

Final Report

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1 INTRODUCTION

1.1 Purpose of this Document

The purpose of this document is to give a detailed account of the performance of the group 3 team as individuals as well as a unit, also the work that went into the project and details of the program itself.

1.2 Scope

This document states which documents need to be completed and handed in alongside this report. This document will also contain Personal Reflective Reports from each team member, this contains their personal thoughts on the project and the team.

1.3 Objectives

The aim of this document is to lay out a detailed explanation of the work contributed by the team to create the program, this includes what each team member contributed and the problems incurred whilst working as a unit. This document also aims to aid in understanding the development of the program and how this was achieved.

2 Extra Documents Produced for the Final Delivery

2.1 The End-of-Project Report

2.2.1 Management Summary

This section of the document provides an overview of what this project achieved and how the team involved in this project performed in their tasks as well as any issues the team faced as a whole in the development of our program.

The program itself fulfils the majority of the requirements needed. The product functions that are met by our program are as follows:

The ability to make plant recordings whilst out in the field and be able to store them onto the app whilst out of communications range. The submission of new records to a predetermined reserve site and storing these records on the SQL database. The creation and maintenance of species records on the website allowing users to add information to their record at a later date.

However there are some issues with our project; a number of bugs have been reported during development which the team simply did not have the time to correct before the program was to be handed over to the client. These bugs include:

If a picture is to be sent alongside a record, the system will not recognise the file type and results in the entire record submission failing, it is therefore suggested that pictures should not be submitted to the app.

Another bug appears when a user tries to filter the record results from a particular reserve, it is not that the list is incorrect, a perfect alphabetized list occurs however if there are multiple records of the same species then all copies are shown, no duplicates are removed from the reserve.

For the most part the teams' documentational work has been of high standard and quality, to ensure this the team had regular QA review meetings several days before document deadlines, allowing the creators of said documents to fix any problems and maintain the good quality of documentation. There were a few documents, i.e. the testing specification and design specification, which were sent back to us by the client for further amendments however these minor corrections were tackled quickly and efficiently by the necessary team members.

The main obstacle to our team was communication, whilst our team excelled in this when it came to group meetings and face to face communication, the team struggled when it came to online communications whilst working, such as organising meeting times and places and delegating work amongst each other. The team also had major communication issues when it came to splitting the team into two sub-groups, these sub-groups had large issues with passing information between each other and relied overly on the group leader and deputy to mediate communications and organise information sharing.

To conclude the team worked to a reasonable standard though not without difficulty. The work the team produced was of good quality and excelled above the standards set; despite early issues with communication the team overcame their differences and worked efficiently and were able to focus on key issues that led to a final product above required quality.

2.2.2 Performance of each team member.

This section details a brief report on the progress and performance of each team member, written by Cormac Brady, the Project Leader. The report on Cormac Brady was written by Melissa Smith as the Deputy Project Leader. All reports were agreed by the team member in question unless otherwise specified.

A preface to this is required to otherwise it is easy to become confused there was a large changing of roles.

Name	Role
Original roles	
Henry Hollingsworth	Android team
Zach Yewman	Android team
Melissa Smith	Deputy project lead
Cormac Brady	Project lead
Calvin Chan	QA team
Howard, Rhys Kieran	QA lead
Karl Franks	Server team
James Portch	Server team
Abdullah Alkhashty	Testing
Au, Yee Tim	Testing lead
Scott Lockett	Web-Team
Kieran Lynch	Web-Team
Status quo	
Abdullah Alkhashty	None

Au, Yee Tim	QA / Testing team lead
Cormac Brady	Project lead / Database
Calvin Chan	QA / Testing team
Karl Franks	Web-Team
Henry Hollingsworth	Android
Howard, Rhys Kieran	QA (reviews) / Documentation
Scott Lockett	Documentation
Kieran Lynch	None
James Portch	Documentation
Melissa Smith	Deputy project lead
Zach Yewman	Web-Team Lead

Cormac Brady

Cormac's role in the project was primarily the team leader. At the beginning of the project his performance in this role was unsteady and lacked confidence, however as the project progressed he excelled in keeping on top of issues that arose, keeping track of progress and following up on team members who had uncompleted tasks. His other roles consisted of picking up the slack in any area that was necessary.

Cormac's main duties were assigning roles and tasks to other team members, arranging meetings (both official and review) and where they would be held, creating and maintaining the Gantt chart that ensured all work would have a reasonable time scale and maintaining the time sheet which allowed him to keep track of which team members were not pulling their weight.

Cormac was quick to respond to issues both work and personnel based, he kept a calm composure when dealing with difficult team members and remained professional at all times. His work on the project was immensely valuable and he completed tasks without complaint. Cormac went above and beyond the needs to ensure all team members understood what was being asked of them and provide all members with the motivation needed to complete their tasks.

Cormac also established a good rapport with the team and created a friendly and welcoming work environment which in turn made the team appreciate his efforts and respect his role and authority. He worked well with the rest of the team in all tasks but also made fair judgements on those who were simply not putting in the work required.

Abdullah Alkhashty

Abdullah was originally part of the Testing team, however as our project progressed it became apparent that his duties were not being fulfilled, when given additional tasks they were not fulfilled either, such as examining document feedback and appending those said documents with the required content. This occurred over the entire project with many warnings being carried out. In addition to this Abdulla attended only 40% of all meetings although to his credit did make himself available for coding week. Due to this "Au, Yee Tim" became the only effective part of the testing team and the team.

Overall I am quite disappointed with Abdullah's input throughout the whole project. Again most work that was submitted was not of high quality and or was done by someone else once it became time critical that it be done.

