

End of Year Report

Irish Life

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1st August 2017

DT 228 / 3

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Introduction

Overview of the industry placement

A rewarding, challenging and enjoyable experience. That is the best way to describe the placement to date. The internship was filled with various opportunities to learn new things, meet new people and to develop one's self. Throughout the whole placement, it felt more like one big learning experience and not a standard nine to five job.

There are several different factors that contributed to this. The quality of work that was required was of a high standard. This enabled an individual to challenge themselves, move out of their comfort zone and discover new things about both their self and their abilities. Co-workers were encouraging, complimentary, helpful and promoted "friendly competition". This meant an individual could feel as they had contributed positively when they were complimented for a piece of work. They could also be encouraged and aided by fellow staff members if they ever struggled with a piece of work. The friendly competition also helped the employee to be the best version of themselves that they could be. A vibrant, relaxed and pleasant work environment also enabled the individual to have an enjoyable experience overall.

Review of the industry placement process

The placement process could be described as an unfamiliar, beneficial and a complete experience. The goal of the process itself is to expose the participants to the working world and all that it may have to offer. This is achieved by placing an individual into a business environment that they can use to show off their skills and ideas to assist a business going forward.

For many students, the idea of an interview maybe something of a foreign concept. Some may have had jobs prior to undertaking this process, but will have never had to complete an interview. Likewise, the notion of working a nine to five job may be something that a lot of people have not experienced either. For these reasons, we can describe the process as unfamiliar. However, because of this, the participants gain inside knowledge and first-hand experience as to what interviews and nine to five jobs are really like. These experiences can be extremely beneficial to students who undertake the industry placement. An interview, a nine to five job, a wage, paying taxes, forging new relationships, personal development, these tasks are just some which add up to create a complete experience offered by the process itself.

Company in Context

Description of the student and their role within the company.

Daniel was placed on the Retail IT DevOps team when he started. He also remained there until the end of the placement. Although his team never changed throughout the placement, his role on the team varied as he spent more time at the company.

When placed on the DevOps team, an individual must focus mainly on automated testing for the first few weeks. This will enable them to gain a better understanding of in house applications that are developed. They can also learn about methodologies, standards and third party applications used by the team.

When he started, Daniel was asked to partake in several days of video training to learn about Selenium. It is a piece of software used to mimic user inputs on a web page and can also be used to find problems on those pages. After he completed the videos, his role shifted to working on automated tests which had already been written for in house applications. He had to ensure that if there were any problems with the tests, that they were reported or fixed by him.

Once Daniel had been immersed in the world of automated testing for long enough, he was asked to focus more on the area of continuous integration. TeamCity was the preferred software of choice within the department. Over the course of a few weeks, Daniel learned the ins and outs of TeamCity. He was asked to maintain it, fix any problems with it and look after general administration.

As Daniel's days became numbered at Irish Life, he was asked to take on some development work. After spending months building up knowledge of coding standards, methodologies and continual integration, he was now ready to apply this to his own development work. He was asked to develop and deploy a piece of software that would manage and maintain database connections for various in house applications. Daniel spent the last few weeks of his internship working on this before handing over to one of his colleagues.

Discussion of the contributions made to the company

Whilst employed at Irish Life, many opportunities can present themselves which allow an individual to contribute towards the company. Sometimes these can be small changes, sometimes they can be big. Over the six months he was there, Daniel made several contributions, both big and small to the company.

One of the biggest contributions made by Daniel or any other intern for that matter was, a fresh way of thinking. It so happens when people work for companies for a long time, their ways of thinking can become repetitive or stale. Bringing in new, energetic, young and fresh faces can also bring with it a whole new way of thinking. They can suggest new ways of developing / designing applications. They can bring with them new technologies that they

have used previously. They can also present new ways of looking at problems and come up with innovative ideas on how to solve them. Daniel subconsciously incorporated all of this into his day to day work life and as a result helped others around him.

Some of the smaller things Daniel contributed to were: Changing of the codebase for his team, implementation of new projects on the continuous integration server and the constant re-factoring / fixing of code within the codebase.

Brief review of the primary business of the company and their role within that business.

Irish Life is one of the biggest providers of pensions and investments in Ireland. They also as of late now provide health insurance to anyone who wishes to purchase it. In the department of Retail IT, they mainly deal with developing customer facing web applications. These web apps can be accessed by the likes of brokers or clients / people with a username and password.

