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Abstract

A reflective journal about the transversal skills I acquired and bettered in both year one and two of my Software Development ICT Apprenticeship

Transversal SKills – Reflective Journal

Year 2

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# Introduction

This document is a reflective journal on both the first and second year of my Software Development ICT Apprenticeship. It will discuss six integral transversal skills that I not only acquired but also improved on in my workplace in my role as an ICT Specialist.

Working as a team, leadership, communication, applying professional standards in the workplace, managing customer relations, and creating and giving presentations are essential aspects of a ICT oriented environment. They are invaluable in completing workplace projects and promoting a high standard of work in the workplace. I have detailed various scenarios in which I encountered, acquired or honed five of these skills as well as a recording of myself giving a presentation on cybersecurity in the workplace, and how they impacted me in my role as an ICT Specialist, both in the present and for my future in an ICT oriented environment.

## Document a noteworthy example of working as part of a team

# Introduction

This document will detail a scenario in my workplace wherein I was tasked with working as part of a team to complete a common goal. It will discuss the importance of teamwork in an IT oriented environment as well as describe various instances within the aforementioned scenario in which I was able to apply and improve my teamworking skill. The document will then conclude with how my experiences in the workplace have shaped my understanding of working as a team and its importance as a skill in my role as an ICT specialist.

Teamwork is an essential part of an IT oriented environment. Group projects form many of the operations in an IT company. In Software Development, these projects will be application or web projects, which means that the team working on said application/web project must be able to delegate all tasks involved in development, collaborate on project documentation, work together to ensure that all their separate parts function as one, and communicate effectively with each other in order to ensure that the end product is of a high quality and is delivered on time. These are the skills I had to implement when working as a team to complete a web application.

# Scenario

## Background

I was assigned by my manager to work on a web-based application with another of my colleagues. Helpdesk staff in our ICT unit have a number of daily tasks to perform, which can be time consuming and with some of the tasks, may be security risks due to the manner in which they are executed, due to the fact they involve interacting with databases that contain confidential personal data. Therefore, Helpdesk staff would be better served by an application wherein they can perform all their tasks in one location. I was tasked with designing, developing, and testing this application alongside my colleague. As part of this process, I had to perform the following three tasks in order to work effectively as a team with my colleague.

## Dividing Duties

First and foremost, my colleague and I discussed how we should divide up the project tasks. These tasks were centered around writing up documentation, writing code for the application, and testing the application. We decided, with some input from our manager, which one of us would be best suited for each task, based on experience and knowledge of the systems. As I was the newer, less experienced member of the team, I opted to do the simpler, less complicated code tasks in order to obtain a better understanding of how the system works. I, along with my colleague, chose the sections we wanted to write in the Software Technical Specification document, verifying our choices with each other in order to ensure that we were both on the same page and not working on the same section. I also documented all application features I was working on, in terms of code specifications and use cases.

## Looking over each other’s work

As myself and my colleague were both working on the application documentation, it was essential that all of our work flowed together and was comprehensible. It was also important that all information was correct, as this documentation would serve as an official account of the application development process. Therefore, whenever my colleague finished a section, he would let me know and I would read over it and offer ways to improve it or not if it did not need it. My colleague would also read over any of my sections and offer advice. In doing this, I was able to work effectively with my colleague to create a high quality document as required by our manager as well as learn and teach new things. It is important that a team is able to produce documentation of the highest quality, and this is only possible with effective communication amongst the team.

## Keeping tabs on each other’s code

As my colleague and I were working on separate parts of the application code, it was essential that we uploaded our work at several intervals to verify that our code functioned together and that there were no conflicts that would render the code useless. Whilst I was working on my chosen application features, I would regularly upload my code to our shared repository, along with my colleague who would do the same. By doing this, I was able to run my code with my colleague’s code to ensure that our work was functioning properly as a whole. I was also able to acquire tips about my code by reading over my colleague’s code and asking him any questions that I may have. This is important as it ensures that the team’s output is working correctly and provides an opportunity or two for the team to learn from each other and each other’s work.

# Conclusion

Functioning as part of a team is an essential aspect of working in an ICT environment. It forms the backbone of any projects that are conducted and is an invaluable skill in an ICT environment where ICT staff may be separated into different areas of expertise such as Software Development, Networking, etc, but function as one whole ICT department. Every staff member has a distinct role within the team, be it a project development team or a software development team, but also has a obligation to the team as a whole to deliver what is required of their role and also to aid the team at large by collaboration and communication. When I was given the opportunity to work on a web-based application as part of a team, I was able to experience this for myself. My role within the development team was to write up and documentation and develop code for the application, whilst my obligations to the ICT team as a whole was to produce a fully functional application to aid my Helpdesk colleagues in their daily tasks.