Au, Yee Tim

Tim was tasked with roll of being the, leader of the teasing team and has been quite helpful due to his experience with the in the group project he did last year. However his roles naturally came to encompass some of the QA's (Rhys).

His duties have been to help to review documents before there subsequent submission. As well as update the GitHub issues page to reflect the bugs and missing requirements of the software for each revision, and to provide that feedback to the me and the other developers.

Overall, Tim has been consistent and motivated throughout the project with an average amount of hours on his timesheet (45). Tim's good knowledge of the QA and specification documents made him invaluable to the group when trying to make a decision on issues. But most of all he has been easy to contact and carry out a task given without much oversight.

Calvin Chan

Calvin has had the role of deputy tester being under the leadership of Tim. Calvin's duties have been much of the same as Tim's. His duties to help to review documents before there submission, update the GitHub issues page to reflect the bugs and missing requirements of the software for each revision and to provide feedback back to developers.

Overall Calvin Chan contributed a medium amount to the group with 42 hours on his timesheet, and I felt he has made a good contribution to the group. Calvin benefited very much from oversight of tasks from Tim. And provide a happy atmosphere during the meetings, however this was sometimes taken too far and became a distraction as well.

Henry Hollingsworth

Henry's role in the group has been that of lead in Android development his duties were that of the responsibly over the android application from as well as anyone currently assigned to him. Additionally was also involved in any related documentation such as the design the user interface and how the application was to be tested.

During the project Henry racked up an impressive 58 hours most of that in 13hour shifts during coding week showing his dedication to trying to get the application finished. In writing this I realise that I cannot find any absences or late hand-in in the minutes making him one of the most reliable members of the team. In fact he often went above and beyond volunteering for work, even doing work that I had yet to give out to the team. Without Henry I is doubtful that we would have the same product at all.

Rhys Howard

Rhys's role in the group was that of the QA manager; however after a few weeks it was apparent that was unwilling to do this. His duty, to monitor git commits' to the repository and report if there was work done that was not of good quality (by referring to the QA documents that were provided at the start of this project) to my knowledge was never done. This is proven by his below average of timesheet of 11 hours, his non-attendance during coding week and the fact that in his personal report he says “.. In the repository there were often many versions of the same document”, despite the fact that it was his own job to revert commits like this and notify the author.

Rhys was informed about his duty's every group meeting for the first 3 weeks as well as a number of times in emails and instant-messages, so he is either a tremendously forgetful person or actively tried to deceive me throughout the project. For example his personal report:

“I think overall in this project I have performed my job, however I would much prefer to have been a bigger part in many aspects of the project, I was not particularly included in the coding side of this project and would have liked to assist with this.”

He says this despite that I and the rest of the team know the opposite is true; he actively avoided all the aspects that he now wishes he could do. In addition Rhys attempted to increase his hours on the timesheet fraudulently the day before the hand-in.

James Portch

James's original role in the group was to create the database and manage the environment that the web team would host and develop in. However after learning the extent of learning this would need he switched to purely documentation. His duties have been to make a bulk of sections for example creating Document Structure.

However he has made himself difficult to contact quickly (within 1-2 days) resulting in him only reaching 10½ hours. This combined with making alterations to countless documents and only supplying a pdf afterwards has made working with James difficult. I feel like James could have contributed much more to the group and I don't know how he didn't during coding week James helped the testing team by making data entries so that the website could be tested properly.

Karl Franks

Karl's Role in the group was in the “Web-Team”. His duties included coding PHP, CSS and JavaScript for the website in order to implement it. He was also a part of the relevant documentation of the website such as the design of the user interface and testing.

While Karl did some work in the early stages of the project with some documentation sections he did the bulk of 36 hours during coding week and was a big help then with many requirements met by him for the website.

Overall while he has been inconsistent in the quality of his work he did an above average amount of it (36 hours). He has been fairly easy to contact and carry out a task when some oversight.

Melissa Smith

Melissa's role in the group has been that of the deputy leader. Her duties included managing mini teams for various document related tasks such as their reviews and revisits as well as managing the team. I feel like I should have delegated more to my deputy resulting in her lower hours (24) and it would have been good for her to insist on some work, however I will accept that as my own shortfall.

During the project Melissa was someone I knew I could set on a task and not have to worry about she proved that she could manage the mini teams effectively and solved problems that I had not been looking for such as personal issues between team members. I have no doubt that if she were in my position that we would have done just as well if not better.

Scott Lockett

Scott's Role in the group has been web-team. His duties have been to make documentation for the website as well as implement it during coding week.

However Scott did not turn up at the beginning of coding week (and did not give advance notice) so was unable to participate in the coding, by the time he came back it was too difficult to include him in development as most web tasks had already been completed and existing team members were already on the final ones. During the project I often had to threaten yellow cards to get him to produce any work. His timesheet reflects this with only 8 hours on record as work was often done instead by other team members.

Kieran Lynch

Kieran Lynch was assigned to the web team at the beginning of the project however due to his constant absence and lack of willingness to communicate with the group he lost this role quickly as well as achieving red card for it too. Throughout the project Kieran has been more of a name on a paper than a real team member attending only a handful of meetings and only even completing one task (the creation of the header for the website).

Zachary Yewman

Zac's original role in the group was in android development, but due to his expertise in PHP found that he was much more useful working on the website, I agreed and moved him to the web-team. Zac's duties included involvement in various sections of documents and coded much of the backend of the website as well as part of the front end with Karl.

