

# **ST. XAVIER'S COLLEGE**

**(Affiliated to Tribhuvan University)**

**Maitighar, Kathmandu**



**Case Study Report  
On  
Software Engineering - [IT 224]  
At  
“LIS Nepal Pvt. Ltd.”**

For the partial fulfillment of the requirement for the degree of  
Bachelor in Information Management awarded by Tribhuvan University.

**Under the supervision of  
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## CERTIFICATE OF APPROVAL

The undersigned certify that they have read and recommended to the Department of Computer Science for acceptance, a case study on “**Software Engineering**” submitted by **Sanzeena Shrestha(7563/16) and Upekkha Rajkarnikar (7577/16)** in partial fulfillment for the degree of Bachelor in Information Management awarded by Tribhuvan University.

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## **STUDENT DECLARATION**

This is to certify that we have completed the Case Study entitled “**LIS Nepal Pvt. Ltd.**” under the guidance of **Mr. Bal Krishna Subedi** in partial fulfillment of the requirements for the degree of **Bachelor of Information Management** at Faculty of Management, Tribhuvan University. This is our original work and we have not submitted it earlier elsewhere.

Date: 19/10/2019

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## **Chapter 1: Introduction**

LIS Nepal is a service-centric Information Technology firm. With a special focus on the retail industry, LIS Nepal's expertise lies in Business Intelligence (BI), Data Warehousing, and Data Analytics. It is one of the member companies of Yomari Group. LIS Nepal team comprises experienced professionals with specialization in data analytics. Emphasizing on what makes each client unique, LIS Nepal strives to deliver BI strategic solution, tailored to their competitive differentiators.

LIS Nepal is one of the development centers for Logic Information Systems, based in the US which has branch offices globally.

### **1.1 Background**

LIS Nepal was established in July 2014 which acquired analytics and business intelligence professional services company. LIS Nepal is one of the members of the Yomari Group of companies and came into an operation w.e.f. May 15, 2015.

LIS Nepal staffing services are designed to deliver all the key resources any business needs—exactly when it needs them. The team bears deep expertise across all roles related to your company's technology needs, including:

- **Business Analysis-** LIS Nepal is a skilled retail business analyst who can work with the company's team to identify any gaps or opportunities for improvement in the company's current business processes and associated functionality from the company's IT framework. Along with software functional design,

LIS Nepal can provide the business with process improvements, strategic planning, organizational changes and development of new policies to drive growth and higher profitability.

- **Project management-** Proper initiation, planning, and execution of the company's technology goals are impossible without exceptional IT management. LIS Nepal's detailed understanding of leading retail technology and business processes helps in achieving the company's technology goals., LIS Nepal can provide the company's IT team with seasoned project managers to ensure the technology initiatives are not only properly scoped, but also completed on time and on budget.

- **System Architecture-** Complex retail systems architecture models are comprised of many components that need to work perfectly in sync with each other to achieve successful implementation. LIS Nepal's skilled personnel can aid the company's IT

team in planning and designing the retail systems architecture and infrastructure to provide maximum security, stability, and performance.

- **Software Development and Integration-** As the needs and expectations of the employees and customers change, the business must be capable of installing, configuring and integrating new software or developing new functionality to streamline workflow processes and provide the best possible shopping experiences for their customers. LIS Nepal's software development professionals can assist the IT team in integrating, deploying and maintaining new and innovative technologies that increase the business value the IT systems provide.
- **Quality Assurance-** Even the most effective retail software can cause issues for the business if it isn't properly tested and maintained. That's why LIS Nepal employs a number of IT quality assurance professionals to monitor the entire software development process. From requirements definition, software design and coding to source code control, code reviews, testing and release management, LIS Nepal Quality Assurance professionals can validate the safety and quality of the critical business applications.

## **1.2 Mission and Vision**

### **Mission:**

LIS Nepal's mission is to provide specialized and targeted technology consulting needs of the retail industry. In particular, this practice had focused on providing data integration, data warehousing, and Business Intelligence services to large and mid-market retailers who use Oracle Retail (Retek) systems.

### **Vision:**

LIS Nepal's vision is to deliver Business Intelligence strategic solutions, tailored to their competitive differentiators.

## **1.3Area of Engagement**

### **1.3.1 Retail Data Warehouse**

LIS Nepal is experienced in planning, implementing, developing, deploying, and supporting Retail Data warehouse, Oracle Retail Analytics, and Big Data solution for various clients to transform the economics of their business, by providing better intelligence to make well-informed decisions from their data.