# Evidence an instance of leading others by example

# Introduction

This document will detail a scenario in my workplace in which I displayed my ability to lead others by example. It will discuss what it means to lead others by example in an IT oriented environment as well as describe various instances within the aforementioned scenario in which I was able to set an example for my colleagues to follow. The document will then conclude with how my experiences in the workplace have shaped my understanding of leadership and its importance as a skill in my role as an ICT specialist.

Leadership is an integral part of an IT oriented environment. It comprises mainly of overseeing various projects and ensuring that they are completed on time and in a satisfactory manner, as well as leading other team members and colleagues by example by completing all required tasks on time and producing high quality work. In Software Development, these tasks can relate to planning projects according to organisational SOPs, developing code that adheres to organisational standards projects, and is thoroughly tested appropriately and the finished product is completed in a timely manner and to a high standard. These are the skills I evidenced when leading others by example in the workplace.

# Scenario

## Background

I was assigned by my manager to work on a small project that only required one person to in use complete. Many applications in use by the organisation implement external web-based applications to function properly. At present, the majority of these applications are being rewritten so that the application functions entirely on my organisation’s dedicated application. I was tasked with rewriting such an application. The application in question involved converting map coordinates from an Irish-only standard to a universal standard that can be used in Google and Bing Maps. The conversions were completed by sending the Irish standard coordinates to an external application which then converted and returned them in the universal standard. My task was to modify this code so that the conversion was done entirely in one single application. As I was working on this project alone, it would involve, meeting with stakeholders, planning, designing and developing the project as well as testing and deploying it.

## SOPs and Conventions Followed Correctly

First and foremost, it was important to ensure that all SOPs for Projects, as defined by my organisation were followed precisely and correctly. This meant that I had to ensure that the project was planned and documented according to organisational standards, using a predesigned document framework. In this instance, this meant using the organisational template for the Software Specification Document and adapting it for my project. By doing this, I was able to ensure that the project I was to complete was correctly and wholly defined and designed, therefore meaning that there was a comprehensible document available for my colleagues or myself to refer to when necessary for any future projects. Another SOP that I had to follow closely was the organisational coding conventions for web applications. This meant ensuring that all variables and files had precise and appropriate names, as well as the correct packages and libraries were implemented in the code. In this instance, this meant ensuring that any code I added, adhered to the existing code within the application as well as the other applications on the organisation’s dedicated application. By doing this I set an example for anyone who may look at my work in the future when trying to develop a project of their own, of how the code should be formatted and named.

## Any Issues Encountered Are Reported and Resolved

As with any project, it was essential that any issues and problems I encountered were reported quickly to ensure that it could be solved in a timely manner. This meant that I had to document every issue that cropped up and then contact an appropriate colleague or my manager to inform them of the issue so they can resolve it. In this instance, it meant asking my manager about an issue regarding the JavaScript add-on for converting coordinates, which was, in turn resolved quickly. By doing this, it meant that any bugs that may have already been present in the code before I had started the project were caught and fixed, as well as any issues I encountered with my own code. This set an example for my other colleagues in that not only for reporting issues and problems with their code to get it fixed quickly but also reporting any issues and problems with existing code, so that it may not affect any future projects. This also sets an example for asking for help if one needs it.

## Ensure Project is Completed According to the Defined Schedule

An important part of any project is that it is completed according to a predefined and agreed on schedule. This ensures that all aspects of the project are completed properly and to a high quality within a specified time frame. In this instance, it meant that I adhered to the schedule set out my project manager, and completed each aspect of the project separately, such as first the interface for displaying the converted coordinates and then implementing the JavaScript add-on for converting the coordinates. By doing this, it meant that when the project is completed on time, tested and deployed, then I can focus on any other projects I have to do, thus ensuring that I complete my work on time and to the highest quality. Adhering to a project plan displays a good worth ethic and that I respect the organisational standards and SOPs. This sets an example to my colleagues not only in that I respect organisational standards, but also of my respect to my manager in following the project schedule set out for me, and of my dedication to completing my work on time.

# Conclusion

Leadership is an essential aspect of working in an ICT environment. It is not only concerning project management and leading others in a project team, but how each team member conducts themselves in how they work and behave in a work environment. This can be in adhering to any organisational standards and SOPs when completing any projects, in reporting any issues or problems that may arise in any projects in a timely manner so that they may be resolved quickly, or in completing the project itself to a high standard and according to a schedule defined by the project manager. Every staff member has a role in leading by example so their colleagues can learn and be encouraged by their teammates. When I was given the opportunity to work on various projects such as the one detailed in this document, I was able to evidence some of this leadership myself. I adhered to the SOPs and standards set out by my organisation, reported and resolved any issues that arose during its development process, and was able to complete the project on time. My role allowed me to encourage my colleagues by leading by example.

