**11.1. Diary – Kresimir Bukovac**

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| Date | 22/04/2015 |
| Action | We conducted our fourth team meeting, showing the other members what work we had done since the last team meeting in order to gain suggestions and/or acceptance of the quality of our work. |
| Time Expected | 1 hour. |
| Time Taken | 1 hour. |
| Problems | Specified in Meeting Minutes #4. |
| Solutions | Specified in Meeting Minutes #4. |

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| Date | 24/04/2015 |
| Action | I began programming the command line user interface for different users. |
| Time Expected | 1 hour. |
| Time Taken | 1 hour 35 minutes. |
| Problems | There were many trial and error formatting that I went through to reach the nicest user interface and have it consistent. |
| Solutions | I kept re-testing the user interface with many small modifications. |

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| Date | 27/04/2015 |
| Action | I programmed further options and navigation in the command line’s user interface for different users. |
| Time Expected | 1 hour 30 minutes. |
| Time Taken | 55 minutes. |
| Problems | There were a few trial and error formatting that I went through to reach the nicest user interface and have it consistent. |
| Solutions | I kept re-testing the user interface with many small modifications. |

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| Date | 28/04/2015 |
| Action | I wrote up a memo for tomorrow’s team meeting and sent it out to all of the team members. |
| Time Expected | 3 minutes. |
| Time Taken | 2 minutes. |
| Problems | Specified in Memorandum #5. |
| Solutions | Specified in Memorandum #5. |

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| Date | 29/04/2015 |
| Action | We conducted our fifth team meeting, showing the other members what work we had done since the last team meeting in order to gain suggestions and/or acceptance of the quality of our work. |
| Time Expected | 1 hour. |
| Time Taken | 1 hour. |
| Problems | Specified in Meeting Minutes #5. |
| Solutions | Specified in Meeting Minutes #5. |

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| Date | 29/04/2015 |
| Action | Peter and I planned how the new Qt GUI will be designed and implemented. |
| Time Expected | 1 hour. |
| Time Taken | 20 minutes. |
| Problems | No one has used Qt before, so it has to be learnt. |
| Solutions | I have experience with visual studio, so I am able to apply my understanding of GUI-based programming to this. |

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| Date | 30/04/2015 |
| Action | I made more menus and menu options in the command line user interface. |
| Time Expected | 30 minutes. |
| Time Taken | 40 minutes. |
| Problems | A few inconsistencies began to show up compared to how I made previous menus a few days earlier. |
| Solutions | I looked at the previous menus and ensured the format was the same. |

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| Date | 30/04/2015 |
| Action | I helped Peter with the learning and implementation of Qt. |
| Time Expected | 20 minutes. |
| Time Taken | 40 minutes. |
| Problems | Qt requires Qt-specific variables and function calls. |
| Solutions | They had to be researched and applied to the system’s existing code. |

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| Date | 02/05/2015 |
| Action | I discussed some design and implementation plans with Darryl. |
| Time Expected | 30 minutes. |
| Time Taken | 25 minutes. |
| Problems | There are still some requirements we need clarified in further detail. |
| Solutions | We discussed what we knew at the time and will ask the client questions in the next client meeting. |

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| Date | 05/05/2015 |
| Action | I wrote up a memo for tomorrow’s team meeting and sent it out to all of the team members. |
| Time Expected | 2 minutes. |
| Time Taken | 2 minutes. |
| Problems | Specified in Memorandum #6. |
| Solutions | Specified in Memorandum #6. |

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| Date | 06/05/2015 |
| Action | We conducted our sixth team meeting, showing the other members what work we had done since the last team meeting in order to gain suggestions and/or acceptance of the quality of our work. |
| Time Expected | 1 hour. |
| Time Taken | 1 hour. |
| Problems | Specified in Meeting Minutes #6. |
| Solutions | Specified in Meeting Minutes #6. |

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| Date | 09/05/2015 |
| Action | I made skeleton functions which I liked the user menus to. |
| Time Expected | 20 minutes. |
| Time Taken | 15 minutes. |
| Problems | They haven’t been implemented yet. |
| Solutions | I will implement them at a later date. |

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| --- | --- |
| Date | 09/05/2015 |
| Action | I studied SQL and how it would be used in our system. |
| Time Expected | 1 hour. |
| Time Taken | 2 hours. |
| Problems | I know basic SQL, but the system has a special way in which the SQL queries and results are handled. |
| Solutions | I looked at and studied c++ SQL examples. |