LIS Nepal services extend to a range of organizations, including mid-sized regional retailers to global leaders in the retail industry.

### **1.4.2 Analytics and BI Reporting**

In Addition to the implementation of a retail data warehouse, LIS Nepal also leverages huge client data to provide them with analytical reports that ease their understanding of current business and plan for the future.

LIS Nepal brings the implementation expertise, packaged and tailored services, as well as the reporting and dashboarding knowledge to help retailers get the most out of their Oracle Retail Analytics solution.

### **1.4.3 POS System**

LIS Nepal expertise lies in the implementation and customization of Oracle POS applications like Xstore, Locate, and Relate.

Xstore helps Retailers to process transactions quickly, respond to inquiries efficiently, and extend personalized offers based on customer history. With locate, retailers can view inventory available across all sales channels, such as retail stores and distribution centers. Relate unifies marketing planning and management by providing Retail specific, customer relationship marketing (CRM) solution.

### **1.4.4 Consulting**

LIS Nepal provides expert BI consulting advice and services to large and mid-sized global retailers. Whether part of a long-term road map or to meet an immediate need, LIS Nepal's range of analytics services delivers value to customer's business teams and ROI on all their IT efforts.

LIS Nepal consultants, stationed across the globe, guide the business towards an interactive process of analyzing and exploring structured data to determine trends and patterns, along with enabling them to make informed predictive decisions to positively impact their current and future business.

### **1.4.5 Software Solutions**

An impressive pool of LIS Nepal great developers and experts in various technologies and frameworks provide custom-designed software as and when required. The following are some of the areas wherein LIS Nepal has proved the expertise:

- Web-based application design and development.
- Legacy application re-engineering.
- Application conversion & migration.
- Application customization / feature enhancement.
- Business process automation software.



- Supply, delivery of IT hardware and other third party software supply & support.
- IT support & maintenance solutions.
- Mobile Application development.

#### **1.4.6 Enterprise Solutions**

Understanding the clients' key requirements, and more than that, the key performance indicators is what LIS Nepal believe are the driving force for LIS Nepal to initiate enterprise solutions to the customers.

LIS Nepal knowledge partners and the customer-oriented team work together to build these solutions with a rather close association with the clients.

LIS Nepal, ERP team is always keen on understanding the needs of the customers and are meticulously adamant in providing only the best to them. Delivery is not a milestone for LIS, customer satisfaction is.

### **1.5 Current Situation of Organization**

LIS Nepal has currently many projects up and running. There are 65+team members working closely in Development, HR, Operations and Finance teams. technical team working their best to deliver and develop best services to their clients. They are also proving various internships which help student learn real working environment and they provide best platform to learn and grow together as a team.

## **Chapter 2: Case Study Overview**

### **2.1 Software Developers**

Since 2014, LIS Nepal is involved in developing the assist company's IT team in integrating, deploying and maintaining new and innovative technologies that increase the business value the company's IT systems provide.

### **2.2 Questionnaire**

1. What is the hierarchical structure of your organization?
  - It is confidential.
2. How are you advertising your services/ products?
  - We are a solution provider and client software developer. So we don't need to go for advertisement. Project winning is based on Open Tender Bid.
3. Explain the processes that your organization follows while hiring a software engineer?
  - The steps our company follows are as follows:
    - Step 1: First we take a referral from office staff for easy recruitment.
    - Step 2: Promoting engineer from Intern staff
    - Step 3: Create job description, job requirement and post vacancy
    - Step 4: Shortlist candidates based on their curriculum vitae
    - Step 5: Written exam
    - Step 6: 1<sup>st</sup> round interview
    - Step 7: 2<sup>nd</sup> round interview
4. What are the basic requirements for the applicants?
  - The basic requirements for the applicants are they should have good knowledge regarding domain.
5. In general, what are the most difficult parts of the process of software development?
  - The most difficult part of the process of software development is frequent client requirement changes.
6. How is your software superior to others?
  - We cannot say how our software superior is to others.
7. What Human Resource Management practices does your organization follow?
  - It is confidential.
8. What is the main use of your software?