Throughout the project Zac has been a positive contributor to the group, with his consistency with his quality of work. He has proven that he can be set to a task and is willing to research how to do it if it proves difficult instead of giving up, a rare trait in our group project. During coding week he was a huge help in creation of the final product, doing long hours perfecting the user interface of the website. In total he racked up a very impressive 51 hours almost all of it being in the implementation stage as it was his strength.

2.2 Critical evaluation of the team and the project.

Throughout this project, team member's skill sets were used to produce relevant documentation and code. The team had good team-working skills, especially in close proximity of each other like in work week or integration week. However when two sub-teams needed to communicate between each other there was a less effective method of communicating issues to the specified team leader however this did still work but at a slower pace.

Most members of the group had to learn skills in order to carry out their tasks and have improved their knowledge of technologies used in software development projects including use of:

- Distributed revision control system Git
- API's such as "Android Java API"
- Front-end framework "Bootstrap"
- Project management software "Microsoft Project"
- IDE "Eclipse ADT" (Android Development Tools)
- Relational database management system "MySQL" and "SQLite"

In order to improve, we could have devoted more team members in learning about Android software development before the final coding week. With the extra manpower we could have implemented all of the required features such editing recordings on the app before submitting them to the server. Overcoming this would have really shown then we were an effective team, what lead to this was that easier features were done first so the effort required to implement the application seemed to be less than what it really was. Next time proper feasibility reports (with the necessary QA on them), would give leaders the necessary information to realise such a problem before it happened.

In addition we also learned that it is important to get everyone working as soon as possible and at the same time, when we started out things were slow and it soon became difficult to get individuals to co-operate when the feeling was that no work was being most of our team members were punctual, polite and worked without question.

2.2 Appendices

2.2.1 The Project Test Report

Web and Database

*Test Reference refer to Test Specification

*This is the Test table for the final state of the web/app

Test Reference	Pass / Fail	Comments
UI-W-001	Pass	Information can be added through the web
UI-W-002	Fail	(I don't know how to explain the image mess up with data problem
UI-W-003	Fail	again the addition recording also not uploaded
UI-W-004	Pass	No problems on data size
UI-W-005	Pass	same as UI-W-004
UI-W-006	Pass	New reserve record are rejected by the database
UI-W-007	Fail	Record can be deleted
UI-W-008	Pass	OS grip map reference can show normally
UI-W-009	/	No longer use due to change in design
UI-W-0010	Pass	
UI-W-0011	Pass	
UI-W-0012	Pass	
UI-W-0013	Pass	List are in alphabetical order
UI-W-0014	Pass	It is fixed to order by date in the reserve
UI-W-0015	Pass	

Android App UI Testing

Test Reference	Pass / Fail	Comments
UI-A-001	Pass	
UI-A-002	Pass	
UI-A-003	Pass	
UI-A-004	Pass	
UI-A-005	Pass	
UI-A-006	/	no longer in the part of our design
UI-A-007	Fail	not able to edit the recording the ready to submit
UI-A-008	Pass	

Functionality Testing

Test Reference	Pass / Fail	Comments
UI-A-001	/	There is no homepage button
UI-A-002	/	They are no longer in the design
UI-A-003	Pass	
UI-A-004	Pass	
UI-A-005	Pass	
UI-A-006	Pass	
UI-A-007	Pass	
UI-A-008	Pass	
UI-A-009	/	DAFOR scale now use drop list
UI-A-010	Pass	
UI-A-011	Pass	
UI-A-012	Pass	
UI-A-013	Pass	
UI-A-014	Pass	
UI-A-015	Pass	
UI-A-016	Pass	
UI-A-017	/	No longer in the design
UI-A-018	/	No longer in the design
UI-A-019	/	No longer in the design
UI-A-020	/	No longer in the design
UI-A-021	/	No longer in the design
UI-A-022	/	No longer in the design
UI-A-023	Fail	Database blocked most records
UI-A-024	Fail	No pop up message
UI-A-025	Pass	No longer in the design
UI-A-026	Pass	No longer in the design

2.2.2 The Project Maintenance Manual

Purpose of this document

This document serves the purpose of making the maintenance of the RPSRecord and RPS View easier by helping the maintainer easily figure out what the program does, how it does it and how they can carry out quick, efficient maintenance on the program.

Scope

This document includes an overview of the system, the basic structure and algorithms, limitations and suggestions for when making changes.

Objectives

The main objectives of this document are to allow the program code we have created to be more easily maintained by people carrying out further maintenance on it, helping them to mitigate undetected bugs, add additional features to improve functionality and/or change the program so that changes in external requirements are met.

Application Description

RPS recorder

This application can record a plant, add information of that species, such as DAFOR scale, comments location photo's, and upload recording to the server

Program Structure

RPSRecord

1. The program is structured in the following classes:
2. MainView - The layout that contains the NewRecordFragment and
3. MainActivity - The activity that holds the main page.
4. MyTabListener - Handles switching between the tabs in MainView.
5. NewRecordFragment - The fragment tab that lets the user enter the details of a new record.
6. RecordViewFragment - The fragment tab that lists all records recorded on the device.
7. UserDataView - The activity that lets the user input their personal information.
8. GPSToGrid - Converts GPS coordinates to an OS grid reference using an external library.
9. InvalidFieldException - An exception used when a field is entered with invalid information.
10. DatabaseHelper - Manages the local database for records and reserves.
11. Record - An object representing a single plant record.
12. Reserve - An object representing a single reserve.
13. ReserveDataManager - Pulls reserve names from the server and stores them locally.
14. SubmitRecord - Handles submitting records to the server database.

