress.

b. Mr Dekeyser is happy for anyone from the team to contact him directly via email so long as the whole team is included on the email. However Mr Dekeyser stated that for the purposes of the project management aspects of the course it is probably best if the team leader is the principle contact person.

Requirements

5. Mr Dekeyser identified the following points in regards to the project requirements:

a. Mr Dekeyser stated that clients generally want everything, however the project team obviously cannot implement everything. Collectively the team needs to figure out which features set will included in the final program. The team must intelligently select from the clients wish list and create something that is logically consistent and usable on its own.

b. Mr Dekeyser stated that he will be able to indicate priority of features, but it is up to the team to decide on the features to include in the program.

c. A firm requirement of the project is that the program must have, as a minimum, a simple search box. This would be a text box that the user inputs a tag. The tool then finds images using that tag. Typically, the search will use the words that are stored in the file path but could also search other DB fields.

d. A client wish would be to have a complex search that would allow the user to specify complicated search queries. The challenge with this functionality would be to create a user interface that would allow the complex query to be specified and have code that translates it into DB query.

e. The program is to be tested using the team's own images. It is only required to work with around 20 – 30 images.

f. The program needs to be able to store and index JPEG images and doesn't need to deal with RAW images.

g. One client wish is to be able to synchronise the metadata between the database and the photo.

h. The team is not to use commercial Database software.

Summation/Close

6. Project Sponsor closed the meeting by stating if anything was unclear, as a group try get to the heart of what was unclear and then request further clarification. The meeting concluded at 7:00PM

Minutes-2/18

MINUTES OF MARK IV TECH PROJECT TEAM MEETING 2/18
ZOOM VIDEO CONFERENCE 07 SEP 2018 6:30PM

Attendees:
Mr I. Hertweck PROJECT MANAGER (Chair)
Mr R. George PROJECT TEAM (Secretary)
Mr G. Jones PROJECT TEAM
Mr A Johnston PROJECT TEAM

Discussions
The Project manager commenced the meeting and explained that this was a quick team meeting to identify the strategies and requirements to successfully complete the project. The following points were made:

a. Advanced Search feature: include a form for each field that a user can fill in –
b. database search on each field.
c. Start developing the advance search by using general search parameters, then move onto more advanced parameters. (Incremental development).
d. Continue communicating with Stijn via email.
e. Use one global css file is to be used to hold all site style code.
f. The team would split development into branches on GitHub.

Summation/Close

7. Project Manager closed the meeting which concluded at 7:00PM

MESSENGER MEETING MINUTES

As the team was distributed across three states with varying family and work commitments the team used Facebook Messenger to conduct the majority of their team meetings in place of pre-planned Zoom meetings. A central log of these meetings was maintained fortnightly, which summarises the topics discussed, and decisions made. This log is shown below, along with supporting screenshots to demonstrate that the code of conduct was enforced throughout the project.

16th - 30th July 2018

We began communicating via a Facebook Messenger group chat to talk about the criteria of our first group assignment; the project planning report to present to the client. Our team leader, Isaac, scheduled a meeting with the project supervisor so that we could get a better grasp of the criteria and the requirements the client was after in relation to the project software. Our team brainstormed questions to ask the supervisor during the meeting and wrote them down on a document shared between everyone in the group.

31st July – 14th August 2018

After gathering more information about the project from our supervisor, we began working on the project report due in mid-August. For this assignment we shared our documents and timetables on Google Drive, where we could comment on each other's work and provide constructive feedback. The group chat was used to discuss what each person was working on and where they were up to, what times we would be able to work on the assignment, and to discuss the assignment criteria. All assigned tasks were recorded on the central task management sheet.

15th -29th August 2018

Throughout the month of August, we as a team had begun discussing which local server software we wanted use for the development and testing phase of the web-based image organiser. After trying different options such as LAMP on Linux, XAMPP on Mac, and XAMPP on Windows, and seeing what worked best with the majority of the team, we decided that XAMPP would be used for the development of the software. The messenger chat was primarily made of up conversations on how to fix issues were we experiencing with certain operating systems or software we had considered using.

30th August – 13th September 2018

Our team had begun developing the software towards the end of August, with Gregory laying the main foundations of the website so that it would be easier to implement the project requirements further down the track. We all acknowledged any emails that were sent to the supervisor, and discussed any replies that we received. We also decided to use GitHub to collaborate on the software development and testing side of the project. This made it easier to track our progress, and we could let each other know via Messenger when we were about to commit changes to the master branch. After more than a week of development, we decided to schedule a Zoom meeting among ourselves, and choose which areas we would focus on. It was decided that since Andrew and Gregory were more experienced in backend development, that they would keep a heavier focus on the backend side of the software development. Isaac and Ryan agreed to primarily work on the frontend code, and so we began dividing our work into multiple branches, so as to not overwrite each other's progress.

14th -28th September 2018

Most of our messenger conversations during this time were about troubleshooting code and helping each other with bugs and errors. We had contacted our supervisor again to get some feedback on how the project development was going, as he had access to our GitHub repository.

27th September - 11th October 2018

With the critical requirements of the project completed, most of our chat was focused on error checking and talk about how we would begin writing our final report and presentation of the developed software. We scheduled another meeting with our supervisor to demonstrate the work that we had done. As all critical criteria were completed a new list of possible improvements was created and shared on google drive.

11th - 19th October 2018

Ryan created a video demonstration which was provided to the project sponsor who provided prompt feedback. All new client specified requirements were discussed and assigned. Once these features were implemented, the team leader assigned project report roles as per the task tracker. The team also discussed how to execute the project presentation. The presentation content was divided as below:

- Isaac - project management topics,
- Greg - browse and edit pages,
- Ryan – front-end and search features,
- Andrew – filesystem browser (including multi-directory support) and nerd page

It was decided that the team would create a video to submit, with Ryan combining all individual videos for submission.

KEY MESSENGER SCREENCAPS

Ryan George

I was thinking of doing the same thing as well

Aug 06, 2018 6:21pm

Andrew Johnston

I'll have a look now.

Aug 06, 2018 6:20pm

Gregory Jones

Yeah, I might try and put my thoughts into a list over the next couple of days, just really busy today and tomorrow. Will share it as soon as I can

Aug 06, 2018 6:20pm

Ryan George

Yeah I doubled checked it last night, noticed that the project design section wasn't exactly what I thought it was. Hopefully we can put together a list of requirements within the next few days asking what the client (Stijn) is hoping to get out of the software, since a number of sections in the report are very reliant on that information

Aug 06, 2018 6:18pm

Gregory Jones

Also make sure everyone keeps a weekly project Journal of tasks because its in the Final Project Rubric

Aug 06, 2018 6:17pm

Gregory Jones

Just making sure that everyone is aware that there is a example project on the study desk which helps explain each project section and what to include

Aug 06, 2018 6:13pm

Isaac Hertweck

I've reviewed your project specification Andrew

Aug 08, 2018 7:47pm

Andrew Johnston

If you can upload want you have for functional and no functional requirements

Aug 08, 2018 7:41pm

Ryan George

I'll work on it tonight and upload it to the drive within a few hours

Aug 08, 2018 7:39pm

Isaac Hertweck

that would be good for you two to get those sorted please

Aug 08, 2018 7:38pm

Ryan George

If you want to help I won't say no, but don't feel obligated to do so haha

Aug 08, 2018 7:36pm

Andrew Johnston

If you want I'll do it. I've already finished my section and I'll help you with the functional and non functional requirements also. Upto you. Let me know

Aug 08, 2018 7:36pm

Ryan George

In that case I've got most of those down, just need to finish the list

Aug 08, 2018 7:35pm

Isaac Hertweck

email I think

Aug 08, 2018 7:27pm

Ryan George

Should we send an email or plan a meeting?

Aug 08, 2018 7:27pm

Ryan George

We should probably do that soon, only 9 days left to finish the project plan assignment.

Aug 08, 2018 7:27pm

Isaac Hertweck

Also do we need to send an email to Stijin outlining the requirements we are going with for now?

Aug 08, 2018 7:25pm

Ryan George

I'll have a look tonight, thanks Isaac

Aug 08, 2018 1:33pm

Gregory Jones

Cheers, I'll try and have a look at it tonight.

