**Portfolio 2**

**A Quality Assurance (QA) Portfolio**

**By**

*Ivor Jones*

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| Team Number | **5** |
| Team Task | Recruitment and training |

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| Weeks 6 & 7 | **Project Setup** |
|  | **Own** |
| **Activities undertaken** | For my first task for the group I was tasked with creating the PowerPoint for the seminar we had to do. Based around our team detailing our responsibility’s and how we would interact with the other teams. This was relayed for the other teams to understand who they needed to communicate with, as well as giving the whole class a broad understanding on what the whole project would look like in the end. |
| **Outcome of QA activities** | The PowerPoint seemed to be taken well as the lecturer liked it |
| **Activities resulting from QA process** | Due to the seminar the group discussed how we are going to achieve these goals as well as thinking of new ways to do the assignment based of other people’s presentations |
| **Personal QA development** | Unfortunately, the questionnaire for the presentation was not given out by one of the group members and therefore we do not know details of our progress for the seminar which will be necessary for improvement later in the project.  Also, as a group only one of us spoke, putting a lot of pressure on the individual in question meaning we need to spread out the talking with multiple people to relieve the stress as it would improve the flow of the seminar as the group member began rushing what they were saying towards the end. |
| **Evidence of own activities** | Screenshots from our first seminar that I worked on. |

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| Weeks 8 & 9 | **Project Setup** |
|  | **Own** |
| **Activities undertaken** | For this week I created UML diagrams for the group with the purpose of understanding how our program will function, this diagram may be added upon latter or not reflect the final work as ideas are streamlined.  Whilst another team member was working on the database, they came to me to give them advice on query design and I offered my opinion on how to streamline the fields to be in keeping with my current knowledge of industry convention. |
| **Outcome of QA activities** | The UML was completed to a good standard and it allowed my team mate who was programming to have a good reference for what our programs should do.  I managed to help speed up the process of making the database and we all agreed on the naming conventions which also helped because then we would all understand the code that relates to manipulating the databases data. |
| **Activities resulting from QA process** | The programmers could then start programming the main applications in the new term with a helpful guide, meaning that there will be no misunderstanding when it comes to the purpose and flow of our programs.  The database was completed so no other actions were started. |
| **Personal QA development** | I got a good practice for creating pseudocode and UML diagrams, an essential part of programming. I can definitely use this knowledge, and the website that I used to develop it in the future to help with other tasks of such a nature.  I used slack to communicate ideas to other members which is an effective tool to develop in group programming projects. |
| **Evidence of own activities** | Screenshot of my UML diagram that eventually was used in our 1st seminar |

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| Weeks 10 & 11 | **Project Setup** |
|  | **Own** |
| **Activities undertaken** | * In these weeks my purpose was to act as scrum master, this involved creating and maintaining a gantt chart that I populated with deadlines for each task needed to complete the current stage of the project. * During this week I worked on the second seminar PowerPoint with my other team members, we split up creation and speaking parts evenly, I stepped in to help a member that didn’t want to speak on their own as they were nervous. During this time I had to research about the attributes of Slack and Trello (the topic of our seminar). |
| **Outcome of QA activities** | * I created an efficient chart that showed deadlines and tasks in a way that was concise and adaptable. It made it easier to view the tasks ahead and also to delegate tasks fairly. * The seminar was completed and presented, it went well and I learnt a lot whist researching slack and trello’s properties. |
| **Activities resulting from QA process** | * People could assign themselves new tasks without confusion, making all team member happy and content. * The seminar was over so there were no further tasks to complete, we did however give people a feedback form but the turn in rate was very poor. |
| **Personal QA development** | * I learnt how to create and update a gantt chart, this will be very useful later on and next time we have a project of this nature I will remember to do this earlier as it makes the whole operation run smoothly. * I furthered my research skills, presentation manner and communication skills as we did not work on the PowerPoint in person but rather over slack. |
| **Evidence of own activities** | * Screenshotted example of part of my gantt chart that I created. I added the different aspects that we needed to do and gave time constrictions along with the ability to add how much was completed (picture from a few weeks after completion) |