15. UserInfo - Holds the user's information in public static variables so that they can be accessed easily from other parts of the program.

The program also contains classes that no longer are in use.

RPS View

RPSView/public_html

Add_record.php

Takes JSON data sent from the app and adds the recording data to the database.

Add_reserve.php

Code to validate the user's inputted data when adding a new reserve, and if that data is valid adding that data as a new reserve in the database.

Connect.php

Database connection variables used on every page, so extracted to its own php file that is included on other pages so it doesn't have to be re-typed every time.

Edit_list.php

Displays the Edit Reserve List page, with a table of all the reserves and checkboxes to select the reserves the user wants to delete. Also a small piece of JavaScript to warn the user when they select a reserve that has associated recordings selected, as those recordings will also be deleted.

Header.php

The standard header shown on every page.

Index.php

Displays the main homepage - pulls the list of reserves from the database and displays it in a table. It also has code included from add_reserve.php to add a new reserve and validate the user's input.

Json.reserves.php

Gets a reserve data and outs it into a Json

Records.php

Displays the recordings saved at a specific reserve, formatted in a table.

Update_record.php

Displays a page to let the user update the details of a reserve, with JavaScript validation to check the user has entered valid data.

Algorithms

RPS view

User Input Validation

(Read left for description)

This code is from add_reserve.php and is JavaScript to validate the user's input, and if the user has entered valid data to set that input to be posted so it can be added to the database.

It first sets up two regular expressions for comparison - one for standard text (ie the reserve name and the reserve description) and one for the grid reference.

The main code is a series of if statements the first comparing the user's input with the regular expression. If all three comparisons return true values, the subsequent code to alter the form "details" attributes so the data is posted back to add_reserve.php so other code in the file can add the data to the database.

If the user's data doesn't pass the first check, it subsequently checks each individual comparison, and if the comparison returns a false value the user is alerted to their error. Other codes are mentioned in detail in the design documentation.

```
function check_input(){

    var gridRegExp = /^[a-zA-Z]{2}+[0-9]{6}$/; //Two letters
    followed by 6 numbers

    var textRegExp = /^[a-zA-Z 0-9]/; //Letters and numbers

    if(textRegExp.test(document.details.reserve_name.value)

        && gridRegExp.test(document.details.grid_reference.value)

        && textRegExp.test(document.details.description.value))

    {

        document.details.setAttribute("method", "post");

        document.details.setAttribute("action", "add_reserve.php");

    }

    else if(!textRegExp.test(document.details.reserve_name.value)){

        alert("Invalid Reserve Name details entered");

    }

    else

    if(!gridRegExp.test(document.details.grid_reference.value)){

        alert("Invalid grid reference entered, use a 6 figure OS grid
        reference" +

            " (ie, two letters then 6 numbers");

    }

    else if(!textRegExp.test(document.details.description.value)){

        alert("Invalid description entered");

    }

}
```

File system interaction

RPS recorder

The program requires access to the file-system. Photos taken are store into phones gallery.

Improvement suggestions

RPS Record

We tested when in the add new record page , screen rotating will cause the current record lost, potential place for the bug is in the fragment page. One of the big issues is the images uploading may cause error , the record will be reaching the server but unknown problem cause the database to reject the upcoming record, high chances this will occur when images are included in the recording. Due to the development time is shorter than we expect, we did not have a function to edit records in the Record application. Our software also has a lack of warning/popup messages when recordings have been uploaded. There is no button to cancel recording, in the current version of the software the only way to do it is do press return buttons of the phone devices.

RPSView

Since everyone can edit/delete records in the website we suggest adding a login system, only researchers had the right to access the database. There should be a regular database backup to prevent data lost. To have a better organise structure, create an extra page within each reserve for each species in the reserve, then within each species you have the page for the recordings of that species.

Physical limitations

RPS Record

The build target of the Android project is version 4.2.2, meaning other API versions may encounter problems running the app.

Rebuilding and testing

To rebuild the Android app, import the entire project in Eclipse. To test it, install the generated .apk file on an Android device or use an emulator.

Document history

<i>Version</i>	<i>CCF No.</i>	<i>Date</i>	<i>Changes made to document</i>	<i>Changed by</i>
1.0	N/A	9/02/15	First version of the document	Yta

2.2.3 Personal reflective reports

Cormac Brady – cob16

As the leader of the group my duties included:

- Conducting the group meetings
- Checking up on individuals and group progress
- Working with other group members on their tasks when I had time

However my role also came to include:

- General maintaining of remote git repository
- Creating/updating of minuets, “Gant chart”, timesheets and other administrative docs
- Creating/updating of MySQL database (“main SysAdmin”)

These duties gave the team a framework in which to create good quality work. I do wish that some of the administrative tasks (such as the administrative docs) were handed by other group members as that was what a large bulk of my time was spent doing, however the real issue may be that this work is often very tedious.

As will be probably mentioned in others reflective reports the two main problems we faced was not knowing how long certain tasks would take due to our inexperience and more importantly the many communication problems, our main method was that of email for formal communication and for informal communication group/individual instant messages. However it came to light that many group members did not check these very quickly meaning that often proper correspondence was left to the weekly meetings, this slowed development significantly relative to the ideal if we all worked the same hours in one office.

Attendance of some team members was extremely poor and I found that the card system was not very effective in stopping this as members who were out of contact could not be informed about cards anyway so made no difference in their poor behaviour.

Owning my own VPS and volunteering to use it to host the database and website was one of the best decisions I made in the project as we were a lot freer in what we could and could not do. My server even turned out to also be more reliable and up-to-date than the university systems that other groups used.