Aug 08, 2018 12:22pm

Isaac Hertweck

Hi All, I've made a new spreadsheet on the group folder. CSC3600 Task Manager it is called. I'd like to use it to track all the tasks we have and stuff. Please have a look and update with your progress and feel free to add more tasks to it that you know of. Also I welcome any feedback with it.

This should make it easier for everyone to do their project journals as they can keep track of everything done with it.

Aug 08, 2018 12:20pm

Isaac Hertweck

back end can still be developed in terms of queries and database development

Sep 03, 2018 7:10pm

Isaac Hertweck

well Ryan and I can work on the front end

Sep 03, 2018 7:10pm

Ryan George

I'd probably prefer to do SQL and any HTML/CSS/Java as I'm most familiar with those languages compared to PHP

Sep 03, 2018 7:07pm

Ryan George

Yeah that sounds good.

Sep 03, 2018 7:03pm

Andrew Johnston

Yeah sound good. But maybe front end should be complete before back end is started.

Sep 03, 2018 7:03pm

Isaac Hertweck

Hey team, So Greg and I were talking today and think that it would be a good idea to split development up to Front end and Back end for the website in groups of two then further split up tasks within that. What do you guys think?

Sep 03, 2018 7:02pm

Gregory Jones

also try have photos from different years, so can show ordering funtionality

Oct 05, 2018 2:21pm

Ryan George

Okay no worries

Oct 05, 2018 2:20pm

Isaac Hertweck

Show how you can add photos and remove photos from the directory as well and it automatically updates on the site.

Oct 05, 2018 2:20pm

Gregory Jones

good idea, let me know if you need any help

Oct 05, 2018 2:19pm

Isaac Hertweck

What do you guys think?

Oct 05, 2018 2:19pm

Isaac Hertweck

Or whatever you use

Oct 05, 2018 2:19pm

Ryan George

Yeah I'll do that too

Oct 05, 2018 2:19pm

Andrew Johnston

Sweet. I'll get started on it on Sunday.

Oct 05, 2018 8:46pm

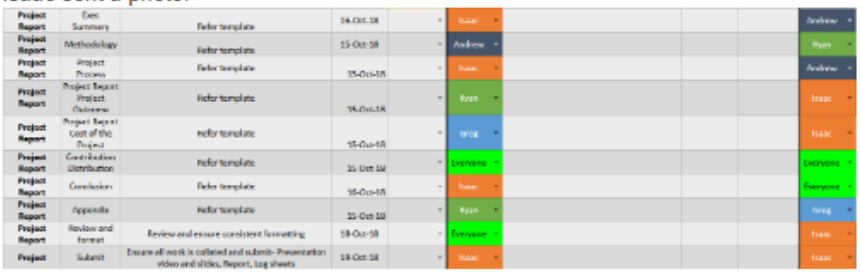
Isaac Hertweck

please use the updated template I made that in the GiT

Oct 05, 2018 8:43pm

Isaac Hertweck

Isaac sent a photo.



Oct 05, 2018 8:42pm

Isaac Hertweck

alright team, I've assigned the different sections to members.

Oct 05, 2018 8:42pm

Isaac Hertweck

@Ryan George we can just use the existing spreadsheet if needed to record tasks.

Oct 05, 2018 8:22pm

Gregory Jones

Yeah, just added mine, and the minutes

Oct 14, 2018 12:11pm

Ryan George

That's fine, I'm not working on anything in the report at the moment. Before we submit the report we'll need to attach all our weekly logs to the appendix

Oct 14, 2018 12:11pm

Gregory Jones

Thanks Ryan, I'm just going to push some changes in the report into git. Hope that's ok

Oct 14, 2018 11:58am

Ryan George

Well spoken and easy to follow, great work Greg

Oct 14, 2018 10:47am

Gregory Jones

https://www.youtube.com/watch?v=vuxd2DWL-sw
https://www.youtube.com/watch?v=vuxd2DWL-sw

Oct 14, 2018 10:01am

Gregory Jones

This is my new draft. Goes just over 4 minutes but I can speed up. Its not my final attempt but just wanted to share to ensure that we are all on the same page and to identify if I need to make changes to the script.

Oct 14, 2018 10:01am

PRESENTATION LINK

https://www.youtube.com/watch?v=VO1xCmzW_xE

EMAIL CORRESPONDENCE

29 Aug 2018

Good Afternoon Mr Dekeyser,

I am emailing you to provide an update on how Mark IV Tech is progressing with your project you have tasked us.

Over the last couple of weeks, the team has drafted up a full project plan and began development of the Web Based Image Organiser.

In the project plan, the project specifications and requirements have been developed from meetings and communication with you.

From this a work breakdown structure has been developed which has allowed us to develop a task schedule and cost estimations. These are important as it allows key milestones to be managed by the company and delivered on time and to the budget set.

The team has estimated that this project will require a total of 377 work hours with a planned expenditure of $70,199.75.

Following the estimations, the project risks have been identified and measured using a risk matrix.

By identifying possible risks early, it will allow the company to put in mitigation techniques in the hope of preventing project delays.

Now that the project plan has been completed, development has also begun. So far Mark IV Tech has chosen the following technologies to develop with...

- SQLite 3
- PHP
- JavaScript
- JQuery
- Bootstrap

A prototype site structure has been developed and tested on our machines and is so far running well. We are currently in the process of creating a schema for the metadata search functions which we will update you on once complete.

We will advise you on any planned changes to the architecture of the program if we run into any problems.

If you have any questions don't hesitate to email me.

Regards,

Isaac (Team Leader)

Mark IV Tech.

---

30 Aug 2018

Thank you very much for this informative update, team. You have communicated appropriate project management issues and provided an update of the current status of a number of the implementation issues such as database schema design.

I look forward to your next update.

Best regards,

--Stijn.

---

13 Sep 2018

Good Afternoon Mr Dekeyser,

I am emailing you to provide an update on how Mark IV Tech is progressing with your project you have tasked us.

Over the last couple of weeks, the team has shifted into the development phase and is tracking well as per our team schedule.

So far we have achieved the following.

- Ongoing development of the front-end of the website including a consistent layout using CSS, HTML and bootstrap.
- We have successfully started reading and writing to the database all of the metadata for the images.
- The database schema is fully developed and tweaks are being made as we find any problems with functionality.
- Currently working on implementing a browse button that will allow the user to select images from a directory on their computer.

We are using Git Hub to keep track of all changes made to the website. If you like you can have a look at our repository so that you can see what has been achieved so far.

https://github.com/Gregory1999/CSC3600

We will advise you on any planned changes to the architecture of the program if we run into any problems.

If you have any questions don't hesitate to email me.

Regards,

Isaac (Team Leader)

Mark IV Tech.

---

13 Sept 2018

Thank you for the report, Isaac and team. I confirm that I can see the git repo and am able to see commit history and the "Insights" page on Github.
You seem to be tracking well overall. I assume the distribution of commits over team members will change, but if not please make sure that your reporting (course assignments) covers that aspect.

Best regards,
--Stijn.

---

03 Oct 2018

Good Afternoon Mr Dekeyser,

I am emailing you to provide an update on how Mark IV Tech is progressing with your project you have tasked us.

Over the last couple of weeks the team has fully developed a working prototype website to the specifications provided.

So far we have achieved the following.

- Developed an easy to use front-end layout that remains consistent across the site and responsive over multiple devices by using bootstrap.
- We have successfully created a browse button that allows the user to navigate a specified drive on their computer and load a folder as a root directory which the website then scans and provides the images.
- The metadata can be edited on the website and the changes are saved to the user's original image file.
- A simple search feature is present that allows the user to search via keywords in the metadata
- An advanced search function has also been created that allows a user to search via specific metadata tags.
- Documentation has been provided on each page of the site advising the user what that page is for.

As the prototype is complete we are now in the final stages of testing and tweaking and can provide you with a version to run if you would like. If you would like to look at the development of the site, here is the link to our GitHub.

https://github.com/Gregory1999/CSC3600

From here we have started the final project report and will also be recording the usage of the website and showing the features it has so that we can present this recording to yourself thus allowing you to see the project and let us know if there is any final changes you want to make.