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| Weeks 11 & 12 | **Project Setup** |
|  | **Own** |
| **Activities undertaken** | * I was tasked with helping my team member research unit testing, in order to do this I read through the provided material and also did extrernal research online so that I could be helpful when it came to the unit testing stage. |
| **Outcome of QA activities** | * I better understand unit testing as a part of the agile development process which will benefit me greatly in the tasks to come as it is very likely that I will be testing my other members code for them. |
| **Activities resulting from QA process** | * Now that we understand unit testing all members of the team can collaborate together to create the unit tests for our projects that we will create in the new year. |
| **Personal QA development** | * I was very unsure about the agile process before researching it, it’s a very important skill to develop and will make me a better programmer/tester in the future. |
| **Evidence of own activities** | Links used for research:  <http://softwaretestingfundamentals.com/unit-testing/>  <https://smartbear.com/learn/automated-testing/what-is-unit-testing/>  <https://www.guru99.com/unit-testing-guide.html> |

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| Weeks 13 & 14 | **Project Setup** |
|  | **Own** |
| **Activities undertaken** | * I started to write a quality assurance document with a fellow team member in order to have a basis upon which to develop and test our program. * I started developing the first portion of the GUI by utilising extreme programming and programming together with another team member. * I gave feedback on a phase 1 review seminar that I had listened to. |
| **Outcome of QA activities** | * The Quality assurance document being started meant that we had a clearer understanding of what our program should physically do and aesthetically look like and allowed us to start some basic programming. * The basics of the GUI were being programmed and started to take shape. * Because I attended the seminar and gave feedback it better prepared me to help contribute to our next seminar. |
| **Activities resulting from QA process** | * While we wrote the Quality assurance documentation we could also start coding some basic aspects of the GUI as we decided on them in the document. |
| **Personal QA development** | * It helped me learn to research similar programs that had solutions to common layouts that are appealing. * It gave me the chance to practice taking user specification and breaking it down into small problems and filling in gaps of knowledge for what the program should do. * I learnt how to use graph layout for python programming as well as the basics of python GUI programming such as how to make labels, text boxes and buttons * I was able to take on board what other people had done in their segments of the project, looking at how it linked to ours as wells as how to take on board their best techniques, layouts and points to ensure my progress. |
| **Evidence of own activities** | * Evidence of programming I helped to completed (extreme programming was used with me and another team member) |

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| Weeks 15 & 16 | **Project Setup** |
|  | **Own** |
| **Activities undertaken** | * I started working on the recap of stage 1 power-point with the help of a fellow group member by getting print screens of our work from last term and helping to organise and create dialogue to support our previous work. * Unfortunately the day we were meant to present our power-point I was very sick and couldn’t do much talking so I handled the power-point slides and offered support when the team member giving the presentation couldn’t remember what to say. * I reviewed a presentation that was given to us that week and gave feedback on it as well. * I assisted in making the login system functional, we had to overcome several issues when programming this because the |
| **Outcome of QA activities** | * We had organised meetings to allow us to make the power-point together, We managed to complete the PowerPoint, although I could not do much when presenting the seminar due to being ill, I helped the team member out who was doing the presenting when she couldn’t remember what to say and was able to save my strength to work on other things. |
| **Activities resulting from QA process** | * After giving our presentation we then could go and look at the feedback for it which allowed us to improve on our presentation skills for the next seminar. |
| **Personal QA development** | * Due to not feeling well I learnt to step back and find ways of helping without actively being able to participate in the presentation at the time. * Due to the issues encountered while programming I was able to develop my research skills for finding code solutions and looking up coding problems. This proved very useful in my other projects and could be useful later down the line for this one. |
| **Evidence of own activities** | Screenshot of code that I helped to implement and work on.    Screenshot of the completion of a seminar review.    Screenshot of one of the slides I helped design for the seminar |

