Internship Report

On

"Automation on the Banking System by Ultimus Software: A cash study of Meghna Bank"

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INTERNSHIP REPORT

ON

"AUTOMATION ON THE BANKING SYSTEM BY ULTIMUS SOFTWARE: A CASH STUDY OF MEGHNA BANK"

SUBMITTED TO:

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SUBMITTED BY:

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Major in Management Information System

Department of Bachelor of Business Administration

DATE OF SUBMISSION: 5th October, 2021

Letter of Transmittal

5th of October, 2021

Ms. Mimnun Sultana

Assistant Professor

School of Business and Economics

United International University

Subject: Submission of the internship report on **Automation on the banking system by Ultimus Software: A cash study of "Meghna Bank"**

Dear Ma'am,

I am very well pleased to submit my internship report title as **Automation on the banking system by Ultimus Software: A cash study of "Meghna Bank"** which was assigned to me and that was required for graduation from the Bachelor of Business Administration program. In order to achieve all the requirements and instructions you have given me all over the last few months, I have tried to do my best.

I appreciate that it gives me much pleasure to tell you that working on this report has given me a wide range of exposure. The report is based on the knowledge, and experience of my academic life and I sincerely believe that this report helped me to quest a new experience. I tried my best to make this report as informative as possible.

I am requesting you to approve this report. I hope that this report based on artificial intelligence will satisfy you. For any of your further queries I would be at your disposal at your convenience. Thank you.

Sincerely yours,

Sumaya Habiba

Sumaya Habiba

ID: 111 181 119

United International University

Student Declaration

I, Sumaya Habiba, hereby solemnly declare that the presented report is uniquely prepared by me. The title is **Automation on the banking system by Ultimus Software: A cash study of "Meghna Bank".** That report is prepared after completing the internship.

Hereby I confirm that this report is not submitted anywhere and this report is prepared for my academic purpose.

Sumaya Habiba

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111 181 119

School of Business and Economics

United International University

Acknowledgment

At the very beginning, I would like to thank the almighty Allah for blessing me with the strength; aptitude & patience to successfully complete the BBA course and prepare this report within a time.

Firstly, my heartiest thanks go to my supervisor **Ms. Mimnun Sultana, Assistant Professor, United International University** for her guidance and who helped me immensely to prepare and complete this report. I am grateful to her for supporting me and giving me the proper direction

Secondly, thanks to all the people who have helped me a lot in this pandemic situation. Without this helps, I have probably not finished this report on time, so I would like to express my gratitude to all of you. I received full of assistance from the Liability operation department of Meghna Bank. Mainly I express my gratitude with regard to MR. Swarup Dhar, Head of Liability Operations, and Riad Ahmed, Senior Principal officer and also thanks to Ashik Rohman and Rayman Khan Niaz HR officers who gave me all the support that I needed badly to prepare this report.

Finally, thanks to each and every one who has helped and supported me significantly in different stages during the periods.

EXECUTIVE SUMMARY

A Fourth Generation Bank is the Meghna Bank and its journey starts from 09 May, 2013. Meghna Bank is a commercial Bank and all branches are run on commercial basis. Meghna Bank offers their customers different types of services. And the Liability Operation Department plays a vital role because this department handles documents to the entire branch's customer. Always need permission of liability operation to need any information about account holders. All information stored in Liability Operation and they store customer information by their "Ultimus Software" system.

In this report, I describe "Ultimus Software" and how the bank is benefiting from using this system software. And I also talk about the banking sector updating day by day by with system software created. For Automation in the banking system, customers and bankers both are benefited. So I am discussing system software development and by Ultimus Software use to the banking system is improving. The banking automation technology was very helpful for their employees because by using this system software their work was easy and consumed their time. That's why the bank employee provides better service day by day. And also there has been no change to lose and damage documents. If any problem arises in the archive but that will not be a hassle for the employees because that was input into the software system.

In this report, there are 5 chapters and discusses the banking system by Ultimus Software of Meghna Bank. In Chapter 1 I have given a short description about the process and essential step that has been followed. In chapter 2 I have discussed methodology, roles and responsibility. In chapter 3 I have given information about MEGHNA BANK LTD. In Chapter 4 there is discussion about automation of the banking system by Ultimus Software of Meghna Bank. And In chapter 5 there are all finding and recommendations and also the conclusion.