If you have any questions don't hesitate to email me.

Regards,

Isaac (Team Leader)
Mark IV Tech.

04 Oct 2018

Thank you for the report, Isaac and team. As before, I confirm that I can see the git repo and am able to see commit history and the "Insights" page on Github.

Could you let me know please what your plans are (ie. date) regarding a Zoom meeting to demonstrate the prototype, or sending through the recording that you refer to?

Compared to your previous report, I note that the distribution of git commits over team members has not changed as much as expected. Hence in your final report you will need to address the issue of *other* work (non git commits) done by team members, and the general distribution of contributions.

Best regards,

--Stijn.

---

05 Oct 2018

Hi Mr Dekeyser

We can demonstrate the prototype over zoom on Monday/Tuesday evening if that works for you. 5 or 5:30pm AEST? Or even this afternoon around 5pm AEST if available.

Regards

Isaac

Mark IV Tech.

05Oct 2018

Those times don't work well for me. If you were originally planning to send me a (link to a) recording, then I can look at that and provide feedback if necessary. Otherwise we will need to find a time slot that works for all.
Best regards,
--Stijn.

05Oct 2018

Hi Mr Dekeyser,

Thanks for the prompt reply, we have created a video of the prototype website outlining all the functions for your review.

https://www.youtube.com/watch?v=9B7dSwnBdMY&feature=youtu.be

Please note: For the final release product, on the advanced search page, the simple search toolbar won't be included as it isn't necessary on that page.

Any feedback would be greatly appreciated.

Regards,

Isaac

Mark IV Tech.

---

08 Oct 2018

Hi all, thanks for the link to the video recording. I believe it demonstrates the functionality of your application well. From what I can see, I also believe the set of features that you've chosen to implement, form a logical coherent whole and hence you have a usable product.

Some minor feedback:

* searching on dates should probably pop up a date picker

* often users are interested in searching a date range, rather than 1 specific date

* Question: is the altered metadata only saved to the database, or also to the file? Do I lose the metadata I entered when I delete the database?

* Question: how does your algorithm notice whether the images in a directory have changed? Is it a complete re-scan, or is there some efficiency built in skipping existing images?

Best regards,

--Stijn.

---

09 Oct 2018

Good Evening Mr. Dekeyser,

In response to your questions,

Is the altered metadata only saved to the database, or also to the file? Do I lose the metadata I entered when I delete the database?

The metadata is saved directly to the image and then a rescan saves the changes into the database. Therefore there is no loss of metadata when the database is deleted.

How does your algorithm notice whether the images in a directory have changed? Is it a complete re-scan, or is there some efficiency built in skipping existing images?

The database stores the last scan date-time, the scanning algorithm will get all image paths in the root directory and then loop over each file. If a file is already in the db the algorithm will check if it has been modified since the last scan. If it has been modified, the program will read in the files metadata, if not it will skip the image and go onto the next path.

We took your feedback on board and implemented your recommendations successfully. We have also added multi-directory support as well.

Regards,

Isaac

Mark IV Tech.

---

16 Oct 18

Good Evening Mr Dekeyser,

Just providing a final update on our progress.

We are in the final week and are currently working on the final project report and presentation.

The presentation will be a combination of PowerPoint slides as well as a demonstration of the website. All members will be presenting different parts and talking about the functions that they mainly worked on. The final prototype has some slight differences from when you last saw it. It now supports multiple directories, date range searching and more alerts to the user in events like when no directory has been set.

The Final Project Report will give a detailed discussion of the project and the teams' processes.

It will be discussing the following:

- Methodology
- Project Management Process
- Project Outcome and final cost

The discussion will involve what Mark IV Tech did, findings we made as well as analysis of what we could have done better for next time to greater benefit our clients.

As well as those key areas being discussed it will have all of the meeting minutes attached and log sheets.

Is there anything you would like from us before we submit our presentations and final project report on Friday? We can forward you a copy if you like.

Regards,

Isaac

Mark IV Tech.

APPENDIX B: ACTIVITY LOG SHEETS

GROUP SUMMARY OF ACTIVITY LOG SHEETS

Week Number	Initialising	Discover and understand the details of the problem	Create the project plan.	Design Components	Implement and Test	Monitoring and Controlling	Deploy	Weekly Total
Week 1	7.75	4	0	0	0	0.25	0	12
Week 2	9	5.5	3	5	2	0.5	0	25
Week 3	3	6	15	0	0	0.5	0	24.5
Week 4	0.5	0.25	16	1	3	4.5	0	25.25
Week 5	4	0.25	6	0	12	0.5	0	22.75
Week 6	4	2.25	0	1	10	0.5	0	17.75
Week 7	2	4.75	0	19	9	2	0	36.75
Week 8	0	4.25	0	13	11	2	0	30.25
Week 9	0	2.25	0	13	12	2	0	29.25
Week 10	0	2.25	0	8	17	1.5	0	28.75
Week 11	0	0.25	0	7.5	14.5	0.5	1	23.75
Week 12	0	1	0	3.5	17	5.75	0	27.25
Week 13	0	0	0	0	0	3.25	15.5	18.75
Week 14	0	0	0	0	0	4.25	12.75	17
Total	**30.25**	**33**	**40**	**71**	**107.5**	**28**	**29.25**	**339**

GROUP CONTRIBUTION BREAKDOWN

The following contribution figures were calculated from the below individual log sheet summaries.

Name	Initialising	Discover and understand the details of the problem	Create the project plan.	Design Components	Implement and Test	Monitoring and Controlling	Deploy
Greg	39.3%	26.3%	27.0%	4.0%	60.5%	8.3%	22.9%
Ryan	7.5%	41.4%	10.8%	5.9%	19.1%	52.8%	19.0%
Andrew	29.9%	18.2%	41.9%	56.4%	12.6%	2.8%	15.2%
Isaac	23.4%	14.1%	20.3%	33.7%	7.9%	36.1%	42.9%

GREGORY'S SUMMARY OF ACTIVITY LOG SHEETS

Week Number	Initialising	Discover and understand the details of the problem	Create the project plan.	Design Components	Implement and Test	Monitoring and Controlling	Deploy	Weekly Total
Week 1	2.5							2.5
Week 2	5	1	3					9
Week 3	3	3	4					10
Week 4			3	1	3			7
Week 5					12			12
Week 6					10			10
Week 7		3		1	6			10
Week 8		2			7.5	1		10.5
Week 9		2			5	1		8
Week 10		2			6	1		9
Week 11					7.5		1	8.5
Week 12					8			8
Week 13							5	5
Week 14							3	3
Total	**10.5**	**13**	**10**	**2**	**65**	**3**	**6**	**107**

RYAN'S SUMMARY OF ACTIVITY LOG SHEETS

Week Number	Initialising	Discover and understand the details of the problem	Create the project plan.	Design Components	Implement and Test	Monitoring and Controlling	Deploy	Weekly Total
Week 1	1					0.25		1.25
Week 2	1					3.25		4.25
Week 3		1.5				0.25		1.75
Week 4			3			1.25		4.25
Week 5			1			2.25		3.25
Week 6				0.5		1.25		1.75
Week 7		10				1.25		11.25
Week 8		6			2	0.25		8.25
Week 9		3			3	0.25		6.25
Week 10					8	0.25		8.25
Week 11					4.5	0.25		4.75
Week 12				2.5	3	2.75		8.25
Week 13						2.75	3	5.75
Week 14						2.75	2	4.75
Total	**2**	**20.5**	**4**	**3**	**20.5**	**19**	**5**	**74**

ANDREW'S SUMMARY OF ACTIVITY LOG SHEETS

Week Number	Initialising	Discover and understand the details of the problem	Create the project plan.	Design Components	Implement and Test	Monitoring and Controlling	Deploy	Weekly Total
Week 1	3	2.5						5.5
Week 2		1		5	2			8
Week 3			9.5					9.5
Week 4	0.5		6					6.5
Week 5	4							4
Week 6	0.5	2						2.5
Week 7		1.5		7	3	1		12.5
Week 8		2		4	1			7
Week 9				4	2			6
Week 10				5	1			6
Week 11				3.5	0.5			4
Week 12					4			4
Week 13							2.5	2.5
Week 14							1.5	1.5
Total	**8**	**9**	**15.5**	**28.5**	**13.5**	**1**	**4**	**79.5**