The coding week is where we fell short the most as we did not have enough people who were familiar with android development before we started the week so putting more people on the task was akin to poring fuel on the fire.

To conclude, even though it has been a very stressful exercise, I have learned a huge amount on what it is to run a team of 12. Running a project requires jumping to lots of things all the time and getting bogged down in the details often makes you lose sight of the overall progress of the group. I just wish I knew what I know now at the beginning of the project so we could have done even better.

Melissa Smith – mas97

The objective of this report is to outline my involvement in the group project and to give a detailed description of the tasks assigned to me, how I completed them and any issues I encountered whilst working, this includes issues with the work itself and any issues I had with the team.

My role in the project was Deputy Manager, the responsibilities that came with this role included tasks such as:

- Assisting in assigning tasks to team members
- Managing over teams whilst the team leader was engaged elsewhere
- Meeting with the client alongside the team leader
- Assisting in decisions on design and implementation

These duties took a reasonable amount of time despite not being work related tasks and I feel I could have accomplished more towards the actual program had it not been for this role, however these duties were necessary for the team to correctly work as a unit.

The other tasks I had outside of my role were almost purely documentation, things such as writing up sections of the design document, test specification, project plan and the final report, read over said documents when they were altered to assess whether or not they remained within the specification and alter then according to feedback from the client. One of my other assigned tasks was to be part of the Quality Assurance team of our group, this included going through sections of documentation I had not worked on, with the rest of the QA team to find faults and report back so they could be altered to bring them up to the standard necessary; the QA team also had to check the website and the app to make sure that they met the specifications set by the client.

The issues I faced whilst part of this team were mainly communication problems, there were a few team members that not only contributed very little, but we had major issues simply contacting them whether this was done on purpose to avoid the team or whether there were simply issues with the methods of communication used I do not know. We did have some major issues with communication between teams, the problem arose when there were parts of the project that relied on others, for example, when the web and app teams had to communicate between themselves in order to get the parts working together correctly and the team leader and I ended up having to be the middle men as the teams simply weren't communicating properly or in places weren't communicating at all. Another example of the communication issues of the team is the QA team reviews of documents etc. there was a review that ended up being cancelled as some of the QA team didn't arrive at the meeting, with no explanation as to why, and the document being reviewed had not been submitted for review.

Aside from communication errors the only other issue we had as a team were absent team mates, this was not unexpected as it is even within the risk analysis for the project however there were a few repeat offenders who simply did not turn up regularly and didn't contribute enough to validate their absences from meetings.

There were some mild issues with the actual creation for the project, there were some problems with lack of skills in certain areas this meant that team members had to work together more closely and pick up skills they didn't have quicker than would have been comfortable, this was not a large problem however it did stunt the growth of the project more so than we would have liked. Technical issues were present, there were some issues with the server and accessing it became rather tricky for a while but the issue was quickly fixed.

I feel that I have done my best for the team and the project and whilst I wish I could have done more towards the technical side of things I believe that I upheld my duties well and that I helped balance the team and ensured that peoples skills were being properly utilized. I also feel that I aided in the prioritising of the project and that my working alongside the team leader has allowed him to focus more on the project and the technical aspects whilst I worked with the people involved and maintained motivation.

I do however believe I could have done more to aid tension between the team as there was some animosity between a few of the members that I was unable to recognise until later on within the project and I think I could have spoken to the individuals in question in an attempt to calm the issue. I also understand that whilst there were always going to be parts of a project I am unable to contribute to due to lack of skill, there were areas of the project I admit I could have been more involved in such as the website, with mild skill in the area I could have participated more than I have.

As a whole I believe our team has been mixed in its performance; when we started out as a team things were slow and difficult to get individuals to co-operate with one another however once the project had gotten beyond the beginning stages the individuals who bothered to contribute and attend were outstanding, the communication issues aside, the team members created work that was above and beyond what they were asked for and they worked without complaint and whilst all teams have a few individuals that are unfavourable, most of our team members were punctual, polite and worked without question.

My feelings also stretch to the team leader, who at the beginning was slightly awkward and unsure of his place amongst the team, he has grown throughout the project and proven himself to be a brilliant leader. My role as deputy leader could have been an arduous one, it is easy for a leader to simply treat deputy management as just another team member, however I felt I was treated with respect and given tasks that were in accordance to my role; I was not ever downtrodden or lessened for being deputy or for being the only female on the team, I was only ever treated as an equal and a valued member of not only management but the team as a whole.

To conclude I feel the entire experience has been a positive one, the project has been a huge success as to showing my strong points and what I still have to work on. It has also been a success in showing the other team members what office life is like and how to efficiently work as a team, I feel my previous experience with office work was a large benefit to my team and to my experience within this particular team and I believe the app and the website created out of this project to be a shining example of the work that can be created when a team works together properly.

Calvin Chan – cac36

Job

Quality and Assurance / Testing Team

I was originally assigned to the Quality and Assurance team, however as the project went on the group needed another person to assist the Testing Team. I volunteered to take on the position, I found out that testing is what I seem to excel in. Our group seems to be dysfunctional most of the time. We have a group mate that have only showed up twice or three times to the meetings. I heard that he has potential as his work is “not bad” however the effort and contribution was so little it isn’t even worth mentioning. At this point we are 1 person down, to make up for the lack of man power the group had to earn our keep. Our group seems to be in harmony, people are getting along but when people start saying did (not going to mention names) finish that job he was assigned yet? There was always this response “who is ...?” It is evident that our group lacks communication; people don’t know each other’s names. This would have been fine if it was on the first or second week, but we are well in the middle of the project and at this point people should be familiar with each other. At the end we did learn each other’s names, some are good some are bad.