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Chapter One

INTRODUCTION

1. INTRODUCTION

Banks are one of the major sectors and also are the lifeline of any modern economy. The banking sector is an important financial stagnation of the financial sector. The bank does not generate money, it helps to diffuse and recycle money, to change wealth through a country's national boundaries. The bank is the lifeline of all industrial and commercial operations that help to grow the entire economy of a nation and also helps to flow funds and secure financial capital." But on the other hand, the bank offers various facilities to run its company smoothly. Bank also offers clients and customers with various facilities such as locker facility, withdrawal services, credit card, online payment system, performance guarantee, etc.

In Bangladesh, there are 63 scheduled banking institutions all over the country at present. Our standards of living are improving day by day by modern online banking. Banks make it a lot easier for an individual to have home loans, auto loans, farm loans, personal loans, and so on.

Nowadays in the banking sector, they are using various software's to improve performances and gets more secure and also give more service to the customer. Software is not just a computer program; it also comprises documentation and arrangement data which is required for the program to work perfectly. A professional software developer must have a proper knowledge about documentation because for a system running correctly and successfully there needs to be proper documentation by a software bank that records all data of a customer. So that's why more time was saved in a banking system and bank authorized people don't get hassle to keep customer records. Software gives smarter, easier, and faster ways of improving the banking system day by day and also reduces fraud, affordably. In a banking sector they use more verities software to get more facilities and better work and performance of the core banking system. Banks use different software for different departments. In this way banks boost their operation and optimize resources. Technology is filling up all organizations in the world day by day, and people get more diffident on technology and they don't work without technology. That is getting easier in human life and these young generations learn to use technology and find their jobs easier. And this way improves the modern economy.

In this report, I tried to display the working of the banking account system and describe the basic performance of a bank account management system. The main goal of this report is to determine how to solve the financial application of a customer in a bank environment by using software for the Bank Account Management System. They increase the quality of software systems. Firstly, I try to discuss effective software productivity, applied techniques, and identification. Secondly, discuss software performance. This software is database type software and used to store all clients information. Software used for the purpose of storage of client's information. Bankers were very helpful by using this software system and they easily handle their entire client's information and also other activities by this software. Main thing is that Automation is the biggest contributor in the banking sectors and also improving day by day in these sectors.

1.1 Origin Of the report

An internship report prepared as a requirement for the completion of the BBA program of United International University. The Internship is a program where a student can work in an organization to gain real-life knowledge of the corporate world and to get experience and also gain working skills. The Internship report is mandatory for BBA program students and there are also 3 credits. Because only academic perception that is not enough for executive life. For gaining practical knowledge this internship was required. So, I was thankful that I had a chance to do an internship program in the Department of liability operations at the head office of Meghna Bank Limited. The title of this report is "Automation of Banking System by Ultimus Software: A Cash Study of Meghna Bank". For these three months, period I have prepared my internship report under the supervision and guidance of Ms. Mimnun Sultana, Assistant Professor of the United International University.

1.2 Objects of the reports

The main objective of this report is to find a way of improving and securing the banking system by using modern technology and also for society to profit. That will gain experience about banking systems and technology which is a partial requirement of the BBA program. And I prepare this report using of my academic knowledge and working knowledge as well. There are some objectives presented below:

1.2.1. Board Objectives

- Knowing the success of Meghna Bank Limited
- Performance of the Meghna Bank of use software system
- Observe the profitability, Market position of Meghna Bank
- Also, observe their banking activities
- How they conduct their operation in a system software
- How a bank grow in a modern economy by using modern technology
- To achieve practical knowledge about the uses of a software system

1.2.2. Specific Objectives

- ✓ Collect data about the banking system and their services
- ✓ To get overall idea of the banking system their way of uses
- ✓ Analyze how to get more secure to banking system software
- ✓ How bank doing effective and efficient analysis by their system software
- ✓ Find out the problem which is happening in work times
- ✓ And find ways to solve those problems
- ✓ To suggest the cardinal step to resolve the Meghna Bank's problem

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Chapter Two

METHODOLOGY

2. METHODOLOGY

This report is made based on the different relevant sources of knowledge. This report prepares both secondary and primary sources.

2.1. Primary Data

Primary data is the traditional data and basic way of collecting the data. And this data is very helpful and easiest to collect. For all reports that data is firstly collected by everyone.