ISAAC'S SUMMARY OF ACTIVITY LOG SHEETS

Week Number	Initialising	Discover and understand the details of the problem	Create the project plan.	Design Components	Implement and Test	Monitoring and Controlling	Deploy	Weekly Total
Week 1	1.25	1						2.25
Week 2		1.5				0.25		1.75
Week 3		1.5	1.5			0.25		3.25
Week 4		0.25	3			4.25		7.5
Week 5		0.25	3			0.25		3.5
Week 6	3	0.25				0.25		3.5
Week 7	2	0.25				0.75		3
Week 8		0.25		3	0.5	0.75		4.5
Week 9		0.25		6	2	0.75		9
Week 10		0.25		3	2	0.25		5.5
Week 11		0.25		4	2	0.25		6.5
Week 12		1		1	2	3		7
Week 13						0.5	5	5.5
Week 14						1.5	6.25	7.75
Total	**6.25**	**7**	**7.5**	**17**	**8.5**	**13**	**11.25**	**70.5**

GREGORY'S LOG SHEETS

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*1*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Forum introduction	*I*	*16-Jul-18*	*6:00PM*	*7:00PM*		*1*
Set up communications	*I*	*20-Jul-18*	*5:00PM*	*5:30PM*		*0.5*
Set up development Environment	*I*	*22-Jul-18*	*8:00AM*	*9:00Am*		*1*
Total					*0*	*2.5*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*2*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Risk Management	*I*	*28-Jul-18*	*8:00:00 AM*	*10:00:00 AM*		*2*
Project Research	*I*	*28-Jul-18*	*10:00:00 AM*	*11:00:00 AM*		*1*
WBS	*I*	*28-Jul-18*	*11:00:00 AM*	*12:00:00 PM*		*1*
Team Principles	*I*	*29-Jul-18*	*7:00:00 AM*	*9:00:00 AM*		*2*
Non-Compliance rules	*I*	*29-Jul-18*	*9:00:00 AM*	*11:00:00 AM*		*2*
Operational Processes	*I*	*29-Jul-18*	*11:00:00 AM*	*12:00:00 PM*		*1*
Total					*0*	*9*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*3*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Meeting With Supervisor	*G*	*30-Jul-18*	*6:30:00 PM*	*7:20:00 PM*	*1*	
WBS	*I*	*4-Aug-18*	*8:00:00 AM*	*11:00:00 AM*		*2*
GITHUB ACCOUNT	*I*	*3-Aug-18*	*6:00PM*	*7:00PM*		*1*
Operational processes	*I*	*4-Aug-18*	*11:00AM*	*1:00PM*		*2*
Gaunt Chart	*I*	*4-Aug-18*	*8:00AM*	*12:00PM*		*2*
Meeting Minutes	*I*	*2-Aug-18*	*5:00PM*	*7:00PM*		*2*
Total					*1*	*9*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*4*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Research Data base	*I*	*12-Aug-18*	*08:00AM*	*9:00PM*		*1*
Code the initiral data base script	*I*	*15-Aug-18*	*08:00AM*	*11:00AM*		*3*
Final Review/draft Ass2	*I*	*15-Aug-18*	*12:00:00 PM*	*3:00PM*		*3*
Total					*0*	*7*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*5*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Code the initial file scanner	*I*	*18-Aug-18*	*08:00AM*	*12:00AM*		*4*
Code the initial photo retriever	*I*	*18-Aug-18*	*1:00PM*	*4:00PM*		*3*
Code the XHR functions in JS	*I*	*19-Aug-18*	*08:00AM*	*11:00AM*		*3*
Code the basic search script	*I*	*19-Aug-18*	*1:00PM*	*3:00PM*		*2*
Total					*0*	*12*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*6*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Tested on Windows using XAMPP and fixed errors	*I*	*25-Aug-18*	*08:00AM*	*12:00AM*		*4*
Coded metadata reader script	*I*	*26-Aug-18*	*08:00AM*	*11:00AM*		*3*
Coded XHR funtion in JS	*I*	*26-Aug-18*	*12:00PM*	*02:00PM*		*2*
Test JS and metadata reader	*I*	*26-Aug-18*	*02:00PM*	*03:00PM*		*1*
Total					*0*	*10*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*7*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
DB discussions	*G*	*30-Aug-18*	*07:00PM*	*08:00PM*	*1*	
Researched JPEG metadata editing and PEL	*I*	*1-Sep-18*	*9:00AM*	*12:00PM*		*3*
Code the metadata editor script	*I*	*1-Sep-18*	*01:00PM*	*03:00PM*		*2*
Code the XHR calls in Javascript	*I*	*2-Sep-18*	*9:00AM*	*11:00PM*		*2*
Test and rectify metadata editor and Javascript together	*I*	*2-Sep-18*	*11:00:00 AM*	*01:00PM*		*2*
Total					*1*	*9*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*8*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Researched how to retreive and store thumbnail images	*I*	*5-Sep-18*	*09:00AM*	*11:00PM*		*2*
Implemented code to extract and store thumbnail images	*I*	*5-Sep-18*	*11:00AM*	*12:00PM*		*1*
Altered code so that displayed thumbnails instead of full images	*I*	*5-Sep-18*	*01:00PM*	*02:00PM*		*1*
Tested and adjusted new code	*I*	*5-Sep-18*	*2:00AM*	*3:00PM*		*1*
Team Meeting	*G*	*7-Sep-18*	*6:00PM*	*6:30PM*	*0.5*	
Group Test and adjust code	*G*	*8-Sep-18*	*09:00AM*	*09:30AM*	*0.5*	
Implemented the remainer of the DB	*I*	*8-Sep-18*	*09:30AM*	*10:00AM*		*0.5*
Updated the search and db update code to match the scheme	*I*	*8-Sep-18*	*12:00PM*	*2:00PM*		*2*
Tested and adjusted the new code	*I*	*8-Sep-18*	*2:00PM*	*3:00PM*		*1*
Group Test and adjust code	*G*	*9-Sep-18*	*9:00AM*	*09:30AM*	*0.5*	
Add task to Project Sheet	*I*	*9-Sep-18*	*9:30AM*	*10:00AM*		*0.5*
Total					*1.5*	*9*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*9*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Created a initial Advanced search script in php	*I*	*14-Sep-18*	*16:00PM*	*17:00PM*		*1*
Tested a initial Advanced search script in php	*I*	*14-Sep-18*	*17:00PM*	*18:00PM*		*1*
Researched methods to retreive used folder	*I*	*15-Sep-18*	*09:00AM*	*10:00AM*		*2*
Implemented browse.php script to return all directories in folder.	*I*	*15-Sep-18*	*2:00PM*	*3:00PM*		*1*
Implemented js code to use ajax to call browse and display subFolders	*G*	*15-Sep-18*	*6:00PM*	*6:30PM*		*1*
Tested code and adjusted code	*G*	*15-Sep-18*	*09:00AM*	*09:30AM*		*1*
Discused browser search code and tested on group computers. Fixed small erros	*I*	*16-Sep-18*	*09:00AM*	*10:00AM*	*1*	
Total					*1*	*7*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*10*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Created Script to delete database and created javascript function to call php	*I*	*21-Sep-18*	*12:00PM*	*1:00PM*		*1*
Researched PEL	*I*	*22-Sep-18*	*8:00AM*	*10:00AM*		*2*
Added and refactored code to get_meta.php so displays extra metadata.	*I*	*22-Sep-18*	*10:00AM*	*11:00AM*		*1*
Added code to edit the new metadata fields.	*I*	*22-Sep-18*	*2:00PM*	*3:00PM*		*1*
Tested and troubleshoot new code	*I*	*22-Sep-18*	*4:00PM*	*5:00PM*		*1*
Git admin	*I*	*22-Sep-18*	*3:00PM*	*4:00PM*		*1*
Added code to allow user to change drive.	*I*	*23-Sep-18*	*08:00AM*	*10:00AM*		*2*
Total					*0*	*9*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*11*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Added code to read user rating metadata and tested	*I*	*27-Sep-18*	*12:00PM*	*1:00PM*		*1*
Altered code to add photo year to display	*I*	*29-Sep-18*	*7:00AM*	*8:30AM*		*1.5*
Added code to allow user to select time sort order	*I*	*29-Sep-18*	*8:30AM*	*9:30:00 AM*		*1*
Tested and adjusted sort and display code	*I*	*29-Sep-18*	*9:30AM*	*10:00AM*		*0.5*
Created a select form example showing peer how to use XHR to dynamically adjust selection options.	*I*	*30-Sep-18*	*07:00AM*	*10:00AM*		*3*
Reviewed Peers work on advanced search form and debugged errors	*I*	*30-Sep-18*	*3:00PM*	*3:30PM*		*0.5*
Created final project template	*I*	*1-Oct-18*	*8:30:00 AM*	*9:00AM*		*0.5*
Reviewed assignment 3 specifications and added outstanging tasks to the Projects task management sheet.	*I*	*1-Oct-18*	*9:30:00 AM*	*10:00AM*		*0.5*
Total					*0*	*8.5*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*12*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Created PHP/Js to get database stats	*I*	*4/Oct*	*2:00PM*	*3:00PM*		*1*
Moved all individaul pages into JS.	*I*	*6/Oct*	*7:00AM*	*9:00:00*		*2*
Added ability to select multiple root folders	*I*	*6/Oct*	*10:00AM*	*12:00*		*3*
Added buttons to remove root folders from database and tested.	*I*	*7/Oct*	*8:00AM*	*10:00AM*		*2*
Total					*0*	*8*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*13*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Cost Analysis	*I*	*9-Oct-18*	*8:00:00 AM*	*10:00:00 AM*		*2*
Prepared Presentation Script	*I*	*14-Oct-18*	*09:00am*	*11:00AM*		*2*
Practiced and recorded presentation	*I*	*14-Oct-18*	*11:00AM*	*12:00Am*		*1*
Total					*0*	*5*