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| Date | 10/05/2015 |
| Action | I implemented a few functions related to logging in. |
| Time Expected | 45 minutes. |
| Time Taken | 55 minutes. |
| Problems | It took a little bit longer due SQL being needed. |
| Solutions | I quickly figured out how to resolve what I didn’t know. |

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| Date | 10/05/2015 |
| Action | I fixed major inconsistencies in the visual aspect of the user interface between my parts and those of the other team members’ code. |
| Time Expected | 20 minutes. |
| Time Taken | 50 minutes. |
| Problems | I didn’t know the login details for a specific user type. |
| Solutions | I waited to get the login details so that I could test the menus in the running system after I quickly went through and fixed any obvious discrepancies I could see in the code. |

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| Date | 12/05/2015 |
| Action | I wrote up a memo for tomorrow’s team meeting and sent it out to all of the team members. |
| Time Expected | 2 minutes. |
| Time Taken | 2 minutes. |
| Problems | Specified in Memorandum #7. |
| Solutions | Specified in Memorandum #7. |

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| Date | 13/05/2015 |
| Action | We conducted our seventh team meeting, showing the other members what work we had done since the last team meeting in order to gain suggestions and/or acceptance of the quality of our work. |
| Time Expected | 1 hour. |
| Time Taken | 1 hour. |
| Problems | Specified in Meeting Minutes #7. |
| Solutions | Specified in Meeting Minutes #7. |

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| Date | 13/05/2015 |
| Action | We asked the client questions and updated our requirements. |
| Time Expected | 15 minutes. |
| Time Taken | 10 minutes. |
| Problems | There are more specific requirements which we now need to work on. |
| Solutions | Solutions were planned and will be implemented to meet requirements. |

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| --- | --- |
| Date | 13/05/2015 |
| Action | I made skeleton functions for all of the managers that I needed to work on. |
| Time Expected | 10 minutes. |
| Time Taken | 35 minutes. |
| Problems | The flight manager has a lot more functions than I expected, and it had to be connected to many other classes. |
| Solutions | I analysed the system design and wrote up the skeleton functions. |

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| Date | 13/05/2015 |
| Action | I studied examples of SQL usage in c++. |
| Time Expected | 1 hour. |
| Time Taken | 40 minutes. |
| Problems | There is still a learning curve which is being fought with. |
| Solutions | There are more examples to examine and it’s becoming easier for me. |

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| Date | 15/05/2015 |
| Action | I coded the user interfaces for the managers and their controllers. |
| Time Expected | 1 hour 30 minutes. |
| Time Taken | 1 hour 35 minutes. |
| Problems | The user interfaces contain different information, but the format must be consistent to make the system look nice and be familiar. |
| Solutions | I cross checked all of the interfaces numerous times over with each other. |

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| Date | 18/05/2015 |
| Action | I made upgrades to the user interface of managers and their controllers. |
| Time Expected | 1 hour. |
| Time Taken | 1 hour 20 minutes. |
| Problems | Now that the core interface has been implemented, more specific interfaces and feathers need to be implemented. |
| Solutions | I made sure to be consistent and follow the design of the system. |

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| Date | 19/05/2015 |
| Action | I thought of more specific questions to ask the client in the next client meeting. |
| Time Expected | 5 minutes. |
| Time Taken | 5 minutes. |
| Problems | There are certain aspects of the system we aren’t certain about how to go around its exact implementation. |
| Solutions | We will see what the client wants the system to do exactly, then implement it to fit those requirements. |

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| Date | 19/05/2015 |
| Action | I wrote up a memo for tomorrow’s team meeting and sent it out to all of the team members. |
| Time Expected | 2 minutes. |
| Time Taken | 2 minutes. |
| Problems | Specified in Memorandum #8. |
| Solutions | Specified in Memorandum #8. |

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| Date | 20/05/2015 |
| Action | We conducted our eighth team meeting, showing the other members what work we had done since the last team meeting in order to gain suggestions and/or acceptance of the quality of our work. |
| Time Expected | 1 hour. |
| Time Taken | 1 hour. |
| Problems | Specified in Meeting Minutes #8. |
| Solutions | Specified in Meeting Minutes #8. |

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| Date | 20/05/2015 |
| Action | I updated the SQL interaction for managers, customers and logins. |
| Time Expected | 2 hours 30 minutes. |
| Time Taken | 4 hours. |
| Problems | Many functions had to be changed to adjust to new requirements or as it is simply a better implementation. |
| Solutions | I went through all of the files and reworked the functions definitions. |