Daniel and his team would maintain automated tests for these web applications on an ongoing basis. The applications were subject to monthly updates, which would also in turn require monthly regression tests (test existing functionality on top on new functionality). If these tests encountered any problems, Daniel or his team would have to either fix them or report the problems to the correct team.

In tandem with this, the DevOps team was also in charge of the continuous integration server. This server would do things like compile and run tests on the code, deploy the successfully compiled code to a given server or even run regression tests on the web application. This server was vital in ensuring that monthly releases of the web applications went ahead as proposed.

Work Performed

Description of work undertaken

Three main areas were covered during the placement. One was automated testing, another was continuous integration and the last was development. Each of these areas played a key role in developing practical skills that had already been acquired through college. They also allowed individuals to apply any theoretical knowledge previously learned in a real-world environment.

Testing applications in the world of IT is just as important as the development process. This can often require a lot of man power and resources if the process is manual. To resolve this problem automated testing can be used as an alternative. This can be done through unit testing, system testing or integration testing. Each one of these procedures often requires well-structured designs, clever implementations and many iterations. An individual can take theories and experiences acquired from design and programming modules within a college environment and apply them across this area.

Continuous integration on the other hand is a topic many students may not be aware of. It is rarely talked about in the realms of education and is only fully seen in the working world. For continuous integration to work well, individuals who maintain it must have a decent knowledge of server functionality and task management. Many processes must be micro managed effectively for continuous integration to run smoothly. Students may call on any prior knowledge that relates to networking as well as server and task management to assist them with the area of continuous integration.

With regards to development, there are many skills which are required to have everything run smoothly. Most of the work undertaken will be by an individual who is part of a team. Communication is essential as well as being able to function within that team. Knowing one's place and what they must work on ensures everything runs smoothly. These skills may have been obtained as part of the college curriculum or through previous workplace experience. On top of this, the practical development skills like coding are an integral part of the development process.

Review of Issues, methodologies, processes and procedures used within the company

There were a few things which really stood out within Irish Life. These relate to the areas of security, development methodologies and learning and development. Irish Life, like any other big company is the perfect example of bureaucracy and the notorious "red tape". One quickly learns that there are many procedures and protocols which must be adhered to. This is something that may not be seen in smaller companies.

Security is something that is always big on people's minds. Big companies who utilise large amounts of IT are no exception to this either. Because of this, it comes as no surprise that creativity and ingenuity can be a lot harder to achieve in such a regulated environment. New employees are given very limited privileges when it comes to accessing things such as

servers, files, folders etc. This is often taken for granted as a liberty within smaller companies. On top of this, long drawn out requests must be made whenever an individual requires access to something. These can often take time and can lead to delays with regards to other projects.

The retail IT department employ agile methodologies for the development work. They work off a monthly release schedule and at times things can get a bit hectic. Over a month, the first week is usually spent dealing with any problems from the previous release. New ideas are also proposed for the upcoming release during this week. The next two – three weeks are usually when the main development takes place. Some level of testing is carried out during this period; however, much of the testing is carried out at the end of the month. The test teams along with the automated tests will rigorously test applications to ensure no defects or problems go unnoticed. This final week can often be cut short due to late application pushes which are needed to fix underlying bugs. An “all hands-on deck” approach is sometimes required by the devops / test team to cover as much as possible in a short time.

Within these big companies, there are often a lot of teams to keep track of. Within these various teams there are also different skill sets which are required within the team. For example, there are security, finance, IT, management, legal, human resource teams etc. It is hard to area specific training to every individual within the company. However, it is not hard to give general training to the masses. This is achieved through online quizzes which must be completed every so often. By doing this, the company ensures that employees can stay up to date with standards and regulations which are imposed on them. When it comes to area specific training, this is often promoted within the team itself. Individuals within the DevOps team are given very hands on type training. They may spend their first week watching videos / reading documentation, but after that the approach is a lot more practical. New starters often work alongside colleagues and are encouraged to take on work themselves and ask questions where possible. This can be quite a challenging, yet highly rewarding process itself.

Critical Analysis

Technical and Soft Skills

Upon starting, a clear set of goals were laid out with regards to both technical and soft skills. It is important that an individual knows what they wish to achieve before undertaking anything. By doing this it can often make the task at hand easier and more enjoyable.

Learning new things is something that is very important to Daniel. Because of this he wanted to branch out into areas he had never been exposed to before. Continuous integration and automated testing do not get a lot of exposure within a college environment. For Daniel to gain an understanding of these areas he would also need to develop his communication skills. This was done through real examples such as setting up new projects on the server along with colleagues. By doing this, Daniel could gain experience within unfamiliar areas of IT and was able to evolve areas of both his technical and soft skills.