ACTIVITY LOG SHEET						
Name	**Gregory Jones**			**Week**		*14*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Rerecorded presentation	*I*	*15-Oct-18*	*8:00:00 AM*	*10:00:00 AM*		*1*
Cost Analysis (finalised)	*I*	*16-Oct-18*	*09:00AM*	*10:00AM*		*1*
Reviewed and edited final	*I*	*16-Oct-18*	*10:00am*	*11:00AM*		*1*
Total					*0*	*3*

RYAN'S LOG SHEETS

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 1		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Introduction post to the forums	*I*	*16/07/2018*	*1:30pm*	*1:45pm*		*0.25*
Form the project team	*G*	*16/07/2018*	*9:30pm*	*10:00pm*	*0.5*	
Setup communication platform with members and identify a platform to share work on	*G*	*18/07/2018*	*4:45pm*	*5:15pm*	*0.25*	
Maintain personal project log	*I*	*18/07/2018*	*7:00pm*	*7:15pm*		*0.25*
Hours This Week					0.75	0.5
Hours This Week + Previous Weeks					0.75	0.5
Project Total					*1.25*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 2		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Create Professional Portfolio	*I*	*27/07/2018*	*3:00pm*	*6:00pm*		*3*
Identify what resources are needed to work on project	*G*	*28/07/2018*	*2:15pm*	*3:15pm*	*1*	
Maintain personal project log	*I*	*28/07/2018*	*7:00pm*	*7:15pm*		*0.25*
Hours This Week					1	3.25
Hours This Week + Previous Weeks					1.75	3.75
Project Total					*5.5*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 3		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Had a group meeting with supervisor over Zoom to identify requirements	*G*	*2/08/2018*	*6:00pm*	*7:00pm*	*1*	
Edited group meeting recording	*I*	*2/08/2018*	*7:00pm*	*7:30pm*		*0.5*
Maintain personal project log	*I*	*2/08/2018*	*7:45pm*	*8:00pm*		*0.25*
Hours This Week					1	0.75
Hours This Week + Previous Weeks					2.75	4.5
Project Total					*7.25*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 4		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Drafted up the client requirements.	*I*	*6/08/2018*	*4:00pm*	*5:00pm*		*1*
Reviewed and edited work done by other team members.	*G*	*8/08/2018*	*6:00pm*	*7:00pm*	*1*	
Added cost estimations.	*I*	*9/08/2018*	*2:00pm*	*4:00pm*		*2*
Maintain personal project log	*I*	*9/08/2018*	*7:00pm*	*7:15pm*		*0.25*
Hours This Week					1	3.25
Hours This Week + Previous Weeks					3.75	7.75
Project Total					*11.5*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 5		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Reviewed and provided editing suggestions to the project plan.	*G*	*15/08/2018*	*4:00pm*	*6:00pm*	*2*	
Discussed and signed off on final project plan with team members.	*G*	*17/08/2018*	*5:00pm*	*6:00pm*	*1*	
Maintain personal project log	*I*	*17/08/2018*	*6:00pm*	*6:15pm*		*0.25*
Hours This Week					3	0.25
Hours This Week + Previous Weeks					6.75	8
Project Total					*14.75*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 6		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Ongoing communiciation with group members about development and configuring of software so that members can pull files off GitHub	*G*	*21/08/2018*	*5:00pm*	*6:00pm*	*1*	
Set up software on computers so that development can begin.	*I*	*25/08/2018*	*11:00am*	*11:30am*		*0.5*
Maintain personal project log	*I*	*25/08/2018*	*4:00pm*	*4:15pm*		*0.25*
Hours This Week					1	0.75
Hours This Week + Previous Weeks					7.75	8.75
Project Total					*16.5*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 7		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Studied relevant content to undertake project.	*I*	*27/08/2018*	*1:00pm*	*6:00pm*		*5*
Studied relevant content to undertake project.	*I*	*28/08/2018*	*11:00am*	*4:00pm*		*5*
Communicated with team on initial development.	*G*	*1/09/2018*	*5:00pm*	*6:00pm*	*1*	
Maintain personal project log	*I*	*1/09/2018*	*7:00pm*	*7:15pm*		*0.25*
Hours This Week					1	10.25
Hours This Week + Previous Weeks					8.75	19
Project Total					*27.75*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 8		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Studied relevant content to undertake project.	*I*	*4/09/2018*	*12:00pm*	*6:00pm*		*6*
Worked on front-end code.	*I*	*7/09/2018*	*1:00pm*	*3:00pm*		*2*
Maintain personal project log	*I*	*7/09/2018*	*3:00pm*	*3:15pm*		*0.25*
Hours This Week					0	8.25
Hours This Week + Previous Weeks					8.75	27.25
Project Total					*36*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 9		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Tested website responsiveness (for PC, phone)	*I*	*10/09/2018*	*12:30pm*	*1:00pm*		*0.5*
Worked on front-end code.	*I*	*13/09/2018*	*1:00pm*	*3:30pm*		*2.5*
Studied relevant content to undertake project.	*I*	*13/09/2018*	*4:00pm*	*7:00pm*		*3*
Maintain personal project log	*I*	*13/09/2018*	*7:00pm*	*7:15pm*		*0.25*
Hours This Week					0	6.25
Hours This Week + Previous Weeks					8.75	33.5
Project Total					*42.25*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 10		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Worked on front-end code.	*I*	*20/09/2018*	*10:00am*	*3:00pm*		*5*
Fixed code with fellow team members.	*G*	*22/09/2018*	*2:00pm*	*5:00pm*	*3*	
Maintain personal project log	*I*	*22/09/2018*	*5:00pm*	*5:15pm*		*0.25*
Hours This Week					3	5.25
Hours This Week + Previous Weeks					11.75	38.75
Project Total					*50.5*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 11		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Tested website responsiveness & checked for errors.	*I*	*27/09/2018*	*8:00pm*	*8:30pm*		*0.5*
Helped fix errors with the advanced search page.	*G*	*28/09/2018*	*2:00pm*	*6:00pm*	*4*	
Maintain personal project log	*I*	*28/09/2018*	*7:00pm*	*7:15pm*		*0.25*
Hours This Week					4	0.75
Hours This Week + Previous Weeks					15.75	39.5
Project Total					*55.25*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 12		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Cleaned up code and made sure navigation works properly	*I*	*2/10/2018*	*2:00pm*	*5:00pm*		*3*
Documented instant-messaging conversations with team members for report appendix.	*I*	*3/10/2018*	*3:00pm*	*5:30pm*		*2.5*
Created instructional video showcasing image organiser	*I*	*4/10/2018*	*2:00pm*	*4:30pm*		*2.5*
Maintain personal project log	*I*	*5/10/2018*	*10:15am*	*10:30am*		*0.25*
Hours This Week					0	8.25
Hours This Week + Previous Weeks					15.75	47.75
Project Total					*63.5*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 13		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Converted messenger conversations to meeting minutes.	*I*	*12/10/2018*	*2:00pm*	*3:00pm*		*1*
Added project outcome to project report.	*I*	*12/10/2018*	*7:00pm*	*10:00pm*		*3*
Communicated with team in relation to final project presentation.	*G*	*13/10/2018*	*4:00pm*	*5:30pm*	*1.5*	
Maintain personal project log	*I*	*14/10/2018*	*6:30pm*	*6:45pm*		*0.25*
Hours This Week					1.5	4.25
Hours This Week + Previous Weeks					17.25	52
Project Total					*69.25*	