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| Date | 21/05/2015 |
| Action | I distributed mini tasks to all of the group members to work on. |
| Time Expected | 10 minutes. |
| Time Taken | 10 minutes. |
| Problems | Some tasks were tough to implement. |
| Solutions | We worked together to plan the best way to approach the problem. |

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| Date | 22/05/2015 |
| Action | After having a brief meeting with the team members, I designed a code style specification document. |
| Time Expected | 50 minutes. |
| Time Taken | 30 minutes. |
| Problems | Everyone has different and inconsistent programming styles/habits. |
| Solutions | A document specifying one coding style needs to be enforced. |

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| Date | 22/05/2015 |
| Action | I restyled some code files. |
| Time Expected | 15 minutes. |
| Time Taken | 20 minutes. |
| Problems | Other files are being worked on by other team members. |
| Solutions | I only restyled the smaller files which weren’t being worked on. |

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| Date | 23/05/2015 |
| Action | I cleaned up GitHub and removed files which were no longer needed. |
| Time Expected | 5 minutes. |
| Time Taken | 5 minutes. |
| Problems | Deleting the wrong files would cause the system to break. |
| Solutions | GitHub allows for versioning and rollbacks to be done as a safety net. |

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| Date | 23/05/2015 |
| Action | I restyled a lot of code files. |
| Time Expected | 2 hours. |
| Time Taken | 1 hour 30 minutes. |
| Problems | There were a lot of differences in coding style even from the same person. |
| Solutions | Noticing common patterns and understanding which cases are possible, I was able to use find and replace really well to speed up the process and ensure that I miss less small discrepancies due to human error. |

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| Date | 24/05/2015 |
| Action | I scanned the code files to look for logic errors. |
| Time Expected | 45 minutes. |
| Time Taken | 30 minutes. |
| Problems | There are many types of errors which can easily be missed. |
| Solutions | I used my knowledge in the sequence of logic to ensure there were no obvious errors. |

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| Date | 24/05/2015 |
| Action | I thought of final questions to ask the client in the final client meeting. |
| Time Expected | 5 minutes. |
| Time Taken | 10 minutes. |
| Problems | There are many things we need to implement, but time is running short. |
| Solutions | We must establish all of the cores and important requirements first. |

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| Date | 25/05/2015 |
| Action | I helped a team member fix a problem. |
| Time Expected | 10 minutes. |
| Time Taken | 1 minute. |
| Problems | They were unfamiliar with the set of functions. |
| Solutions | I wrote those functions and was able to easily fix the issue with my memory of the full implementation of the functions and their calls. |

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| Date | 26/05/2015 |
| Action | I moved around some files on GitHub for better organisation of files. |
| Time Expected | 1 minute. |
| Time Taken | 1 minute. |
| Problems | The other team members need to be able to access the files on their varying operating systems. |
| Solutions | I made everything simple to access and removed spaces. |

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| Date | 26/05/2015 |
| Action | I deleted some old files that were not needed. |
| Time Expected | 2 minutes. |
| Time Taken | 2 minutes. |
| Problems | They were made when we had a different system plan. |
| Solutions | We updated the plan and implemented its design. |

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| --- | --- |
| Date | 26/05/2015 |
| Action | I scanned through the code files to look for logic errors. |
| Time Expected | 1 hour. |
| Time Taken | 1 hour. |
| Problems | There were a few obvious logical errors. |
| Solutions | I fixed them so that they would work as required. |

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| Date | 26/05/2015 |
| Action | I restyled all of the code. |
| Time Expected | 4 hours. |
| Time Taken | 5 hours 40 minutes. |
| Problems | Many various format discrepancies were existent and even newly implemented code had varying format. |
| Solutions | I went through line by line, formalising all of the code. |

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| Date | 26/05/2015 |
| Action | I reassigned tasks to the team members. |
| Time Expected | 10 minutes. |
| Time Taken | 10 minutes. |
| Problems | The deadline for the system is nearing fast. |
| Solutions | I assigned tasks that were similar to the same person to make it easier to work on since it would be familiar to them after the first section is done. |

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| --- | --- |
| Date | 27/05/2015 |
| Action | I restyled the code. |
| Time Expected | 10 minutes. |
| Time Taken | 25 minutes. |
| Problems | There were inconsistencies in new code implemented. |
| Solutions | I fixed any inconsistencies I found in the code style of the files. |

