KATHMANDU UNIVERSITY

Dhulikhel Kavre

Internship Report

Company

Seva Development

Supervisor

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Submitted by:

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Acknowledgement

The internship opportunity I had with Seva Development was a great chance for learning and professional development. Therefore, I consider myself as a very lucky individual as I was provided with an opportunity to be a part of it. I am also grateful for having a chance to meet so many wonderful people and professionals who led me through this internship period. Bearing in mind previous I am using this opportunity to express my deepest gratitude and special thanks to the CEO of Seva Development who in spite of being extraordinarily busy with her/his duties, took time out to hear, guide and keep me on the correct path and allowing me to carry out my project at their esteemed organization and extending during the training.

I express my deepest thanks to teachers of Computer Science and Engineering department of Kathmandu University, for taking part in useful decision & giving necessary advices and guidance and organize the internship selection program for all students. I choose this moment to acknowledge this contribution gratefully. I perceive as this opportunity as a big milestone in my career development. I will strive to use gained skills and knowledge in the best possible way, and I will continue to work on their improvement, in order to attain desired career objectives.

ABSTRACT

CHAPTER 1: INTRODUCTION

* 1. Background

Internship is the program given to the student as a course that need to fulfill for the final year of Computer engineering in Kathmandu university. Internship is not only the course but also a real time work experience for the students who wants to purse their career in particular job. It is the opportunity for the undergraduate students to use the theoretical knowledge they have gained throughout the Bachelor's program and apply it at the workplace environment. Not only this course helps to gain work experience but also helps to build soft-skills such as communication skills, teamwork etc. This report is a short description of my three months’ internship at Seva Development. carried out as the compulsory course of final semester for BE in Computer Engineering. The internship program is assigned six credit hours as per the course requirement.

1.2 Objectives

Some of the learning goals and objectives of the internship program are as follows:

* To understand the working concept of Software testing company in Nepal.
* To gain experience in the related professional working expertise field.
* To build up teamwork, meet new people and enhance my communication skills.

CHAPTER 2: DESCRIPTION OF INTERNSHIP

2.1 About organization

Seva Development’s mission is to provide high quality high paying jobs to Nepali graduates and economic development for their villages by providing economical, best-in-class software testing services to companies the United States.

We want to help the people of Nepal work their way out of poverty by empowering the best and brightest students to apply their talents in a way that benefits their local economy. Seva offers exceptional employment and educational opportunities to local Nepali graduates in village regions and contributes to development projects in their communities. [1]

2.2 Internship activities

As an intern first we were headed to Sundarbazar Lamjung.

2.2.1 Overall process

2.2.2 Responsibilities towards team

During the internship period, the portrait objectives and responsibilities within a team are as follows:

* To create attractive design and work with the given platform.
* To learn about the standard JavaScript coding and Mongo dB database as well.
* To make understanding between relation of quality and software testing that plays critical role while developing software in the industry.
* To gain knowledge and work in Agile methodology of software developing life cycle.
* To learn about different types of testing that includes unit testing, functional testing, non-functional testing, component testing, regression testing etc. and apply for real software during development.
* To learn about various manual and automated testing tools like Testlink, JIRA, Selenium UI automation test, Hp testing tool, qTest etc. and implement testing in these tools.
* To create understanding about recurring bugs in the system and way to fix them.

2.2.3 My contribution towards group project.

First we choose **Employee Information System (EIS)** for our own company. We decided to develop such system because it was necessary for our company to track our employee details and it would be great help for company as well. So we divided the project task for each member and started to work on it. My task was to work on the design implementation and database of the system.

1. Website Development

* Created smoothie user interface using CSS.
* Created two database for users present in the system i.e. admin user and normal user
* Connected the interface with Mongo DB.
* Created test cases for my work.

1. Integration of Project with JIRA after creating test cases with TestLink

* TestLink is the open source test management system that helps to create test reports. The test report especially contains test case of passed or failed conclusion of system component. This test report helps to explain developer what are the defects present in the system.
* JIRA is also a tool developed by Australian Atlassian Company for issue management. This tool is useful for bug tracking , issue tracing and project management. In JIRA dashboard, if any bug was found by tester then it can be shown using bug tracking component in JIRA and also the respective bug can be linked with Testlink so that reporting can be easier. In JIRA, we can create the project sprint. Project sprint is the activity tracking method in which we can term project task like “started’” , “on going” or “ completed” which. Sprint gives information to developer/tester about what task is completed or not.

[SNAPSHOT IF NEEDED]

1. Selenium UI automation WebDriver for testing website. [Python]

* Selenium is open source binding module for testing website in automated way. Selenium is available for various platform such as Python, C#, C++. Java etc. Selenium uses web element techniques for locating the element present in the web pages. Selenium uses id, xpath, css, class name, link name etc. to pinpoint the targeted element. Using such attribute selenium can automatically navigate, fill the form etc. to test the website.

1. Functional Testing using Unit Functional testing (UFT)

* Unit testing is done by developers during the development phase. This automation can be done in two ways. One is record and play the test case while another is writing the code.

2.3 Training program

During the Internship period I was given a package of training course which helped us to improve, understand and know our job better. All the course was about the software training. The list of training program which we got during internship period are as follows:

* + 1. **Udemy** (Best software training course you will ever get)

**Udemy** is the platform where we can learn any programming language, marketing strategy courses and much more. Udemy provides a platform for experts to create course which can be offered to people, either free or paid. In other word Udemy is also a platform where we can earn money by offering tuitions. Learning in Udemy has special value like some courses offer certification of the course completion which is a special effort to attract corporate trainers seeking to create coursework for employees of their company.   
During the period of internship, we got Testing training through this platform. Following are the main topics that we learned during the internship period:

* Introduction to the software training.
* Test case scenario, test case and test plan writing.
* Test execution.
* Test strategy and Defect Management.
* JIRA, Bugzilla and qTest tools.
* Automation Overview with QTB
  + 1. **Codecademy**[Python and JavaScript training]

**Codecademy** is a platform or a education company where one can have best learning experience in coding. Codecademy offer many tutorials for learning programming languages for free of cost.