ACTIVITY LOG SHEET						
Name: Ryan George				**Week:** 14		
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Write presentation notes	*I*	*16/10/2018*	*4:00pm*	*6:00pm*		*2*
Modified log sheets	*I*	*16/10/2018*	*8:00pm*	*10:30pm*		*2.5*
Maintain personal project log	*I*	*16/10/2018*	*11:30pm*	*11:45pm*		*0.25*
Hours This Week					0	4.75
Hours This Week + Previous Weeks					17.25	56.75
Project Total					*74*	

Task Summary Sheet		**Name:** Ryan George	**Week:** 1	
Stage	**Task**	**Estimated Work Remaining at Start of Week**	**Hours Spent this Week**	**New Estimate**
WBS 1.1.1	Introduction post to the forums	1	0.25	0.75
WBS 1.1	Form the project team	1	0.5	0.5
WBS 1.2	Setup communication platform with members and identify a platform to share work on	1	0.25	0.75
WBS 6.1	Maintain personal project log	4	0.25	3.75
Cumulative Total: 1.25		**Week Total:**	**1.25**	

Task Summary Sheet		Name: Ryan George		Week: 2
Stage	Task	Estimated Work Remaining at Start of Week	Hours Spent this Week	New Estimate
N/A	Create Professional Portfolio	N/A	3	N/A
WBS 1.3	Identify what resources are needed to work on project	2	1	0
WBS 6.1	Maintain personal project log	3.75	0.25	3.5
Cumulative Total: 5.5		Week Total:	4.25	

Task Summary Sheet		Name: Ryan George		Week: 3
Stage	Task	Estimated Work Remaining at Start of Week	Hours Spent this Week	New Estimate
WBS 2.5.2	Had a group meeting with supervisor over Zoom to identify requirements	1	1	0
N/A	Edited group meeting recording	0.5	0.5	0
WBS 6.1	Maintain personal project log	3.5	0.25	3.25
Cumulative Total: 7.25		Week Total:	1.75	

Task Summary Sheet		Name: Ryan George		Week: 4
Stage	Task	Estimated Work Remaining at Start of Week	Hours Spent this Week	New Estimate
WBS 3.5	Drafted up client requirements	4	1	0
WBS 6	Reviewed and edited work done by other team members	N/A	1	N/A
WBS 3.4	Added cost estimations	4	2	2
WBS 6.1	Maintain personal project log	3.25	0.25	3
Cumulative Total: 11.5		Week Total:	4.25	

Task Summary Sheet		Name: Ryan George		Week: 5
Stage	Task	Estimated Work Remaining at Start of Week	Hours Spent this Week	New Estimate
WBS 6	Reviewed and provided editing suggestions to the project plan.	N/A	2	N/A
WBS 3.8	Discussed and signed off on final project plan with team members	N/A	1	N/A
WBS 6.1	Maintain personal project log	3	0.25	2.75
Cumulative Total: 14.75		Week Total:	3.25	

Task Summary Sheet		Name: Ryan George		Week: 6
Stage	Task	Estimated Work Remaining at Start of Week	Hours Spent this Week	New Estimate
WBS 6	Ongoing communiciation with group members about development and configuring of software so that members can pull files off GitHub	N/A	1	N/A
WBS 4	Set up software on computers so that development can begin.	N/A	0.5	N/A
WBS 6.1	Maintain personal project log	2.75	0.25	2.5
Cumulative Total: 16.5		Week Total:	1.75	

Task Summary Sheet		Name: Ryan George		Week: 7
Stage	Task	Estimated Work Remaining at Start of Week	Hours Spent this Week	New Estimate
WBS 2.3	Studied relevant content to undertake project.	4	5	0
WBS 2.4	Studied relevant content to undertake project.	2	5	0
WBS 6	Communicated with team on initial development	N/A	1	N/A
WBS 6.1	Maintain personal project log	2.5	0.25	2.25
Cumulative Total: 27.75		Week Total:	11.25	

Task Summary Sheet		Name: Ryan George		Week: 8
Stage	Task	Estimated Work Remaining at Start of Week	Hours Spent this Week	New Estimate
WBS 2.3	Studied relevant content to undertake project.	0	6	0
WBS 5.2	Worked on the front-end code.	50	2	48
WBS 6.1	Maintain personal project log	2.25	0.25	2
Cumulative Total: 36		Week Total:	8.25	

Task Summary Sheet		Name: Ryan George		Week: 9
Stage	Task	Estimated Work Remaining at Start of Week	Hours Spent this Week	New Estimate
WBS 7	Tested website responsiveness (for PC, phone)	0	0.5	0
WBS 5.2	Worked on the front-end code.	48	2.5	45.5
WBS 2.3	Studied relevant content to undertake project.	0	3	0
WBS 6.1	Maintain personal project log	2	0.25	1.75
Cumulative Total: 42.25		Week Total:	6.25	

Task Summary Sheet		Name: Ryan George		Week: 10
Stage	**Task**	**Estimated Work Remaining at Start of Week**	**Hours Spent this Week**	**New Estimate**
WBS 5.2	Worked on the front-end code.	45.5	5	40.5
WBS 5.1.1	Fixed code with fellow team members	50	3	47
WBS 6.1	Maintain personal project log	1.75	0.25	1.5
Cumulative Total: 50.5		**Week Total:**	**8.25**	

Task Summary Sheet		Name: Ryan George		Week: 11
Stage	**Task**	**Estimated Work Remaining at Start of Week**	**Hours Spent this Week**	**New Estimate**
WBS 7	Tested website responsiveness & checked for errors	N/A	0.5	N/A
WBS 5.1.1	Helped fix errors with the advanced search page	47	4	43
WBS 6.1	Maintain personal project log	1.5	0.25	1.25
Cumulative Total: 55.25		**Week Total:**	**4.75**	

Task Summary Sheet		Name: Ryan George		Week: 12
Stage	**Task**	**Estimated Work Remaining at Start of Week**	**Hours Spent this Week**	**New Estimate**
WBS 5.2	Cleaned up code and made sure navigation works properly	N/A	3	N/A
WBS 6.2	Documented instant-messaging conversations with team members for report appendix.	5	2.5	2.5
N/A	Created instructional video showcasing image organiser	N/A	2.5	N/A
WBS 6.1	Maintain personal project log	1.25	0.25	1
Cumulative Total: 63.5		**Week Total:**	**8.25**	

Task Summary Sheet		Name: Ryan George		Week: 13
Stage	**Task**	**Estimated Work Remaining at Start of Week**	**Hours Spent this Week**	**New Estimate**
WBS 6.2	Converted messenger conversations to meeting minutes.	2.5	1	N/A
WBS 8.1.3	Added project outcome to project report.	4	3	1
N/A	Communicated with team in relation to final project presentation.	N/A	1.5	N/A
WBS 6.1	Maintain personal project log	1	0.25	0.75
Cumulative Total: 69.25		**Week Total:**	**5.75**	