- The main use of our software is:
  - a. Financial management
  - b. Trading
- 9. How efficient is your hierarchical structure?
  - It is very efficient.
- 10. What are the major marketing strategies of the company?
  - The major marketing strategy of the company is that we participate in Open tender bidding.
- 11. How is Human Resource Management helping in the smooth running of the Company?
  - Human resource management helps our company to run through, quarterly, bi-yearly employee performance evaluation and feedback delivery.
- 12. How do you secure your software?
  - We secure our software through the following ways:
    - a. Separate software assessment testing from Infra-security teams before handed over to the client
    - b. Penetration testing of the overall software system including hosting infrastructure
- 13. What is the best-suited programming language and tool?
  - There is no specific one.
- 14. How is the work divided among your employees?
  - The work is divided among our employees according to the following:
    - a. Team leads to track team performance.
    - b. Principle software engineer to track project milestones.
    - c. Managers to manage resource involvement and client
- 15. Describe your selection process and what criteria do you look for when you select a candidate.
  - Our selection process consists of the following:
    - a. Written exam result
    - b. Screening process from 1<sup>st</sup> round interview
- 16. If I wanted to develop software how would you convince me to choose your Company?

- It depends on the client's software requirements. We would show you our previous works on similar software and convey you the benefits of choosing our company. In addition to this, we will provide you the opportunity to check the software in the developing phase.
17. How does the company gather its resources for software development?
- Our company gathers its resources for software development from clients' requirements.
18. Does the major source of work come from within or outside the country?
- The major source of work comes from outside the country.
19. What are your CSR and how have you been completing them?
- CSR is not available in our company right now.
20. Were there any concerns about how your software house would be impacted by using the software model?
- No, there haven't been any concerns about how our software house being impacted by using the software model.
21. Were there any costs associated with the process prior to using the software model?
- Yes, there is a cost associated with the process prior to using the software model.
22. Who are the main targeted customers of your company?
- The main targeted customers of our company are:
    - a. Local client
    - b. Outsourced customers
23. What marketing strategy you follow to launch your projects in the markets?
- We participate in an open tender bidding.
24. How do you tackle the errors and negative feedback of software?
- Firstly, we check and debug our software before handing it to the clients so there are very few chances of the errors. We also provide after-sale services, so that if any error occurs during software operations our representative will go to the site and look and correct the errors.
  - To handle negative feedback we first ask the client the major reason for their dissatisfaction then handle the situation as per requirement.
25. How often are programs updated? Is the total number of updates decided by the client?

- As every software is client-based software, client will provide enhancement requests or additional features requirements.
26. What are the hurdles that you may face while installing software?
- The major hurdles are that the provided infrastructure are not industry standard or of low spec.
27. Do you provide maintenance service for your software free or you take certain fees for it?
- It depends upon the projects.
28. What programming languages and tools (frameworks) you use for the development of Software?
- We have used Java, .NET, c#, PHP for the development of software.
29. On what basis do you take the internees of trainees?
- When it comes to taking the internees of trainees, we contact to college administration and also take the referrals.
30. What programming languages have you used in the past? What are your tops two programming languages currently used in software houses?
- We have used Java, .NET, c#. The top two programming languages currently used are Java and asp .NET.

## **Chapter 3: Report Analysis**

### **3.1 Result**

LIS Nepal is a service-centric Information Technology organization. It is one of the member companies of Yomari Group. Established in July 2014, it provides specialized and targeted technology consulting needs of the retail industry.

We got a chance to know about LIS Nepal Pvt. Ltd. and the work they carry out in the technology field. They are customer-centered organization and gives their full dedication to satisfying the customers through customized software. Their major goal is to provide solutions to their clients by providing higher quality work. They work for increasing goodwill and providing full services to the clients throughout the tender period.

Software engineering is a point by point study of investigating breaking down user's needs and designing, constructing, and testing end-user applications that will satisfy these necessities using the software programming languages. Software engineering emerged when a product, for the most part, surpasses courses of timelines, budgets, and reduced levels of quality. It guarantees that the application is built reliably, accurately, on schedule and on spending plan and inside necessities. The demand for software engineering also emerged to take into account the gigantic rate of progress in user requirements and environment on which applications should work.

### **3.2 Conclusion**

From our case study, we can conclude that software development in Nepal is in a progressive phase. In this paper, "LIS Nepal Pvt. Ltd." was used as a case study. LIS Nepal has been providing a lot of contributions to the development of software in Nepal. LIS Nepal has helped in recruiting talented employees as well as sharpening the talents of employees.

After this completion of this paper we came to comprehend the real software engineering process in the real world. We also understand what is a good software system, and what a development process would need to include to build software. We also understand what software engineering devices and strategies are utilized and how it is helping in the real world this case study helped us to know a lot more about the software companies.

In light of this case study we have better learning in the field of IT. How the software is created? How software maintenance is done? How the software's are overseen? This was a significant inquiry and after finishing this investigation we can get out the majority of our issues. What's more, this case study demonstrated to be exceptionally productive for our IT profession.

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