There are a certain people who tend to make excuses and avoid work. In my opinion that is unacceptable, as mentioned above we are one person short. Safe to say that at least 3 people really did not contribute much to this project. It always seems to be a certain people that contribute the most when we started work week. Safe to say I have attended the entire work week, stayed until I am no longer needed. The certain people in our group who were there every day along with me, they have my great gratitude. It seems that including me six people showed up every day. And the rest probably showed up for a day or two. Keep in mind that is only 50% of the group actively working. To my knowledge there is one person that is working at home but said person does produce result so there is no problem there. I cannot comment on the missing people if they did any work on their own time or not but it is evident that only half of the group showed up every day during work week. I am sure all 3 cards have been issued to different people and I must say that it could have been avoided.

My job could be easy or very difficult depending on how much experience and time you are willing to invest into it. I am no stranger to testing for bugs and glitches; I do it in video games on a regular basis so I find repeating the same action over and over simple and easy. I tried to do my best as submitting all the improvement and bugs that I could find, our program is not perfect but it is functional. Only if our group had more man power and everyone would pull their weight it would have gone so much smoother. In conclusion, our group was okay and there were good and bad times. It could have been so much better but it also could have been so much worst. I am happy that things turned out okay and we have a working program because of the talented programmer / web developers we have.

James Portch – jap55

The aim of this report is to outline my involvement in the group project and to give a detailed description of the tasks allocated to me, how I handled them as well as any issues that arose during the process of completion.

My role within the group jumped from being in the quality and assurance team, compiling and creating our first document “Project Plan” and server team creating the “Components Diagram for Server(RPSRsrv)” for our “Design Document”. I feel that the role for that I had for this document was fairly simple, just the fact about how I carry out things is a disorganised mess and this could have gone a lot smoother than it did. I feel I was a lot better suited to doing tasks within the QA team.

I managed to turn up to almost all of the group meetings only missing approximately 2 or 3 of the extra meetings due to lectures and practical sessions. Although there were a large amount of us in the group I feel that I only saw certain people only once or twice throughout the process. I think the group as whole started off quite weak and a bit unsure of how to approach the project, but I think in the end they managed to pull through and get the work done to an acceptably good standard.

Due to my lack of skills in certain areas of the project I believe I haven’t been able to do enough to actually help with the implementation side of the development and have most likely created more work for people as they were the only ones able to cope with the tasks.

During work week I had a severe inner ear infection which stopped me from being able to move as I would lose my balance, fall over, and feel sick. This lasted from the 23rd January – 29th January 2015. I did however attend work week for the first 2 days being allocated to go over the submitted documents, Project Plan, Test Specification, and Design Document with one of my colleges and amend them according to the given feedback of each one, as well as being allocated to add data recording data to the data base so that there would be something to view on the website. This involved adding reserves, users, and plant recordings.

With regards towards our group leader, I think he started off unsure of really what to do as he had the guts to volunteer as no one in the group really wanted to do the job. After a while of being in the position I believe he gained more confidence in the role. However allocated tasks in the meetings were at times unclear to people and what had to be done for them. In spite of this he has managed to keep people busy working on the project although he has done a lot of tasks that I think he didn’t expect he would have to do.

To conclude, the experience of the group project as a whole has been good and I have gained group working skills which is something that I have never done before. In my opinion I know I could have done more to help with tasks and have been more enthusiastic and involved to take on tasks when openly offered for anyone to take. Overall the experience has been good practice for entry into the real world.

Scott Lockett – scl10

My role within the group was a member of the Web Team, my responsibilities with the role mostly included creating documentation for the web/server aspect of the project, and some basic PHP and HTML.

My duties for the documentation were all completed on time and to the best of my ability. I found the documentation aspect of the project a lot better suited my skills than the actual implementation of the website. I produced multiple documents for the web application such as the testing specification, the design specification, and also in the project plan analysing the risk of the project as a whole.

My duties also took a lot less time compared to a lot of the other people in the group, who actually created the application or the website for example. I was given the tasks to start implementing the design of the website which I struggled with and as a result I was assigned very few tasks since then, and so my timesheet was significantly lesser to other members of the team.

As said previously, I faced quite a few issues with the creation of the website I was assigned as part of the web team. I'm not a very confident web programmer and I didn't really feel like the position suited me and most technical jobs which were given to me, I struggled with and other members had to take over tasks and complete them. I was a consistent member of the team however and did attend all meetings and tried to help out whenever possible. During the coding week I was on hand to help in any aspects I could.

Communication was a major downfall of the group as a whole. Often tasks were assigned verbally, with no real specification of what to do, during the hour meeting each week. But were not fully explained due to time constraints and which had to be explained in better detail further in the week over other mediums which were not as efficient. During the first few weeks of the project, we did attempt a second meeting each week, which attendance was especially poor. This was more than likely again down to the failure of communication amongst the group, but also down to clashes.

In terms of discipline there seemed to be no difference between a deterrent and a threat constantly throughout the process. Team members were regularly threatened with yellow cards which weren't responded well to. I think that work would have still been completed without the need for yellow cards to be mentioned. The team leader did work very well however, and managed the group exceedingly well towards the end of the process, and should be proud the way the team was managed.

The application team and the web team were both a very effective team and worked very hard and produced a very impressive application and website. I feel like the process was slow to start but came together very well towards the end and certain people in the group were vital to the success of the group.

I found the process a very good overall experience. It was interesting to see how a team function as a whole and how the group came together to create a piece of software that we can all be proud of. The experience was definitely a long and at times, dull, process, but still a very productive, useful and insightful experience.