Task Summary Sheet		Name: Ryan George	Week: 14	
Stage	**Task**	**Estimated Work Remaining at Start of Week**	**Hours Spent this Week**	**New Estimate**
WBS 8.3.1	Write presentation notes	4	2	2
WBS 6	Modified log sheets	N/A	2.5	N/A
WBS 6.1	Maintain personal project log	1	0.25	0.5
Cumulative Total: 74		**Week Total:**	**4.75**	

Activity Log Summary Sheet for:			Ryan George
Stage	**Group Work** (total time)	**Individual Work** (total time)	
1. Initialising	1.75	0.25	
2. Discover and understand details of the problem	1	19	
3. Create the project plan	1	3	
4. Design Components		0.5	
5. Build all the program components and integrate	7	12.5	
6. Monitoring and controlling	5	9.5	
7. Testing		1	
8. Deploy		5	
9. Project Closure			
Other	1.5	6	**Project Total Time**
Total Time	**17.25**	**56.75**	**74**

ISAACS LOG SHEETS

Task Summary Sheet		Name: Isaac Hertweck	Week: 1	Date: 16 - 22 Jul	
Stage ID	**Task**	**Estimated Work Remaining at Start of Week (hours)**	**Hours Spent this Week**	**Complete Y/N**	**Estimated time until complete (hours)**
WBS 1	Introduction post to the forums	1	0.25	Y	N/A
WBS 1.1	Form the project team	1	0.5	Y	N/A
WBS 1.1.2	Select a project and submit team information and contact supervisor	1	1	Y	N/A
WBS 1.2	Setup communication platform with members and identify a platform to share work on	1	0.25	Y	N/A
WBS 6.1	Maintain personal project log	4	0.25	N	3.75
	Cumulative Total Before This Week		**Total**		**Grand Total**
	0		2.25		2.25

Task Summary Sheet		Name: Isaac Hertweck	Week: 2	Date: 23 - 29 Jul	
Stage ID	**Task**	**Estimated Work Remaining at Start of Week (hours)**	**Hours Spent this Week**	**Complete Y/N**	**Estimated time until complete (hours)**
Assign 1	Create Professional Portfolio	4	4	Y	0
WBS 1.3	Identify what resources are needed to work on project	2	1	Y	1
Team Leader 1.0	Setup meeting with supervisor	0.25	0.25	Y	0
WBS 6.1	Maintain personal project log	3.75	0.25	N	3.5
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		**Total**		**Grand Total**
	2.25		5.75		8

Task Summary Sheet		Name: Isaac Hertweck	Week: 3	Date: 30 Jul - 05 Aug	
Stage ID/Task Type	**Task**	**Estimated Work Remaining at Start of Week (hours)**	**Hours Spent this Week**	**Complete Y/N**	**Estimated time until complete (hours)**
Meeting 1	Had a group meeting with supervisor over Zoom to identify requirements	1	1	Y	0
Team Leader 1.0	Setup meeting with supervisor	0.25	0.25	Y	0
Team Leader 2.0	Created a template for the project plan.	2	1.5	Y	0.5
WBS 6.1	Maintain personal project log	3.5	0.25	N	3.25
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		**Total**		**Grand Total**
	8		3.25		11.25

Task Summary Sheet		Name: Isaac Hertweck	Week: 4	Date: 06 - 12 Aug	
Stage ID/Task Type	**Task**	**Estimated Work Remaining at Start of Week (hours)**	**Hours Spent this Week**	**Complete Y/N**	**Estimated time until complete (hours)**
Team Leader 2.0	Created a project task manager spreadsheet for tracking and assigning tasks to team members.	4	4	Y	0
WBS 3.7	Drafted up the introduction and conclusion for the project report.	2	1	Y	1
WBS 3.3/3.5	Reviewed and edited work done by other team members	2	2	Y	0
WBS 6.1	Maintain personal project log	3.25	0.25	N	3
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		**Total**		**Grand Total**
	11.25		7.5		18.75

Task Summary Sheet		Name: Isaac Hertweck	Week: 5	Date: 13 - 19 Aug	
Stage ID/Task Type	Task	Estimated Work Remaining at Start of Week (hours)	Hours Spent this Week	Complete Y/N	Estimated time until complete (hours)
WBS 3.8	Reviewed and provided editing suggestions to the project report.	2	2	Y	0
WBS 3.9/Assignment 2	Signed and submitted the project report then informed all team members.	1	1	Y	0
WBS 6.1	Maintain personal project log	3	0.25	N	2.75
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		Total		Grand Total
	18.75		3.5		22.25

Task Summary Sheet		Name: Isaac Hertweck	Week: 6	Date: 20 - 26 Aug	
Stage ID/Task Type	Task	Estimated Work Remaining at Start of Week (hours)	Hours Spent this Week	Complete Y/N	Estimated time until complete (hours)
Group	Ongoing communication with group members about development and configuring of software so that members can pull files off Git Hub and run on individual machines.	1	1	Y	0
Individual	Setup software on computers so that development can begin.	2	2	Y	0
WBS 6.1	Maintain personal project log	2.75	0.25	N	2.5
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		Total		Grand Total
	22.25		3.5		25.75

Task Summary Sheet		Name: Isaac Hertweck	Week: 7	Date: 27 - 02 Sep	
Stage ID/Task Type	Task	Estimated Work Remaining at Start of Week (hours)	Hours Spent this Week	Complete Y/N	Estimated time until complete (hours)
Team Leader 2.1	Updated the task management spreadsheet with new tasks relating to development of project.	2	2	Y	0
Team Leader 1.1	Emailed supervisor with an update on progress.	0.5	0.5	Y	0
WBS 6.1	Maintain personal project log	2.5	0.25	N	2.25
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		Total		Grand Total
	25.75		3		28.75

Task Summary Sheet		Name: Isaac Hertweck	Week: 8	Date: 03 - 09 Sep	
Stage ID/Task Type	Task	Estimated Work Remaining at Start of Week (hours)	Hours Spent this Week	Complete Y/N	Estimated time until complete (hours)
WBS 4.2	Design user interfaces and code a template at same time	2	1	N	1
WBS 5.2	Code the view layer (combined with above design task)	20	2	N	18
Group	Had another Zoom team meeting to discuss current development phase	0.5	0.5	Y	0
WBS 6.1	Maintain personal project log	2.25	0.25	N	2
WBS 7.1	Perform Unit Tests	8	0.25	N	7.75
WBS 7.2	Perform System Tests	8	0.25	N	7.75
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		Total		Grand Total
	28.75		4.5		33.25

Task Summary Sheet		Name: Isaac Hertweck	Week: 9	Date: 10 - 16 Sep	
Stage ID/Task Type	Task	Estimated Work Remaining at Start of Week (hours)	Hours Spent this Week	Complete Y/N	Estimated time until complete (hours)
WBS 4.2	Design user interfaces and code a template at same time	1	1	Y	0
WBS 5.2	Code the view layer (combined with above design task)	18	5	N	13
Team Leader 1.2	Emailed supervisor with an update on progress.	0.5	0.5	Y	0
WBS 6.1	Maintain personal project log	2	0.25	N	1.75
WBS 7.1	Perform Unit Tests	7.75	1	N	6.75
WBS 7.2	Perform System Tests	7.75	1	N	6.75
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		Total		Grand Total
	33.25		9		42.25

Task Summary Sheet		Name: Isaac Hertweck	Week: 10	Date: 17 - 23 Sep	
Stage ID/Task Type	Task	Estimated Work Remaining at Start of Week (hours)	Hours Spent this Week	Complete Y/N	Estimated time until complete (hours)
WBS 5.2	Code the view layer	13	3	N	10
WBS 7.1	Perform Unit Tests	6.75	1	N	5.75
WBS 7.2	Perform System Tests	6.75	1	N	5.75
WBS 6.1	Maintain personal project log	1.75	0.25	N	1.5
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		Total		Grand Total
	42.25		5.5		47.75