# Evaluate your own communication approaches and identify areas for improvement

# Introduction

This document will detail the communication approaches I have employed in the workplace as an ICT Specialist. It will discuss the role communication has in an ICT oriented environment as well as my experiences and any areas that I feel I could improve in. The document will then conclude with how my experiences in the workplace have shaped my understanding of communication and its importance as a skill in my role as an ICT specialist.

Communication is an integral part of an IT oriented environment. It is an essential skill to possess when working as an IT team as a whole, meeting with project stakeholders, and also when developing projects as part of a dedicated Software Development team. However, it can also be simply reporting an issues and problems that may arise with any projects to the project manager or voicing any concerns when attending regular project meetings with project stakeholders and managers. These are the areas I have identified in which I believe there is room for improvement for me, and in which I will seek to improve on in order to further enrich my role as an ICT Specialist.

## Evaluation of Communication Approaches

In my role as an ICT Specialist, I have been assigned various projects to develop by my manager. These have included and ranged from projects that only needed one person to complete, to a group project in which I was tasked with working alongside a colleague to complete it. In the process of completing these projects, I had many opportunities to utilise and improve my communication skills. These included meeting with stakeholders to discuss project requirements, meeting with project managers to discuss the project progress, and regular meetings with my teammate to compare our code and talk through any issues and problems that we may have encountered. I also had to write up documentation regarding these projects, such as Software Specification Documentation, which was a very important part of communication as it detailed the project requirements and design, which would have to be clear and concise in order to be comprehendible to stakeholders and anyone else who may need to read it. In my opinion I feel that my communication approaches to these tasks was satisfactory and to a high standard. I ensured that when presented with these opportunities, I completed them to the best of my ability at the time. However, I also feel, that in some of the areas mentioned, my ability at the time was not at level that I wanted.

## Voicing Issues with Projects

One of the areas, in my opinion, that I could improve a little on, is voicing any issues that I may be having with projects and code. In other words, when I needed help with some code, such as not being familiar with packages or languages being used, or code not working as it should, I was reluctant to voice my concerns immediately to the project manager or my manager, instead opting to do some research myself and attempting to find a solution. Whilst there is nothing wrong with doing research myself, it did take longer to solve the issues, whereas simply asking the project manager or my manager would’ve saved some time that I could’ve used to complete other parts of the projects. Therefore, I intend to remedy this by ensuring that, whilst I shall continue to research, I will be quicker to ask for help as well, thus ensuring that the project will be completed according to the project schedule in a timely manner.

## Voicing Concerns in Project Meetings

Another area in which I feel I need to improve in, is my voicing of any concerns that I may have with a project when discussing with the project manager and my manager either in the initial meeting to assign the project to me, or in any follow up meeting, to discuss project progress or any new features that need to be added. In other words, instead of asking as many relevant questions as I should in the meeting and acquiring answers immediately, I tended to research later on and try to get answers that way. This would mean that at times I wouldn’t fully comprehend some of the aspects of the project code and any packages or languages that may be implemented in it, which therefore meant that it would take longer for me to complete aspects of the project. Whilst, as with the previous area, there is no problem with doing my own research, it is important that I ask as many questions that I need at project meetings as it is necessary to have all information about a project, no matter how small and insignificant it is. Therefore, I intend to this by ensuring that, whilst as before, I will continue with my research, I will also ask any questions that I deem necessary in order to successfully complete projects.

# Conclusion

Communication is an essential aspect of working in an ICT environment. It entails not only talking with others, but exchanging ideas, communicating issues and problems, and writing up clear and concise documentation that will be read and referenced by others. It is an important aspect of an IT oriented environment, as it is essential for ensuring that all projects are completed in an orderly an timely manner and to the highest quality. Therefore, as an ICT Specialist, it is important that I hone my communication skills and address any shortcomings I may have in order to better myself in my role as an ICT Specialist and Software Developer. Each staff member has a role in ensuring that communication within their own team and the ICT team as a whole is efficient and sufficient. When I was given the opportunity to work on various projects, I was able to witness this and learn from it. My role allowed me to understand and improve my communication skills more.