Leading on from learning new things, it is also important to stay relevant and keep existing skills up to date. Technical skills such as coding and problem solving are two of a developer's main tools. On the DevOps team an individual is usually required to be coding or problem solving on a day to day basis. Because of this it means that they can constantly keep these skills both relevant and up to date. They may be able to incorporate new ideas, methods and ways of thinking into their current skill set because of this also.

Over the six months Daniel was not only able to achieve his original goals, he was also able to accomplish ones which he had not previously thought of. By being placed on a team he could forge new relationships with fellow co-workers. These co-workers were also able to test his abilities as a professional and helped him to mature as an individual.

Your Role within the Company and Your Work

From day one up to now, a lot has changed with both Daniel and his position within the team. Upon starting an individual is seen merely as a new face with the possibility to have great potential. Whether by the end of the placement the words great and potential are used together again rely solely on the individual, how they perform and what the contribute.

It is important that individuals feel settled within a company before major changes begin to happen to them. Being a part of the same team for several months can really assist with this. It allows an individual to forge new relationships, learn all about the company, understand how the team operates and to really feel settled. Whilst the individual can take on various pieces of work within the team, it is important that there is some level of consistency. This was the case for Daniel. From start to finish, the one thing that remained the same was the team. His work varied and became more complex as he became more settled at the company however.

By allowing the work to vary, it also meant that the quality of work being produced could be of a higher standard. As Daniel spent more time at the company, he could get rid of poor practices he may have picked up and adopt better, more professional ones. With the increasing complexity of the work also came a greater challenge. By overcoming these challenges, Daniel was again able to increase the standard of his work once again by testing himself. He was also able to take on more work as time progressed, but was also able to maintain a high quality of work. This all comes down to the saying “practice makes perfect” and that it did for Daniel.

With more work came more chances to show what Daniel could do and what he could contribute to the team and the company. Daniel brought forward several ideas which were later implemented by himself and the team. These ideas meant that the team could enjoy things like easier workload, more efficient workflow and greater task prioritization.

Future Career Plans and Ambitions

There is no better way in life to understand what something will be like than to experience it for oneself. An internship is a fantastic way to experiment with both a company and area within any field. It can help an individual to figure out what they like and what they don't. It can also assist them with college too. They may lean towards certain modules for their final year after undertaking one.

Before undertaking his internship, Daniel was set on doing something in web development and mobile app design. After getting a lot of exposure to web applications and a few mobile apps, he is still happy to proceed down that path. He now not only understands what is involved in developing the applications themselves, but what is also required in the background. All of this will be key to him when he finishes college and continues to work in the world of web development.

DIT and The Company

As mentioned several times already, an internship is majorly beneficial to the participants. Not only do the individuals gain real experience, but they also can forge new relationships, impress future potential employers and develop themselves and their skill sets. Moreover, it also allows DIT and the company in question to forge a prosperous relationship for all involved.

A way in which the internship could be improved is to lessen the written aspect of the continual assessment and adopt a more hands-on approach. Regular bi-monthly sessions or something similar between the supervisor, student and manager / individual within the company may be of more benefit. These sessions could be ten to fifteen minutes and could allow all participants to give feedback / present ideas of their own. These sessions could replace the interim report required by the module and could be graded by the supervisor.

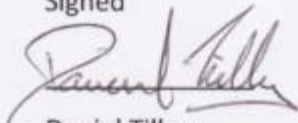
Conclusion

A rewarding, challenging and enjoyable experience. Three words which sum up the entirety of the internship. If future students were given a choice of either six months of classes or six months of an internship, an internship would be the favourable option. One can learn a lot, both practical and non-practical about themselves and their field of study whilst on an internship. Also, it can enable a person to grow and develop in ways that might not be possible in a college environment. For Daniel, this has been the case. He has enjoyed every moment of it, learned a lot and has grown and developed himself in ways he never thought he could.

Declaration A

I hereby certify that this report which I now submit for assessment to the School of Computing, Dublin Institute of Technology on the programme of study leading to the award of **DT228** is entirely my own work and has not been submitted for assessment for any academic purpose other than fulfilment for the stated above.

Signed


Daniel Tilley

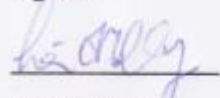
Date

4/8/17

Declaration B

I confirm that this report has been completed without breach of company confidentiality.

Signed


Liam O'Malley

Date

4/8/17