Task Summary Sheet		Name: Isaac Hertweck	Week: 11	Date: 24 - 30 Sep	
Stage ID/Task Type	Task	Estimated Work Remaining at Start of Week (hours)	Hours Spent this Week	Complete Y/N	Estimated time until complete (hours)
WBS 5.2	Code the view layer	10	4	N	6
WBS 6.1	Maintain personal project log	1.5	0.25	N	1.25
WBS 7.1	Perform Unit Tests	5.75	1	N	4.75
WBS 7.2	Perform System Tests	5.75	1	N	4.75
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		Total		Grand Total
	47.75		6.5		54.25

Task Summary Sheet		Name: Isaac Hertweck	Week: 12	Date: 01 - 07 Oct	
Stage ID/Task Type	Task	Estimated Work Remaining at Start of Week (hours)	Hours Spent this Week	Complete Y/N	Estimated time until complete (hours)
WBS 5.2	Code the view layer	6	3	Y	N/A
Team Leader 1.2	Emailed supervisor with an update on progress.	0.5	0.5	Y	0
WBS 6.1	Maintain personal project log	1.25	0.25	N	1
WBS 7.1	Perform Unit Tests	4.75	1	N	3.75
WBS 7.2	Perform System Tests	4.75	1	N	3.75
WBS 8.1	Draft Assignment 3 - Create an intial template	1	1	Y	0
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		Total		Grand Total
	54.25		7		61.25

Task Summary Sheet		Name: Isaac Hertweck	Week: 13	Date: 08 - 14 Oct	
Stage ID/Task Type	Task	Estimated Work Remaining at Start of Week (hours)	Hours Spent this Week	Complete Y/N	Estimated time until complete (hours)
WBS 8.1.2	Project Process	1	1	Y	0
WBS 8.1.5	Executive Summary and conclusion	2	1	N	1
WBS 8.3	Draft Presentation	1	1	Y	0
WBS 8.3.1	Prepare Presentation Script	2	1.5	N	0.5
WBS 8.3.2	Prepare PowerPoint Presentation	1	0.5	N	0.5
WBS 6.1	Maintain personal project log	1	0.25	N	0.75
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		Total		Grand Total
	61.25		5.5		66.75

Task Summary Sheet		Name: Isaac Hertweck	Week: 14	Date: 15 - 21 Oct	
Stage ID/Task Type	Task	Estimated Work Remaining at Start of Week (hours)	Hours Spent this Week	Complete Y/N	Estimated time until complete (hours)
WBS 8.1.5	Executive Summary and conclusion	1	1	Y	0
WBS 8.3.1	Prepare Presentation Script	0.5	0.5	Y	0
WBS 8.3.2	Prepare PowerPoint Presentation	0.5	0.5	Y	0
WBS 6.1	Maintain personal project log/Finalised all logs	0.75	0.75	Y	0
Team Leader 1.2	Emailed supervisor with an update on progress.	0.5	0.5	Y	0
Team Leader 3.0	Ensure everything is formatted correctly and review work	3	3	Y	0
Team Leader 3.1	Check that all requirements for submission have been added	0.5	0.5	Y	0
WBS 8.3.3	Perform Presentation	0.5	0.5	Y	0
WBS 8.4	Submit Final Report	0.25	0.25	Y	0
Communications	Ongoing communication over Facebook Messenger with team members	0.25	0.25	Y	0
	Cumulative Total Before This Week		Total		Grand Total
	66.75		7.75		74.5

ANDREWS LOG SHEETS

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*1*
	Type (G/I)	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Itroductory post to the forum	*I*	*16/07/2018*	*20:30*	*21:00*		*0.25*
Form poject team using forum	*I*	*17/07/2018*	*17:00*	*17:30*		*0.5*
Decide on project with team	*I*	*20/07/2018*	*17:00*	*17:30*		*0.5*
Discussions to Contact Supervisor with team	*I*	*22/07/2018*	*17:30*	*18:00*		*0.5*
Setup communication channels with team	*I*	*19/07/2018*	*17:00*	*17:15*		*0.25*
Total					*0*	*2*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*2*
	Type (G/I)	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Group Chat to Organise meeting with Professor	*G*	*23/07/2018*	*17:00*	*17:30*	*0.5*	
Researched Metadata	*I*	*26/07/2018*	*17:00*	*19:00*		*2*
Set up development environment	*I*	*27/07/2018*	*17:00*	*20:00*		*3*
Total					*0.5*	*5*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*3*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Meeting With Supervisor	*G*	*30/07/2018*	*18:30*	*19:20*	*1*	
GUI (Front end) Development	*I*	*2/07/2018*	*17:00*	*22:00*		*5*
Tested making changes to upload files (Git hub)	*G*	*4/07/2018*	*17:00*	*19:00*	*2*	
Total					*3*	*5*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*4*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Drafted project Specifications	*I*	*6/08/2018*	*17:00*	*22:00*		*5*
Finalised project Specifications	*I*	*8/08/2018*	*17:00*	*18:30*		*1.5*
Drafted critical and non critical requirements	*I*	*9/08/2018*	*17:00*	*19:00*		*2*
Emailed Stijin for guidence on requirements	*G*	*10/08/218*	*18:30*	*19:30*	*1*	
Total					*1*	*8.5*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*5*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Drafted Architectual Design of Image Editor	*I*	*13/08/2018*	*17:00*	*21:00*		*3*
Choose Database Software for project	*G*	*14/08/2018*	*16:00*	*16:30*	*0.5*	
Finalised Critical and non Critical Requirements	*I*	*15/08/2018*	*17:00*	*20:00*		*3*
Total					*0.5*	*6*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*6*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Drafted Database Schema	*I*	*13/08/2018*	*12:00*	*14:00*		*2*
Discussion of Database Schema	*G*	*13/08/2018*	*16:00*	*18:00*	*2*	
Total					*2*	*2*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*7*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Updated Database Schema	*I*	*29/08/2018*	*17:00*	*17:30*		*0.5*
Discussed database Schema	*G*	*30/08/2018*	*17:30*	*19:30*	*2*	
Total					*2*	*0.5*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*8*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Delegated Development Tasks	*G*	*4/09/2018*	*19:00*	*20:00*	*1*	
Development on GUI	*I*	*5/09/2018*	*19:00*	*22:00*		*3*
Group Meeting	*G*	*7/09/2018*	*18:30*	*17:00*	*0.5*	
Development on GUI	*I*	*9/09/2018*	*10:00*	*14:00*		*4*
Development on GUI	*I*	*9/09/2018*	*18:00*	*22:00*		*4*
Total					*1.5*	*11*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*9*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Researched Full Path	*I*	*16/09/2018*	*8:00*	*10:00*		*2*
GUI Development (Browse)	*I*	*16/09/2018*	*12:00*	*17:00*		*5*
Total					*0*	*7*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*10*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Advanced Search Development	*I*	*22/09/2018*	*10:00*	*12:00*		*2*
Advanced Search Development	*I*	*23/09/2018*	*13:00*	*17:00*		*4*
Total					*0*	*6*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*11*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Formatted GUI	*I*	*28/09/2018*	*9:00*	*12:00*		*3*
GUI Development Cross Platform	*I*	*28/09/2018*	*14:00*	*17:00*		*3*
Total					*0*	*6*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*12*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Created Redirect to Scan page	*I*	*7/10/2018*	*9:00*	*13:00*		*4*
Total					*0*	*4*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*13*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Identified Methodologies	*I*	*10/10/2018*	*9:00*	*13:00*		*2*
Prepared Presenation Script	*I*	*13/10/2018*	*17:00*	*17:30*		*0.5*
Total					*0*	*2.5*

ACTIVITY LOG SHEET						
Name	**Andrew**			**Week**		*14*
Activity	**Type (G/I)**	**Date**	**Start Time**	**End Time**	**Group**	**Individual**
Finalised methodolgies used for report	*I*	*16/10/2018*	*17:00*	*18:00*		*1*
Performed Presentation		*16/10/2018*	*18:00*	*18:30*		*0.5*
Total					*0*	*1.5*

END OF REPORT