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Working Report on the development operations in the context of n-Tier Solutions Ltd.

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Internship Report
Spring 2010

Working Report on the development operations in the context of n-Tier Solutions Ltd.

by

Nafis Ahmed
ID: 0510271

An Internship Report Presented in Partial Fulfillment
of the Requirements for the Degree
Bachelor of Business Administration

INDEPENDENT UNIVERSITY, BANGLADESH
April, 2010

Working Report on the development operations in the context of n-Tier Solutions Ltd.

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Nafis Ahmed
ID: 0510271

Has been approved by

April, 2010

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Abdullah Al Aabed
Lecturer
School of Business
Independent University, Bangladesh
April, 2010

April 20th 2010

Mr. Abdullah Al Aabed
Lecturer
School of Business
Independent University, Bangladesh (IUB)

Subject: Letter of Transmittal

Dear Sir,

I would like to take this opportunity to thank you for the guidance and support you have provided me with during the course of this report. Without your help, this report would not have been possible to complete. With deep gratitude, I also acknowledge the help provided by Mustafa Zuhair Ibn Yahya, Managing Director, and Sumon Sarker, Chief Design Engineer, nTier Solutions Ltd. for providing me with utmost supervision during my internship in the company.

I would really appreciate if you would enlighten me with your thoughts and views regarding the report. Also, if you wish to enquire about an aspect of my report, I gladly would answer your queries.

Thank you again for your support and patience.

Yours Sincerely,

Nafis Ahmed
ID: 0510271

Acknowledgements

In the completion of this internship report I would like to thank a few people for their support and guidance. First I would like to express my gratitude to Mr. Mustafa Zuhair Ibn Yahya, Managing Director, and Sumon Sarker, Chief Design Engineer, for their assistance and encouragement during the path of my internship.

I would like to thank Mr. Abdullah Al Aabed, my university supervisor, for directing me throughout the planning and writing of the report. After providing me proper guidance from the very beginning he never failed to assist me regardless of the enormity of my troubles by keeping a cool head and providing step-by-step procedures on upcoming activities.

Table of Contents

1.0	Intorduction	1
2.0	Company Background	2
2.1	Summaryof Products and Services	2
2.1.1	Out-of-the-box Applications	3
2.1.2	Customized Applications	4
2.1.3	Web Sites & Applications	4
2.1.4	n-Tier Securities	6
3.0	Some Of Our Clients	7
4.0	My position as an Intern at nTiers	10
4.1	Field Assignments	10
4.2	Regular Office Work Participation	12
5.0	My Learning	12
6.0	Conclusion	13

Abstract

For my internship program as part of my curriculum on Bachelor of Business Administration at Independent University, Bangladesh I was assigned to work as an intern in Tier Solutions Ltd. for a period of two months starting from March 2010 and ending in April 2010. There I was placed under direct supervision of the Managing Director of the company Mr. Mustafa Zuhair Ibn Yahya as as most of my work orders were to come from him. I was also assigned to Sumon Sarker, Chief Design Engineer at Tier Solutions Ltd later on for assistance to the design and program construction phases of development projects at work. With the office located in Uttara, although a stipulated office time was discussed, however, the nature of work involved demanded for a different approach, to remain active until work at hand was completed within given deadlines and sometimes involved field visits to different locations from where the client would operate, sometimes to provide skilled physical assistance and in other times to attend pre-arranged meetings with clients, for example, to gain information regarding changes that the client would appreciate.

The report as created below will discuss on a number of topics starting with the company€s operations to its role play in the growing sector of Information Technology in the context of the current status of software and web development companies operating from within Bangladesh and my involvement in the processes to include my contributions to the company throughout my period of internship.

Most of the information collected to compile this report was gained as primary data through experience and discussions with the working members of the office and the clients I was privileged to meet. However there are large sections in this document that contains information collected through secondary data collection means. Most information regarding the company€s profile as well as some of the client€s information was collected through secondary data