# Apply professional standards within a workplace

# Introduction

This document will detail a scenario in my workplace in which I applied the standards of my organisation. It will discuss what it means to apply to professional standards in an IT oriented environment as well as describe various instances within the aforementioned scenario in which I was able to set an example for my colleagues to follow. The document will then conclude with how my experiences in the workplace have shaped my understanding of adhering to professional standards and the importance of doing so in my role as an ICT specialist.

Applying professional standards is an integral part of an IT oriented environment. It comprises mainly of adhering to any SOPs defined by the organisation as well as following any industry standards that the organisation has earmarked as pivotal to being successful in their working environment. In Software Development, these professional standards can relate to planning projects according to an industry standard development cycle, adhering to the organisational SOPs when creating supporting documentation for projects, or developing code that adheres to industry standard for that programming language. These are the areas in which I adhered to professional standards in the workplace.

# Scenario

## Background

I was assigned by my manager to work on a small project that only required one person to in use complete. Many applications in use by the organisation implement external web-based applications to function properly. At present, the majority of these applications are being rewritten so that the application functions entirely on my organisation’s dedicated application. I was tasked with rewriting such an application. The application in question involved generating a pdf document containing details about land holdings. The pdf generation was completed by hard coding a html template for the PDF and sending it to an external application to be converted. My task was to modify this code so that the PDF generation was done entirely within a single application using a dedicated NuGet package. I was also tasked with redesigning the layout of the generated PDF document. This meant that there would be various organisational and professional standards that I would have to adhere to.

## Specification Documentation

First and foremost, it was important that all documentation pertaining to the project was completed in a clear and uniform way. In my organisation, we have several frameworks that we must follow when completing this documentation. These frameworks have been designed according to the industry standard and comprise of various document templates to adhere to when composing our own documents. This meant that I had to ensure that any documentation that I created for this project was completed according to these templates. By doing this, it ensures that all project documentation is the same and can be read and understood clearly by anyone who may need to consult it. Following a clearly defined framework of industry standard when composing project documentation is important to me in my workplace and in my role as an ICT Specialist as it means all projects and programs that I work on will be clearly defined for my managers and to anyone else who may need to work on them in the future, which will result in a better output for the ICT team as a whole.

## Organisational SOPs and Practices

Applying professional standards to any project relies heavily on adhering to any SOPs and practices that have been outlined by my organisation. These generally relate to coding practices, such as using certain packages or code layout, as well as documentation standards, if the application produces any files. In this scenario, the project I had to complete comprised of re writing code so that it functioned exclusively in one single application. This involved implementing an agreed upon NuGet package to generate the PDF file. This package had already been implemented in previous projects by my organisation, therefore this meant that it was already downloaded and available for me to use in my project. This reduced my workload considerably, as I was able to focus on other aspects of the project, instead of spending time searching for an appropriate pdf generator package. By re-using the package in my project, it also meant that some of the code in the other projects could be reused in my own project, thus saving me even more time. The reverse was also true, in that any code I produced could be reused in other projects that required a PDF generator. Following this coding practice is important to me in my role as an ICT Specialist as not only can it reduce my workload, but also that of my ICT Software Development colleagues, meaning that our output is increased and of a higher and standard quality.

My project also involved generating a PDF document. This meant that I had to adhere to the organisation’s predefined standard for official documents. This pertained to ensuring the correct letterhead, font, font size, etc. was used in the document. By doing this it meant that all organisational documentation was of a uniform and similar standard, ensuring that clients, in this case mainly solicitors, would be satisfied with the results. Following this organisational standard is important to me as an ICT Specialist as and as a member of the organisation as a whole, as creating clear and uniform documentation that adheres to a particular standard means clients of the organisation will be satisfied which reflects well on the organisation as a whole.

## General Standards

An important part of completing any project is that it is completed to a high-quality standard. This is only achieved by adhering to general industry standards. These standards can be anything from following a pre-determined schedule, adhering to standard coding practices for each programming language used, or attending all scheduled meetings with the project stakeholders. In this scenario, I had to meet with project stakeholders initially to outline the project and decide on the project schedule, as well as follow-up meetings to discuss the project progress. It was important to attend these meetings as it meant the project could progress as intended and any issues ironed out in a timely manner. Following the project schedule defined for me was essential as it gave me certain goals and milestones to aim for, and meant that of any obstacles were encountered, they could be identified and rectified before the next meeting or milestone. Adhering to a standard coding practice, such as variable and function naming conventions in my project was essential as it meant the code would be readable and easy to follow for project stakeholders or anyone who may need to view the code. Following these industry standards are important for me as an ICT Specialist as it means all my projects are completed to a similar high standard and that they are all comprehensible to my ICT colleagues if they should need to view them. By doing this it means the ICT team will be able to work together and use each other’s work, and as a result have a work output of a higher quality.