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| Date | 27/05/2015 |
| Action | I fixed booking manager and profile manager to fit their requirements. |
| Time Expected | 10 minutes. |
| Time Taken | 20 minutes. |
| Problems | They had their privileges inverted. |
| Solutions | I swapped over the functions to the correct manager and slightly altered how they were called to make it work as it was supposed to. |

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| Date | 27/05/2015 |
| Action | I fixed some menu interfaces. |
| Time Expected | 10 minutes. |
| Time Taken | 15 minutes. |
| Problems | There were minor differences in how the user menus looked, but it made the system look sloppy. |
| Solutions | I fixed the menus to look consistent throughout the system. |

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| --- | --- |
| Date | 27/05/2015 |
| Action | I implemented the SQL-querying create and delete functions for airports and flight managers. |
| Time Expected | 1 hour. |
| Time Taken | 2 hours. |
| Problems | There was a logic error in the creation of records. |
| Solutions | I fixed the logic error, allowing the database to store records correctly. |

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| --- | --- |
| Date | 27/05/2015 |
| Action | I added/changed a few variables for airport to work properly with the database. |
| Time Expected | 10 minutes. |
| Time Taken | 30 minutes. |
| Problems | Changing variables required fixes to be done throughout many different files. |
| Solutions | I went and normalised all of the files to be able to use the new variables. |

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| Date | 28/05/2015 |
| Action | I made small user interface-related and functionality changes to the Aircraft/Airport/BookingController/BookingManagerController/GuestUI  /ProfileManageController/Route/TravelAgent files. |
| Time Expected | 3 hours. |
| Time Taken | 2 hours 40 minutes. |
| Problems | Inconsistencies in variable types and function return types needed to be purged and rewritten. |
| Solutions | I went through all of the respective classes, changing what was not in the standard format that the rest of the functions/variables were. |

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| --- | --- |
| Date | 29/05/2015 |
| Action | I created a checklist of the client’s requirements and told the team to check requirements off as they were finalised and full functional. |
| Time Expected | 15 minutes. |
| Time Taken | 10 minutes. |
| Problems | There are many requirements still required from the system. |
| Solutions | Some requirements have different levels of implementation priority. |

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| --- | --- |
| Date | 29/05/2015 |
| Action | I ran through the system and checked off the requirements as I found that they were fully implemented. |
| Time Expected | 30 minutes. |
| Time Taken | 15 minutes. |
| Problems | I am not entirely well versed in all sections of the program. |
| Solutions | Each team member will need to check the part of the system that they implemented as they will know best if it has been done as required or not. |

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| Date | 29/05/2015 |
| Action | I finished all of the create/update/delete functions for FlightManager and its respective associated files. |
| Time Expected | 5 hours. |
| Time Taken | 3 hours 50 minutes. |
| Problems | There was a lot of implement in a way which worked together as one system. |
| Solutions | With a well thought out design and experience with SQL in c++, the functions became easier to implement. |

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| Date | 30/05/2015 |
| Action | I made minor user interface fixes. |
| Time Expected | 5 minutes. |
| Time Taken | 5 minutes. |
| Problems | The user interface had small inconsistencies. |
| Solutions | I made them all have the exact same format visually. |

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| Date | 30/05/2015 |
| Action | I fixed an issue of login for linux users. |
| Time Expected | 30 minutes. |
| Time Taken | 10 minutes. |
| Problems | There was a logic error in the way cross-platform checking and function calling worked. |
| Solutions | I adjusted the functions and defines slightly, allowing cross-platform compatibility for logging in. |

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| Date | 30/05/2015 |
| Action | I restyled some code files. |
| Time Expected | 10 minutes. |
| Time Taken | 10 minutes. |
| Problems | There were inconsistencies in new code implemented. |
| Solutions | I fixed any inconsistencies I found in the code style of the files. |

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| Date | 30/05/2015 |
| Action | I gathered picture evidence of the use of GitHub and other forms of versioning that are being used by the team. |
| Time Expected | 5 minutes. |
| Time Taken | 10 minutes. |
| Problems | I took screenshots of the statistical information and proof. |
| Solutions | I cut the images to only the necessary information so that it would fit legibly into the document. |