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| Weeks 17 & 18 | **Project Setup** |
|  | **Own** |
| **Activities undertaken** | * I started researching vulnerabilities, I intended to write about two vulnerabilities. I researched SQL injection along with people selling exam questions to find out what could be done to prevent such things from happening in our program. * I gave feedback for a seminar which I attended and used the information that I heard to help enrich our own seminar. The seminar was very good and I could take away much from it to apply to future presentations. * I helped give our progress report, I talked through some slides and had to come up with some parts on the spot when I realised that a few sentences were missing. * Once feedback was given for the progress report I looked at it and took on any constructive criticism. |
| **Outcome of QA activities** | * I and another team member started to create a vulnerabilities document, we started to see what sort of things we could apply to our own code. |
| **Activities resulting from QA process** | * The vulnerability research influenced us when we programmed as we were thinking about the implication of our programming techniques. |
| **Personal QA development** | * I learnt about what vulnerabilities where from both attending the vulnerabilities presentation and also through external research on my own part. * I practiced my researching skills and my communication skills with Zuzana as we were working on research together outside of class time and so had to arrange meetings and organise times that suited us. * The lecturers feedback allowed me to tailor my seminar making and presenting techniques. The other teams critiques allowed me to alter what sort of information I would put on the next seminar so as to |
| **Evidence of own activities** | <https://www.w3schools.com/sql/sql_injection.asp> reference for some research  <https://www.nytimes.com/2010/11/14/magazine/14Hacker-t.html> reference for some research    Extract from the vulnerabilities that I was researching which were uploaded to github after being written in a word document. |

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| Weeks 19 & 20 | **Project Setup** |
|  | **Own** |
| **Activities undertaken** | * I gave feedback for a progress report that I viewed and used the seminars to evaluate my own work. * I worked more on vulnerabilities, finding other sources and focussing on real world events to analyse what went wrong so as to determine how to best protect ourselves. * I helped work out code kinks with the test page. There were some minor issues that demanded a second programmer to oversee and to step through the code as the main programmer of the group was stuck and couldn’t see their mistake. |
| **Outcome of QA activities** | * The page was fixed of its issue. |
| **Activities resulting from QA process** | * The next sections could be programmed and looked at after the other issues were fixed. * I found more vulnerabilities to write about and gave advice on other aspects of my other members vulnerabilities that they could look into. |
| **Personal QA development** | * I was meeting up to work out coding problems as wells as to view other people seminars. * I was able to practice giving constructive criticism on other peoples seminars as well as applying them to my own work which is an important ability to practice. |
| **Evidence of own activities** | Feedback I gave for another groups project there was only one seminar that week that included a feedback form. |

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| Weeks 21 & 22 | **Project Setup** |
|  | **Own** |
| **Activities undertaken** | * I gave some feedback on a progress report. * I helped Zuzana work on programming a results page for the English and maths test * As the last scrum master I updated the gantt chart again * As scrum master I arranged some meetings both in person and online to check progress and see how much work everyone could get done. |
| **Outcome of QA activities** | * The feedback I gave allowed me to reflect on my own work. * The work I did programming allowed us to make lots of progress with our program. The use of extreme programming meant that the work got done faster and there was no confusion as to who was programming what. * The gantt chart being updated allowed us to see our weak areas going forward to the end of the project. |
| **Activities resulting from QA process** | * The meetings I arranged as scrum master allowed us to work efficiently and quickly. |
| **Personal QA development** | * I was able to practice managing people and checking what was to be done. Being scrum master was difficult as one member had stopped coming to the seminars and we used to arrange meetings in person afterwards to discuss topics of importance. |
| **Evidence of own activities** | Screenshot of the updated gantt chart    Screenshot of message asking to meet and organise duties with Zuzana as I was having personal issues and wanted to ensure everyone was ok as my role of scrum master.    Programming done using extreme programming with Zuzana coding and me observing, giving advice and coding input where she was lacking. |

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| Weeks 23 & 24 | **Project Setup** |
|  | **Own** |
| **Activities undertaken** | * I finished writing about vulnerabilities. My work was completely finished in this aspect and my vulnerability about selling test papers had been included in the program. * I viewed the last seminars of the year and attended a session talking about job opportunities that I might be interested in. I also gave some feedback to one of the groups that showed their seminar. * I wrote a unit test to check the maths grade was correct. |
| **Outcome of QA activities** | * The unit test could be used to check that the code was working correctly upon completion. Unit tests are a very important way of ensuring a codes quality as it is being programmed |
| **Activities resulting from QA process** | * By attending the lecture on job opportunities I was able to view several websites and look at my future prospects as well as looking for some summer work. |
| **Personal QA development** | * I had practiced writing a unit test which is a great skill to have both in the real world of computer science and also in my other coursework’s. I think I could apply this to my final year project as I will have to do lots of testing of my application. |
| **Evidence of own activities** | The unit test that I created to check that the right mark was being given.    Finnished vulnerabilities.    Evaluating Team 3’s progress report after the seminar |