1.0 Introduction

N-tier Solutions Ltd. is a software and web applications development company based in Uttara, Dhaka. The company specializes in development of special and customized software and web applications and programs designed to work in the specific context of the client, satisfying every need and requirement through the developed applications. The company€s main operation is to develop applications usually of software nature but also goes to include development of hardware solutions which are necessary in order to provide some of the other services the company provides such as development of security applications. An illustration of all of the company€s products and services are provided within the company€s description. The core working groups of the company are the Design and Programming department and the Client Management department both of which are under direct supervision of the Managing Director. All operations start from the client€s side. When a client new or old comes to the company with a query, a request or a complaint the issue is addressed directly by the managing director from whence working orders are sent to different departments. With the start of a new project, for example, when a client comes to the company their queries and requests are first understood and a solution proposed. With an agreeable solution reached, the tasks are then transferred to the design and programming department from where a practicable solution is designed. After agreement with the client on final solution proposed the designers then hand the work over to the programmers to begin construction. From here it may also be discovered what resources may be required to complete the task at hand. After discussing on the issue a figure amount is reached in terms of development costs to the client. The client base of the company includes private as well as military or government branches as clients and stretches nationally and internationally covering a number of different countries across the world. The company retains capabilities development of solutions ranging from small customized application development to aid-existing software or processes to complete full-scale Enterprise Resource Planning (ERP) solutions.

2.0 Company Background

nTier Solutions Ltd within a short span of its operation, has proved to be a unique software development firm: in the sense that all of its solutions were proven to be reliable beyond expectation. In addition, providing on-shot support has enabled the company to gain respect and trust from many of its clients.

The company's unique technical architecture was designed after deep research, which not only ensures smoother running of an application, but also guarantees minimal downtime and state-of-the art security ensuring corporate dependability. The company's dynamic real-time help system, a technology developed solely by our able development team, is based upon expert system, where our software learns patterns and usage habits of a user to give him/her a real-time help that is most applicable for the user.

Within a short period of its official operation, nTier Solutions has achieved a client-list which can be boasted by only a small number of software companies of Bangladesh. To top that The company has also pierced into the International Market, with two North American companies already selecting nTier Solutions as their official development partners for Pan-Asia region.

2.1 Summary of Products and Services

The company provides the following services with full dedication and expertise to a wide range of clients:

- Software Development
  - Off-The-Shelf
  - Customized
- Web Application Development
- Web Site Development
- Network Solutions
- Professional Multimedia Solutions
- Audio-Visual Editing & Remastering
- Data-Entry
- Security Systems (CCTV)
- Specialized Interfaces

2.1.1. Out-of-the-box Applications

Some of the company€s Client-Ready applications are mentioned below:

nTier Financial Management System

Complete automation of your financial management, with seamless synchrony to your needs. All transaction forms, five level charts of accounts, Multi-Currency option, nineteen different generalized report, and need based customizable reports, form some of the salient features of this module.

nTier LC Management System

Generates official and legal documents pertaining import and export, including automated generation of proforma invoice, and bank wise tracking of each L/C as well as real-time status reports, with our unique L/C Management System.

nTier Inventory Management System

Take control of your raw materials, unfinished goods, and store stocks, with automated and integrated stock control system. nTier Array comes with a range of features needed to manage your inventory, from purchase to sales, reducing unexpected losses, and mismanagement.

Supply Chain, Production & Distribution Management System

nTier Distribution features performance appraisal reports, distributor and product wise sales report, vehicle management for distribution, and more, to help track your finished goods right from the warehouse to secondary sellers or distributors.

nTier HR Management System

Track your manpower from recruitment to retirement with complete automation of Human Resource Management, including demographic data with optional biometric identification, automated recruitment process, performance appraisal, training management, compete provident fund management system, to tell a few of the features of nTier HR Management.

nTier Wages- Payroll Management System

Liberate yourself from the toils of calculating your employee salaries and wages at the end of each month. Our nTier Wages salary package comes with integrated grade wise salary structure that can be tailor made to your corporate needs, with automated, gratuity, bonus, perks or other addition as well as deductions wherever applicable. This module can be seamlessly integrated with nTier HR Management and our specialized attendance system, to form a composite Human Resource automation of your Human Resource department.

2.1.2Customized Applications

No two solutions are the same. Out-of-the-box solutions for enterprises don't exactly do what you need. People working with ready-made software end up compromising their quality and ease of work. While umbrellas serve you in rain and sun, raincoats don't really do so. Our customized software is tailor made for your exact needs. Don't work for the software, make the software work for you.

We appreciate how valuable your data is to you. So we design your system architecture using fail safe technology for maximum robustness. Plus, most of your customizations can be readily achieved by changing our established modules. In other words, since we have the core, your needs can be fulfilled in an astonishing rate. With us, you can be working in the automated world in no time! Contact us, we'll make a schedule to visit you, analyze your system, and make estimations on time and cost. If we see eye to eye, we develop your software in the stipulated time.

