**Introduction**

Being a learner can be considered by many as a lowest occupational level, however after working at the Dynamic Visual Technologies (Pty) Ltd Company based in Sandton for a period of six months in software development field, I can say being a learner is an opportunity for growth more than anything else.

**Background**

Software Development Learnership program is a work based learning program that leads to an NQF registered qualification which is more focused on providing us as learners with work integrated learning, whereby we learn the art of programming in the industry level. It is mostly focused on Microsoft products such as MVC.net and windows form application. Students get professional mentorship and exposure to how company software should be built and structured.

The objectives of the department is to develop students and give them necessary skills needed for companies, and to provide students with 2years experience in the programming environment. As a learner my duty is to develop windows applications and web applications using C#.net and Microsoft SQL Server, I got to develop a full recruitment web application, as part of learning how to structure cooperation websites, we are given problem and we are entitled to solve them.

There are problem solving skills and presentation skills which we must apply within the organization. On weekly basis we develop applications then take those projects after a week sprint, to testing where by the bugs will be identified so that it can be fixed, then after bug fixing we go and present to the mentors and practice heads. We have to apply our knowledge which we obtained from Torque IT where we were taught programming in depth we obtained skills such as life skills, fundamentals, introduction to programming, advanced programming such as Web services and many more.

This learnership program provides necessary skills and work place experience that will open up better employment opportunities. It improves professionalism which is necessary for my projects and how I present them.

My department is responsible for providing us with problem statements whereby we have to come with solutions, and develop applications and websites to resolve what is given to us and make sure it meets the criteria, and as part of the program learners are selected to work in the graduate program in different projects with a different team. Successful learners have the opportunity to be promoted to the next level which is internship program where they will be taken to client side where they work with clients like standard bank and others.

**Personal Role at Workspace**

Since the beginning of the program, we are continuously assigned various responsibilities as teams and we were all given the opportunity to choose if we want more challenging responsibilities that are performed individually so that we can show our skills and abilities and I was among the three learners who chose this option.

The above mentioned option afforded me the opportunity to learn more and to challenge myself to be better than I was initially. The challenges that we were presented with individually included amongst other things, to program a bank application in console within a day, the program was later taken for testing and evaluation and the project was completed successfully.

We were then after given another project which was to create a website for a company, which has features such as recruitment functionality. Part of the requirements for the successful completion of the project, I was required to use technologies such as asp.net, MVC and MS SQL Server. This was difficult because I was supposed to learn about new technologies as the MVC which I did not do it during my studies, I was provided with materials such as books and videos to help me understand better.

However even through the difficulty, I managed to eventually understand what the newly introduced program entailed and at this point today I know how to work with the MVC diligently, and it was through the theory that I learned while I was a student at Tshwane University of Technology which helped me to easily adapt to learning of new theories and then using the theories in application.

At first it was difficult for me to code website since I did C++ at varsity, so I had to understand C# first and learn more about Microsoft products and technologies so that I can be able to use products they offer, through my understanding of visual studio which I learned in first year using visual basic dot net. In C++ I learned basic principles which are necessary to use when building company applications and to make them more secured, I also obtained knowledge through theory classes such as Information Systems and System Software which helped me understand designing architecture and hardware.

The website I did was challenging at first but through the skills I obtained, I managed to adapt and do all the requirements. The website was meant to display information about the company and allow users to apply for learnerships and vacancies using it, it is supposed to help acquisitionist of the company get information about the applicants in a centralized location and it also minimizes their work by providing necessary tools and processing of information on their behalf, such as file organizing and data analysis.

I am currently still working on the website, and it was taken for first and second evaluation. And after the completion of this website, it is going to be used by the company because it is a company that is functioning. This is an achievement for me, and I think it is a start of many opportunities to come because my superiors in the company are impressed with my work and commitment.

As part of experimental learning I was requested to work with the graduates on their project and obtain more knowledge about the organizational structure, we dedicated long hours to completing the project successfully, and through this project I have learned more about software engineer. After the completion of this project we were required to present it to the senior management personnel of the company and the outcome was good and they were impressed.

At first we were divided into teams where we had an invoice application do, it was a challenge channeling into a team of members where we come from different backgrounds and we couldn’t understand each other and the level of understanding was not the same, but we managed to complete it. I also worked with the graduates’ team whereby we had to do an MVC application to save information of people who joined company recently.

It was very challenging because it was my first time actually working on an MVC application, but through the skills I obtained from varsity I managed to adapt very quickly to the project and managed to contribute and even got more experience which helped me when I worked on my recruitment website.

Through the numerous learning and practices and mentors who have been helping me, I was selected to progress to the graduate level from 2017, where I will be programming in java EE, and it is a great achievement because I started off as a learner and from TUT I managed to apply all the skills I possess and the things that I was taught in varsity into the work environment, and it paid off.

I have been able to design a database structure and a complete database using database management system, I have been able to deploy a website and apply system design architecture to all my projects, when I develop it I always follow the FURPS structure of the system whereby I look at the functional requirements, usability, reliability, performance and security where I control how access to the data is monitored.

I learned about agile philosophies in varsity which came in handy to the development approach, I learned that it is important to use agile development approach whereby a system is developed piece by piece putting functions in place to allow for future requirements.

Based on what I learned about programming in varsity I managed to adapt to java because I was studying C++ which is almost similar to java development, I was able to answer all the questions that they asked me about java, and I felt very happy that I can actually answer, and how to structure using front end and backend structuring design and how data is accessed into the database without changing the whole system code. Specific duties that are allocated to me is to solve problems encountered in the organizations and develop applications and websites.