During the internship period I learned some Python and JavaScript language. Python was very useful for Selenium automation. JavaScript was useful while building website of Employee Information System.

* + 1. **Certified Tester Foundation Level** (CTFL) course

Certified Tester Foundation Level course provides us CTFL certification training that helps to pass ISTQB exam. CTFL certification is a rigorous, examination based, professional certification program accepted across the world. This course establishes a professional’s proficiency in Software testing.

The CTFL course provides following main topics and what we learned during the internship period.

* Fundamentals for software training
* Software development process and life cycle
* Static and dynamic techniques
* Test Design technique
* Test Management
* Tools support for Testing
  + 1. **KNOD** learning Experience.

Knod is the distant learning online platform where we can take and learn the courses easily in low price. Knod creates an system where students, educators and employers collaborate on real-world projects generating the hands-on experience. Knod also provides a real time learning experience where one can develop their soft-skills that helps to tackle real life problem. During the internship I gained the following things by studying at Knod.

* Learning communication skills.
* Sync Session with foreign students.
* Video Presentation
* Developing Elevators’ Pitch

CHAPTER 3: REFLECTION ON THE INTERNSHIP

Here, in this section I have shared my overall internship experience and opinion about the internship program.

As a first startup company things were hectic at first and the new environment of the organization took me some time to get used to. The project manager and director of the company helped me a lot to get familiar to the organization. Even though the internship period was three months, it was completed in a blink of an eye because of great cooperation of my companions and friends, I could not feel loneliness. Thus I found that the work environment of company is interactive and places a great deal of effort.

So I gained a lot of skillful experience and familiarity with work culture of IT companies.

3.1 Goal Achieved during the Internship

There are various goal that are achieved during internship. Some of the main achievement are as follows.

3.1.1 Understood the functioning and working culture in an IT company

At first, as an intern I didn’t know how an IT company of Nepal operates. So I pursue the understanding of working mechanism by involving in company project. Here I saw the importance of the financial support and personal capability to run the organization. Company works on their own software development cycle skeleton to gain profit and to avoid the loss. I was not aware of the project delivery time frames but I learned time management after I was forced to be flexible and see what are the ways to manage time. The company works on extensive quality assurance task after the development phase completes and before any deliveries are made to clients in order to avoid defects and bugs which could make loss of company in worst condition.

3.1.2 Improving communication skills

During the internship time frame, we were involved in soft-skills development training engaging in KNOD experience platform where we have to talk to foreign clients almost daily. The online presentation and meeting has contributed to my communication skill a lot. However, I realize that it is only a small fraction of development, which I must improve a lot more in future.

3.1.3 Use of knowledge and skills gained in University

The knowledge I have gained in Kathmandu University helped me to work during internship period. The software engineering course principles, software life cycle and programming that I have learnt during my bachelors were used to fulfil the expectations in internship period.

3.1.4 Better career development

As I have known, that testing QA has not been properly introduced in Nepal. Though various IT companies has QA department, only a few QA are employed. It seems that QA is less important than developer in Nepal which is not true because quality assurance only produces fruitful result. So I see that QA company should be introduced in Nepal for good job opportunity. This internship program has insight me with better viewpoints for deciding my future.

3.2 How I fit into the company

I work here as a Contractor. I was given a three month of internship Contract to evaluate my skills and knowledge. I was on my own part of the system (my project) and thus I have my own responsibility. Internship program is quite different than employee status in company its because people think that this sorts of thing are new to me and it takes time to gain skill and get used to. Though I was just an intern but I felt that I was an employee of the company the time that I have spent here.

3.3 Challenges

Internship program has many learning curve and in those curves there resides many challenges. The challenges that I faced in this program are as follows.

* The most challenging task was how to get onboard as QA in IT industry. The task was different than developer. Using test tools was a new experience for me and it took me a lot effort to understand the principle of testing. I have gone through a lot of online course and training to understand working as a QA. It would have been difficult if I hadn’t had any online courses about testing.
* Testlink is very useful tool for generating the test cases. It was difficult to operate for a first time. It took me a lot of time to learn how to use Testlink.
* Another challenge was Integration JIRA with testlink. This was a toughest task and took a lot of time. After learning the basic operation numerious time , I got familiar to to use JIRA and testlink.
* Error detection in program codes was also difficult task. As the error was undetected in most cases. IT was almost impossible to detect an error unless program flow was clearly understood.

CHAPTER 4: CONCLUSION AND REFERENCES

4.1 Conclusion

It’s a pleasant moment where I put my many years of study in practice. Some of these things that I have learned have been technically and others are more related to working in a company. Working on IT company for a around three months, confirmed that I can easily fit in a software company.

Speaking of technical front, I have learned a lot. I had no idea about the Testing job before my internship at Seva Development. I have seldom touched any testing tools nor have testing experience which hadn’t caught my interest before. Working at Seva Development have made quality improvement in me. I have achieved several learning goals. I got clearer idea about professional IT practice and different aspects of working within a team.

I think there is still a lot of things that need to be discover. There are a lot of rooms that needs to be fill for improvement. Internship opportunity was also a good way to discover my strength and weakness. The internship opportunity has helped me to realize the real life working environment. At last this internship has given me new motivation and insights me to purse a career in IT field.

4.2 References