2.1.3Web Sites & Applications

In this age of Information technology, your entire corporate presence is dependent on having a great website. Your website is your signboard, brochure and the visiting card on the information superhighway. However, a website can go a long way in helping your business maintenance in more than the ways you might think possible. Thus web applications are now on the trend, where you can also manage your office through browser based applications, running on any PC that has access to Internet.

Many of our ERP modules are thus developed in Browser platform, so that you, as the manager or the owner of a business, is updated on real-time on every happenings on your factory or office.

Our dynamic websites ensure that clients update their contents from their own office without regular dependency on us. This makes the website happening in mode all the time at the clients will. We provide with secured administrative site for the purpose.

Our web services also includes Domain Registration and Secured hosting in state-of-the-art servers hosted with T1 connections in USA. Our web technology includes Unix, Windows (Dot.Net) servers with multiple FTP, Independent Control Panel, Web Mail, POP Mail (Outlook, Thunderbird and Eudora Compatible), Multi-Recipient Emails, dynamic web stats and many more.

Some of our developed websites

The Anti Corruption Commission – Official Website.

This is a completely dynamic, dual language (English & Bangla) website available for general viewers. The website gives detailed information on the working of the commission, online complaint lodging system, dynamic news and events updates, dynamic verdicts and notices, as well as a comprehensive knowledge base.

URL: www.acc.org.bd

The Laser Medical Center

A completely dynamic website for a technologically advanced clinic. Gives details of their services, an extensive knowledge base on laser technology in treatments and online ‚Know your Skin' Feedback form. A completely dynamic Doctor Section deals with patients logging in to a dedicated account online to share their information with selective doctors while a doctors login allows the doctors to provide feedback online. URL: www.lasermedicalbd.com

TV Islam – USA

A Live Transmission online TV broadcasting system (under testing), researched and developed by nTier Solutions, for the first time in Bangladesh.

Previously, many companies developed Video-on-demand system that worked in leu with You-Tube and other on-demand video websites. However, this is the first time that live video feeds are transmitted online with such configuration that minimal buffers are required, resulting in smooth, real-time TV viewing with only average speed internet connectivity. The website is still under test run to finalize best video and audio throughputs, and has features of both Video-on-demand as well as Live TV Feeds. The website uses CDN technology that dynamically detects geographical location of clients requests, and provides fastest TV Feeds using nearest mirror server to the client, ensuring an almost TV like experience on the internet. The website has features that can enable users to toggle between browser skin or Full-Screen modes.

URLS: www.theislamictv.com || www.islamictvusa.com || www.islamictvworld.com

The Narayanganj Club Ltd

A Completely dynamic Club Website for The Narayanganj Club. The website has individual login for each member, where they can change/edit their information giving them a broadcasting page through the club.

Dynamic features included real-time updatable news , events and announcement pages, as well as a completely dynamic members directory.

An affiliates section provides details of affiliated clubs and hotels all around the world. A graphically attractive Photo Gallery ensures a complete aesthetic web experience for any viewers visiting the site.

URL: www.narayanganjclub.com

2.1.4n-Tier Securities

Commercial:

Monitor your employees or clients at your shop or office from anywhere with nTier Security solutions, with added advantages of loss prevention and inventory control.

Residential:

With your safety in mind, monitor your home from anywhere around the world, and receive instant notifications for anything you want including security breaches, nanny alert etc. You

can also record whats going on and verify alarms to make sure it wasn't a stray cat entering your house.

Industrial:

Protect your industrial assets to increase profitability, and make sure you are always insurance compliant. nTier securities is all about your corporate safety and security.

Not only that, to ensure that we are a •byte€ ahead, our integrated nTier Security CCTV and remote monitoring interfaces on Browser end, so that you can view, monitor and control your office, shop or factory from your home in Dhaka or your vacation suit in Hawaii!

3.0 Some Of Our Clients

Following is a brief overview of some of our prime clients:

Anti Corruption Commission (DUDOK)

We have, in secured server for the prime corruption fighting organization in the country. Further automations with ACC is also underway. The software is a complete automation of acc three phase including:

Networking

- Central server configurations
- Physical connectivity
- Hierarchy based network access and file sharing
- Internal mail server and real time network communication
- Gateway security configuration and back up system configuration

Software Development

- HRM system for acc
- Stock control and inventory management system
- Customized Financial Accounting and Budgetary Control System
- Internal MIS paperless office system, which includes personal task scheduler management, local mailer, task assignment management, live communication.