# Conclusion

Adhering to and applying professional standards is an essential aspect of working in an ICT environment. It is not only concerning general standards such as following schedules and coding practices, but also following any standards and practices defined by the organisation, which could include documentation and coding standards and practices. These are essential to follow, as they are imperative to the function and output of an ICT department and an organisation as a whole. As an ICT Specialist who is part of this ICT department and organisation it is essential for me to apply professional standards to all aspects of my role as it ensures that I complete what is expected of me in a timely manner and to a high standard.

# Detail an example of managing a key customer relationship

# Introduction

This document will detail an example in my workplace in which I managed a key customer relationship. It will discuss what a key customer relationship is and its importance in an ICT environment, and my experience in managing a key customer relationship. The document will then conclude with how my experiences in the workplace have shaped my understanding of key customer relationships and the importance of managing them in my role as an ICT specialist.

Key customer relationships are an essential part of an IT oriented environment. They comprise mainly of end users of any programs that are developed in the ICT oriented environment. These end users generally are external to the ICT department and organisation, but often they are within the organisation itself, albeit in a different department. These end users, or project stakeholders, will be consulted throughout the project development process in order to be kept up to date on the project progress and to suggest changes if necessary. It is important to maintain these customer relationships, be it by keeping them up to date with progress or informing them of any changes. These are important in the example in which I managed a key customer relationship in the workplace.

# Scenario

## Background

A colleague and I were tasked by our manager to work on a project that concerned the needs of fellow ICT colleagues. We were required to develop an application for the Helpdesk staff in our department to help them with completing daily tasks. The application would automate any tasks that required the manual input of SQL commands, with users filling in the appropriate fields and clicking a button to run the SQL command. This would reduce the chance of any errors occurring that are present when an SQL command is entered manually. The application would also include any other functionality that the Helpdesk staff would find useful. The project development process would include meeting with a representative of the Helpdesk staff to discuss potential features. This Helpdesk staff representative would serve as our go between with the rest of the Helpdesk Staff throughout the rest of the development process. As a result, my colleague and I would have to be able to adequately manage this key customer relationship.

## Managing the Customer Relationship

First and foremost, it was important that my colleague and I met with the customer, in this case the Helpdesk staff, to discuss the project. To do so, we arranged a meeting with a representative of the Helpdesk staff. Before this meeting, my colleague and I discussed and prepared several appropriate questions to ask regarding desired application features. By preparing these questions, we were able to converse with the customer and project confidence in the application we intended to create. This would fill, in turn, the customer themselves with confidence in their finished product. It is an important part of managing a customer relationship to instil the customer with confidence in the work you will and have produced.

Further into the project development progress, it was important to keep the customer up to date with the project progress. This meant scheduling regular meetings with all project stakeholders to discuss and update them about the project. By doing this, it keeps the customer informed about the project and open to enquiring about and suggesting changes to different aspects of the project, which, even if they are not satisfied with some parts of it, they will be confident about the finished product as their input is being recognised and instituted. It is an important part of managing a customer relationship to allow customer input throughout the project development process and fill their confidence even more about the finished product.

Finally, when the project was completed and the application deployed for use by the Helpdesk Staff, it was essential that my colleague and I kept in touch with the customer, in order to be kept aware of any bugs or other issues and problems that may have arisen with the project. This meant responding in a timely manner to any emails or other messages from the customer and fixing any problems or issues promptly. By doing this, the customer is reassured about the quality of the project, and the enthusiasm of the development team even in post-deployment. It is an important part of managing a customer relationship to keep the confidence of the customer even after the project is complete as it could potentially mean more business if the customer decides to return with another project to complete

# Conclusion

Managing key customer relationships is an essential aspect of working in an ICT environment. It is not only concerning external customers, but also customers within the ICT department and organisation as a whole. When completing projects, it is essential that an initial meeting is held with the customer to discuss the project, the customer is kept up to date throughout the development process, and that the development team is still in touch with the customer even after the project is completed, in order to fix any bugs, issues or problems that may arise when the project is deployed. These are important to managing and maintaining a relationship with the customer, as confidence is instilled in the customer, when they meet a prepared development team in the initial meeting, when they are talking to the development team about changing something during a regular progress meeting, and when the development team is addressing any issues they have discovered with the finished product. A confident customer is more likely to be a repeat customer and to bring more customers, which is essential in an ICT oriented environment. As an ICT Specialist, it is important for me to be able to maintain and manage key customer relationships, as it is an essential part of my role that I must be successful at in order to be assigned to and complete high-quality projects in a timely manner.

# Presentation