Yee Tim Au – yta

Main role

Testing team lead

In the first few weeks I knew my strengths and weakness and I volunteered to be in part of testing team. Thinking of myself that I might know how to create a case diagram for our project plan. I made few attempts on the work, but another member had created a better version therefore my version was not been used, although that was a good experience for being competitive.

Since I got some more experience on the group project (spending more time reading the requirement), I shared my view on some tasks such as time managing and some design to my leader. After that I formally became the testing team lead.

To make sure others in the testing team got enough work to do first I had to give them the ability to work on specific task. Therefore I spent some extra time to help some team members to use GitHub, to able to read, write and submit their work. Setting guidelines to test team members so they can have a good start on their work but if they are not able to complete the task I will lend a hand to them.

I spent lots of the time contributing Test specification (App UI part). Our early prototype had many parts that are not in the client requirement therefore we got a longer testing list. And thanks for the QA team our test specification table became more sensible.

In the coding week our testing team got works to do every day included testing different version of the applications and the website; Follow up the progress in coding week and reminding the coding team where the focus should be.

After the coding week I was responsible for working on the maintenance manual.

Rhys Howard - Rkh4

The objective of this personal reflective report is to show my involvement within the group project, what my objectives were throughout and how well I completed them, also any issues that arose. It is to also reflect how I feel the group worked together as a whole, and any Issues I had with the team.

Early on in the project I was assigned the role of Quality Assurance (QA) manager;

As such my main role was ensuring that all of the pieces of work completed by the group meet the QA procedures and documents so they may receive the best grade possible. I was also partially responsible for the spell checking documents before submission.

The main issue I found within this project, was improper communication between most of the team, I often was unsure where the team was, what they were doing where I was supposed to be etc. It was not clear when somebody had completed an assigned piece despite having a GitHub repository that everybody could access.

Absences of work from teammates, occasional poor leadership (while sometimes good) people were left out of the project.

There were issues with many of the documents, (again communication errors) as people would each do separate parts, and all of the tasks would not always be completed to the required standard. Also

in the repository there were often many versions of the same document, with no clear 'latest' document, so this took time to change.

I also created a document template for the team to use for all documents so that they would look the same, and more professional, but pre-submission I would have to modify these documents to match the template.

Team meetings were also an issue often, again due to communication, the meetings were not properly organized, or structured, and were not taken seriously by most of the team to the point where very little was achieved, also the review meetings would often just be one member checking over the document, then sending to another for confirmation.

I think overall in this project I have performed my job, however I would much prefer to have been a bigger part in many aspects of the project, I was not particularly included in the coding side of this project and would have liked to assist with this. I think the experience of working in a team however is extremely valuable skill in computer science as it will be used regularly in industry.

As a whole I think the team has performed well, we have managed to complete everything required of us, to a good standard. However the actual team-working could have been improved, with both better communication between all members, and better leadership to ensure everybody is clear of the tasks ahead and meeting times.

Henry Hollingsworth – hmh7

The objective of this report is to outline my involvement in the group project and to give a detailed description of the tasks assigned to me, how I completed them and any issues I encountered whilst working, this includes issues with the work itself and any issues I had with the team.

At the beginning of the project I was assigned to the two-person Android app development team. However, I ended up as the only app programmer as the project progressed, which meant I was then responsible for writing the code and final UI design for the Android app (both front-end and back-end).

Unfortunately, due to the demanding nature of the server database segment, as well as some team members effectively abandoning the project, I was the sole programmer working on the app for almost the entire duration of the project. Before Christmas I expressed a wish for another programmer to be attached to the app, but that proved impossible for the aforementioned reasons. During coding week it was too late for others to learn Android programming and get familiar with the existing code. However, I did get assistance from the group leader with the app's database section.

The submitted app lacks some planned features (namely editing records) and has several bugs, one of which causes the server to reject the submitted data. To have gotten the app fully finished on time it would have required either more intense working on my behalf before and after Christmas or alternatively an extra programmer to take responsibility for some sections of the app.

I had not programmed for Android before the project, save the small worksheet at the beginning of the semester, and I had trouble learning how to implement some of the required Android features, such as the navigation drawer. I believe that if I had learned to properly program for Android sooner (at the beginning of the project) the app would have been fully functional and more polished by the end of coding week.

Even though I could not finish the app on time, I gained a significant amount of experience in Android development as well as working in a group with interdependent tasks and duties.

Abdullah ALKhashty - aba5

Job Testing Team

In this project, I was assigned to the testing team which is in charge of the testing of the application and making sure that the implementation of the plan is well. Our group did lack one important element which was communication, for me also there was a key problem which was that the repository in our git-hub was very complicated to deal with and my job most of the time was unclear to me.

On work week, there were many missing members of our team which lead to us having a shortage of manpower to complete some essential parts of our project, I also was in Birmingham to deal with a family issue for a day. On work week, I did arrive to the Orchid and tried to make the most of it, I was assigned to help with building our database of existing flower conservatories. Also I was put in charge of implementing a search bar that would auto-complete user input in accordance to our existing database, to make the user's job a bit easier, I really did enjoy working on this, however we failed to implement some of the basic aspects of our program so I was not able to finish this part of it.

Although our group was 5 people down as I was informed, we tried to overcome that issue and we made some noticeable progress regardless of the issue. I also was given at one point a job of modifying our website to make it look nicer which I have done, I have implemented a CSS style sheet and some HTML buttons to make it looks nicer and easier to navigate. I have inserted a line between the buttons and the list of wildlife conservatories, to make it look more organized and less crowded.