Developed the official web application hosted at www.acc.org.bd

- Dynamic news and verdicts update
- Online complaint system
- Dynamic tenders n notices
- Knowledge based section

DGFI – Directorate General of Forces Intelligence

DGFI is a prime intelligence agency in Bangladesh. We have provided multiple solutions for the DGFI including:

- National Human Resource Database, a complete and comprehensive database, one of the largest national level database in the country containing over 75 million data in clustered database.
- Management Information System, MIS application for its specialized units
- Biometrics Solutions, Integrated Biometric solution for the DGFI for fingerprint recognition with close support with Innovatrics of France.
- Feasibility study team on behalf of DGFI for developing the project of national ID card and national Biometric solution 2008
- Developed number of blogs and news portals.

Bangladesh Army

We have developed Artillery Fire Control System (AFCS), a specialized long range military automation for Artillery unit of Bangladesh Army. 9th Arty Brigade in Savar coordinates with the project under Artillery Directorate of Bangladesh Army HQ.

RDRS Bangladesh

We have developed Provident Fund Customer Ledger and General Ledger (PFCL, PFGL) customized software application for RDRS Bangladesh, a renowned NGO for northern region

RDRS Enterprise Pvt. Ltd.

RDRS Enterprise Pvt. Ltd. is a commercial company of RDRS, for which we have developed integrated Accounts and Inventory Management system with integrated HR reports.

Akij Group

We developed complete customized ERP for Akij Textile Mills Ltd, which included integrated accounts, inventory, distribution and biometric attendance system. Additional provided and installed complete security systems in ATML Worked closely with marketing team of Akij Foods and Beverage Ltd to develop one of the most comprehensive and happening portal in Bangladesh, dedicated to its official beverage at mojomasti.com.

Mondol Group

nTier Solutions Ltd. had developed complete ERP solution including integrated Accounts, Inventory, Sales and Distribution Management for Montrims Ltd, a concern of Mondol Group.

Redox Chemical Industries Ltd

Developed Customized Inventory and Sales System for Redox Chemical Industries Ltd.

TV Islam USA

For the first time in Bangladesh, a LIVE TV Transmission channel was developed. This was done for US based TV Channel, TV Islam, USA, in collaboration with CDN Partners, Netro.ca, of Canada. The site uses Cloud CDN Technology to broadcast live TV transmission across the globe with real time image compression, allowing viewers with slow connection to watch live TV. (www.theislamictv.com)

Manarat Dhaka International College

Developed customized Web Portal for the college, that includes state of the art dynamic sections, including online admission process, result publications, and online teacher student communications suit. (www.manaratcollege.org)

Hanif Spinning Mills Ltd

Developed Customized ERP for Hanif Textiles including Financial Accounting System, Supply Chain and Distribution Management, Four Tier Inventory Management, L/C (Import & Export).

4.0 My position as an Intern at nTiers

As an intern at nTier Solutions Ltd my primary job was to aid the core management team. I was attached to the managing director of the company at first at which point after introducing me to the company's daily affairs and specifying my role also gave me assignments from time to time. He explained that my primary task would be to aid Mr. Mahbub Alam, Junior officer in day to day affairs. Beyond which he would give me certain tasks to complete within specified time frames. These would not necessarily be regular office work but field tasks. The tasks assigned to me are discussed topic wise below:

4.1 Field Assignments

Part of my job was to aid in communication between different clients and sources of information and this required me to travel to different places across the city. They are discussed topic-wise below along with a preview of the topic.

Grievance Handling Solution:

One of the former clients of nTier Solutions Ltd. the Asian Development Bank (ADB) approached the company early last March with a new query for software design. The grievance handling system of the Government of Bangladesh is currently an entirely manual system. The ADB and the Cabinet Ministry of the government invited us to a meeting to discuss the development of a digital grievance handling system. In other words they were looking for a software based solution to the current infrastructure. To aid Mr. Zuhair during the day long meeting I travelled to the public services commission and the secretariat with him. Since then I have visited the cabinet ministry twice on two related occasions and once more to the ADB office in Agargaon to aid in communication and other meetings and presentations.

Automated Vehicle Locating System (AVL S):

The automated vehicle locating system is a brand new technology coming to Bangladesh. It is a system through which the owner of a vehicle can locate, monitor and interfere with certain aspects of the vehicle remotely, with only the aid of a computer and an internet connection. The vehicle uses a sophisticated hardware solution that uses both GPS and GPRS to communicate with the parent control. One of our previous clients Ibn Sina Group communicated with us and asked whether we have any off the shelf solutions. Although we

did not, the managing director decided to develop the technology owing greatly to the fact that the company had taken previous projects and does have a hardware solution, but not from the software end and hence the project lagged for a while. After the meeting with Ibn Sina I was assigned to find out detailed information about certain devices form the internet as well as a certain vendor of the current technology located in Mohakhali. Soon, more vendors of similar technology emerged and my assignment was extended to cover their solutions and their costs.