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| Date | 31/05/2015 |
| Action | I fixed the SQL-querying functions for ServiceItemManager. |
| Time Expected | 2 hours. |
| Time Taken | 1 hour 30 minutes. |
| Problems | Slight modifications needed to be made for the SQL querying. |
| Solutions | I made the modifications in a way the requirements would be met and the data can easily be used. |

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| Date | 31/05/2015 |
| Action | I organised a meet up of all team members to do final work on the system, plan out our presentation and finish off any documentation so that I may compile it all together into the final report. |
| Time Expected | 2 minutes. |
| Time Taken | 3 minutes. |
| Problems | Team members had other commitments outside of this project. |
| Solutions | The meet up was mutually scheduled at a time available for all of us. |

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| Date | 31/05/2015 |
| Action | I fixed all of the create functions used by managers, fixing a problem with the SQL database and a record’s unique ID. |
| Time Expected | 45 minutes. |
| Time Taken | 35 minutes. |
| Problems | The manager functions were working, but a certain pattern of SQL queries would break the system due to a logic error. |
| Solutions | I fixed the logic error and checked that the previous SQL query pattern would not break the system again. |

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| Date | 31/05/2015 |
| Action | I tried to change an irregular getByID function to return a string like all the other getByID functions. |
| Time Expected | 5 minutes. |
| Time Taken | 35 minutes. |
| Problems | The irregular getByID function is used differently to all the other getByID functions, so it was inconsistent. |
| Solutions | After meddling with the irregular function, I realised the functionality was exactly the same but it handled a few extra cases, in which it was neater to keep the code the way it was than in the standardised format. |

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| Date | 31/05/2015 |
| Action | I restyled some code files. |
| Time Expected | 10 minutes. |
| Time Taken | 25 minutes. |
| Problems | There were inconsistencies in new code implemented. |
| Solutions | I fixed any inconsistencies I found in the code style of the files. |

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| Date | 31/05/2015 |
| Action | I accidentally deleted some of my documentation and tried to recover it. |
| Time Expected | 10 minutes. |
| Time Taken | 1 hour 30 minutes. |
| Problems | GitHub had a dangling commit, and the documents were deleted off of GitHub and my computer. |
| Solutions | I researched how to use Git Shell to recover the lost documents, but after many attempts, it didn’t work, so I will need to remake the documents. |

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| Date | 01/05/2015 |
| Action | I fixed a tiny logic error in the program. |
| Time Expected | 5 minutes. |
| Time Taken | 2 minutes. |
| Problems | There was an unwanted output in the program. |
| Solutions | I fixed the logic by rearranging the order of events. |

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| Date | 01/05/2015 |
| Action | I remade the documents I lost last night. |
| Time Expected | 45 minutes. |
| Time Taken | 50 minutes. |
| Problems | The documents were deleted and needed to be redone. |
| Solutions | I had drafts saved, from which I reconstructed the documents. |

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| Date | 01/05/2015 |
| Action | The team had a group working session. |
| Time Expected | 4 hours 30 minutes. |
| Time Taken | 4 hours 30 minutes. |
| Problems | The workspace became occupied and we had to leave. |
| Solutions | We all went home to continue working on the project whilst using Skype as our means of communication. |

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| Date | 01/05/2015 |
| Action | I scanned through the code files for any fixes which had to be done. |
| Time Expected | 30 minutes. |
| Time Taken | 20 minutes. |
| Problems | There were a few small unwanted outputs in a few places. |
| Solutions | I fixed the logic of the functions to handle the data correctly. |

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| Date | 01/05/2015 |
| Action | I finalised the meta data section of the report. |
| Time Expected | 30 minutes. |
| Time Taken | 30 minutes. |
| Problems | The formatting will be changed when the rest of the report is compiled. |
| Solutions | I won’t waste time formatting the meta report before I have the rest of the report ready for me to compile. |

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| Date | 01/05/2015 |
| Action | I updated the group summary. |
| Time Expected | 5 minutes. |
| Time Taken | 5 minutes. |
| Problems | The team members’ roles have been slightly changed to fit the implementation phase of the project. |
| Solutions | We sorted our roles out early. All I had to do now was record which documents were worked on by which team member. |

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| Date | 02/05/2015 |
| Action | I compiled the final reports. |
| Time Expected | 2 hours. |
| Time Taken | 3 hours 10 minutes. |
| Problems | I was receiving the documentation really close to the deadline. |
| Solutions | I told the team members how to format their documents so that I don’t spend a lot of time reformatting the documents to fit the final document. |