However, many of our group members were carded including a red card for a variety of reasons including not attending work week or not helping with the project. Our overall project looked nice however and is presented well. I could have done a much better job but I did encounter some issues and family problems, which led to me ultimately not being able to concentrate at all. I did however try to make the best of what I could do when I was required at the work week.

Karl Franks - kpf

Team Role - Web Team

Early during the project, I was involved in creating the Project Plan and Testing Specification. I will admit that during the first term of the project I did not put a lot of effort into the project, which reflected on initially very low hours. This was mostly due to not spending enough time working on other assignments, and prioritising those over the group project.

For the Project Plan I contributed a high level architecture description, use case diagram and an accompanying description for each element listed in said diagram.

For the Testing Specification I contributed a table listing a set of tests to test the website and server.

During coding week however I put in a lot more effort, with the bulk of my allotted hours coming from that week. In this week I completed a small task of updating the website's design for the design document (the design had been changed since that document was produced) but spent most of the time working on the website implementation with the other main member of the web team, Zach.

I contributed a lot more during coding week than the rest of the term, and I understand I should have put that level of effort into earlier work.

Zach and I were able to complete the website to meet the requirements and I am quite proud of the work we did, especially with small details that may not be obvious at first.

I think overall our team worked reasonably well, however a lot of the time a large amount of work was finished at the last minute. The main issue I think was that it became clear pretty quickly half of the team were a lot more committed to the project than the other half and I would definitely place myself in the latter group for the early stages. I think the project was well managed, and any issues were generally to do with members of the team not doing their allotted work not with Cormac's management who I think was quite good at delegating tasks, however I think from my perspective there should have been at least an extra person allocated to work on the Android development because as far as I'm aware the Android team were not able to implement all of the requirements. I think team communication could have been improved as well, frequently people would turn up to weekly meetings and proclaim they hadn't done their work for some reason when they should have said something earlier in the week if they had a problem.

Overall I think the project has been a successful experience, and I think it has on a personal level at least improved my confidence in web development and interacting with databases.

Zachary Yewman – zay

The objective of this report is to outline my involvement in the group project and to give a detailed description of the tasks assigned to me, how I completed them and any issues I encountered whilst working, this includes issues with the work itself and any issues that I encountered with the team.

My original role in the group was android developer for the first semester, then after the second semester I migrated over to web development. My responsibilities in the first semester was to create the design documents for the Android App, this involved creating the UI design for the "Project Plan" section of the project, as well as being entirely responsible for the design document as far as far as the android app is concerned. I then continued to work on the android app by creating a prototype version of a class for sending a JSON via a HTTP post from the android app to the database. During the first semester I also managed to create a prototype class for sending the JSON from the android app to the database in a HTTP post.

As time progressed it became more and more clear that Kieran Lynch, one of the two people originally assigned to the creation of the web app who then was later removed, was not very committed to the group project, so to pick up the slack I was asked to do some work on the website, namely to make the website able to communicate with the database and pull information from the database and display it in relevant tables which I succeeded at doing.

When I came back for work week in the second semester I was eager to continue working on the

website, as that is where I found the most personal enjoyment. I revamped the entire websites aesthetics using a CSS framework called "Twitter Bootstrap" alongside Karl Franks, and together we added all of the functionalities to the website that were listed on the specification, while working closely with Calvin Chan and Tim Au who made up the testing team to make sure that there were no bugs and that everything on the website worked as expected. The only thing that was not done to the specification which I only found out from the demonstration was that there was only two web pages used to display the information, one to show the list of reserves, and another to show the list of recordings at the selected reserve. However as I now understand it there should have been three web pages, one for the reserve list, then one for each species in the selected reserve, then another one for each recording of the selected species within the selected reserve.

Due to my migration from the android team to the web team it meant that for work week there were now two people working on the website and only Henry Hollingsworth working on the Android application, who received some help from Cormac Brady for the last couple of days of work week. This meant despite Henrys best efforts, that the app was missing features and still had some bugs by the end of work week. I think that this was preventable had I looked for a replacement in the group for my position in the android team before I moved to the web team, or I could have stayed on the android team and looked for a replacement for Kieran on the web team. Either way would definitely have been better than just moving. This is my biggest personal regret for the group project, and is a mistake that I will learn from and hopefully not make again.

I think that the management of the group by the group leader, Cormac Brady, was something he can be proud of as a first time project leader, given the reluctance of some of the group to do anything. One small problem I had with Cormacs leadership was the frequency at which not meeting deadlines would have been punishable with a card, although I understand that this is to motivate previously unmotivated people to actually do some work, I believe it created a less friendly environment for the people actually doing the work. Other than this I was very impressed by Cormacs attitude, and his eagerness to contribute outside of the leadership role, such as when he created the database on his personal server.

Overall I personally enjoyed the group project experience and the challenges that it brought. My most enjoyable moments have been working with equally motivated people to overcome the challenges faced during the group project.

DOCUMENT HISTORY

Version	date	Author	Comment
1	Jan 26, 2015	Melissa Smith	Basic outline of what is needed, wrote the Introduction sections will
2	Feb 14, 2015	Melissa Smith	Added some personal reflective reports
3	Feb 14, 2015	Melissa Smith	Finished adding some personal reflective reports
4	Feb 15, 2015	Melissa Smith	Added Management summary, performance of team members and team evaluation.
5	Feb 15, 2015	Melissa Smith	Added final state of project and final project plan and design references
6	Feb 15, 2015	Cormac Brady	Added proper history section