Point Of Sale Equipments:

A new client named Baboo's Fast Food and Mini Chinese communicated with us inquiring about off the shelf computer based POS solutions integrated with an Inventory Management solution. With software available already made previously by the company, my task was to update the price and availability of different POS devices such as bar code readers receipt printers, bar code printers, electronic cash drawers, etc. For this I was handed a list of at first seven vendors' addresses and then four more addresses two days later located across the city and a week to collect the quoted prices. I was also asked to take part in some of the meetings held as well as communicate with the client and present samples of different equipments and also discuss regarding their compatibility with his business.

Shopno Departmental Store

Shopno departmental stores is a single business unit of Advanced Chemical Industries (ACI) Ltd. ACI Ltd. is a previous client of the firm and had recently approached us with a problem. It seemed that their new SBU Shopno, stores located around the city are underperforming. They believe this is down to poor communications between branch employees and central command. According to them, failing equipments, faulty and delayed repair works are to blame. Therefore they needed a complain management system to be developed. The company decided to develop software using a new programming language called Flex. Flex is a new web-to-desktop interface generating programming language that can also handle mass amounts of data from enormous databases very efficiently. Some of my tasks apart from participating in various meetings were to aid in creating a proposal document as well as a presentation for the company representing a proposed solution.

Thermax Spinning Mills Ltd.

Thermax spinning mills is a previous client of the company and recently the company had been developing new parts inventory management and order management modules to pre existing software running in the mills. The company designed and developed ERP solution for the factory in Narsingdi. On one occasion there was a requirement for a visit to the factory location to install a module recently developed. Although the decision to participate was voluntary I volunteered and participated with a programming team of three people to travel to location and aid in installation of the new modules.

4.2 Regular Office Work Participation

My job description outlined that if I was not assigned to specific assignments I would need to participate in regular office work by aiding Mr. Mahbub. This usually included working in organizing and managing different files and folders around the office and the office inventory of sample products and computer parts. Aid in installing and removing specific software components form office computers was also part of the job. I was assigned to aid in designing segments of different presentations as well as helping in editing portions of different documents, brochures, catalogues, etc. from time to time.

5.0 My learning

In university all the learning is theoretical. In our classrooms we have learned how the basics of business are operated and we learn about big business enterprise and how theu have been operating. Here I gained a firsthand experience on how an office conducts its daily operations and how it operates in its market. Although nTier Solutions Ltd. is relatively small in scale it is a company that is successful in its field of business and a pioneer for design innovations and customized solutions. Here I experienced the opportunity to work under a small firm environment but due to its nature of business also gained the opportunity to visit other firms and interact with them on a business to business level. Here I was given the chance to use my learnt abilities and to put them to good use as we faced many clients with a rainbow variance of requirements and more importantly one that needed the help form such a company as the one I was working for. I used my academic skills to aid me many times during presentations and meetings with clients and gained firsthand experience in client as well as office

management. Through my internship experience I also learned about the existence of small firms such as the one I worked for and their importance in the greater economy.

6.0 Conclusion

Throughout my internship there were many things to learn. What we learned in the classroom was of application in this environment. I learned how different business enterprises worked and operated with each other. I also learned the importance and value that nTier Solutions provides to its clients by being flexible enough to provide customized solutions that delivered results as expected. It is not that if such small firms did not exist, the big firms could not do what they do, but rather that they would have to struggle more than what is really necessary. It is a service that the firm provides to mainstream industries and investment and management groups so that their operations become easier and they can provide better service at more effective prices to their end-users. It serves as part of a chain of event that shapes the end nature of business as it is today.

Reference

n-Tiers - Corporate Profile (collected from office upon request)

A

Appendix

A.1 List of Acronyms

ERP	Enterprise Resource Planning
ADB	Asian Development Bank
AVLS	Automated Vehicle Locating System
CDN	Content Delivery Network
ACI	Advanced Chemical Industries Ltd.
CCTV	Closed-Circuit Television
LC	Letter of Credit
ACC	Anti-Corruption Commission
HR	Human Resource
PC	Personal Computer
SBU	Single Business Unit
FTP	File Transfer Protocol.