- Practical work involvement
- Through perception
- Face to face communication with employee of liability operation department
- Collect data when I worked at organization

2.2. Secondary Data

Secondary data is collected from the other research basis and relates with similar documents. That is very helpful for creating a report and that data can be qualitative and also quantitative.

- Through Internet
- Company Annual report
- Website of organization
- Monitor their software and other software also
- Website of other organization and other similar software

2.3. Methods of collecting data

i. I collect the data from the banking officers who have already been working here for a few months.

ii. After my internship, I also connected with an officer by email, and messenger, or WhatsApp.

iii. I asked them questions when I faced problems or was confused about some issues.

iv. I observed some documents and files.

v. I also relate with other software functionality and working ways.

2.4. Limitations of the study

When I am working on this report, I face some difficulties and limitations. And some issues arose that were very hard to overcome. There also some weaknesses that I found out when I was working there:

- There is a limited period to prepare the report.
- For Covid- 19 impacted, are difficulties for all workers and also fresher's.
- Their System software that they used for the liability operation department that I know little more about was creating very problematic for me.
- Some information that was very sensitive for banks and did not share with various people for their security purpose.
- For lack of technology like a computer, they don't use their computer for security purposes because there is a lot of information about clients and any information missing that creates a very big problem.

2.5. Internship Roles and Responsibilities

I started my internship in the Head office of MEGHNA BANK LIMITED at their liability operation department on 6th March 2021 and completed 6th June 2021.

- ❖ I was responsible for fill-up their target and checking all files within a time.
- ❖ And find their file and also manage the file.
- ❖ Find out the problems in the files and also solve that properly.
- ❖ Collect all requirements for those that are needed.
- ❖ Sometimes doing inputted data for requirement purpose.
- ❖ Prepare Account opening form and necessary documents.
- ❖ Prepare documents according to their branches.
- ❖ Monitor and try to help others to solve a problem of a file.

Chapter 3

INTRODUCTIONS OF BANK

3. Company Profile

Meghna Bank is a Fourth generation Bank, and its activities started on May 9, 2013. Their pay-off line is “Together We Sail”

Objective: In this industry, they try to be the best service provider and assuring customer satisfaction with their technology and their professionalism.

Their promise to the customer:

- ✓ They recognize their bank as the best quality bank in Bangladesh.
- ✓ They provide excellent and coherent services to all customers.
- ✓ By creating and sharing value, they create a long-term partner especially with all customers.
- ✓ They create customer trust in financial issues.

3.1. Vision

At Meghna Bank, We want to be recognized as an essential Institution for the unbanked through zealous participation in the financial inclusion process.

3.2. Missions

At Meghna Bank, We want to be among the best service providers in the industry by ensuring complete customer satisfaction through the application of technology, professionalism & nursing.

3.3. Core Values

- To continue, completely flexible financial institutions and liable corporate citizens.
- To assure a sustained growth of the institution and reach the aspiration tangible with intangible prospect of the shareholders.
- Requires, Care and Fulfillment of customers that to be important to all our operating activities.

- Encourage a well work environment and Meghna Bank is thinks about an ideal institution to be associated with a pleasant in house culture

3.4. Banking Areas

The Meghna Bank has 47 branches and 18 own ATM booths covering commercially important locations of the country. The principal place of business and registered office of the bank is located at Suvastu Imam Square (Level-06), 65 Gulshan Avenue, Gulshan 01, Dhaka-1212. There have distract branches as Barisal, Chittagong, Feni, Joypurhut, Madaripur, Noyakhali, Sirajgonj, Bogura, Comilla, Gazipur, Khulna, Chandpur, Rajbari, Sylhet, Munshigonj, Jessor, Kisorgonj, Narayangonj, Rajshahi, Dinajpur, Jhalokathi, Rangpur, Khustiya, and Narsingdi.

Also there are ATM's booths in Dhaka, Gazipur, Barisal, Bogura, Khulna, Rangpur, Dinajpur, and Sirajgonj.

3.5. Management Structure

- For Strategic planning their 13 members of the board of directors are accountable.
- The projects are noticed by an Audit and Risk Management Committee within the board.
- Deputy Directors are responsible for achieving targets for the CEO and the manager.
- By the committee of management Significant concerns are seen.
- On the whole there are many management teams in various departments and their roles are different.
- If any problems or difficulties arise then all department managers meet and decide what they should do and how to solve the problem.
- Any big issues arise then they talk to each other and always contact each other.
- Department managers always pass information to their top management.
- Management always supports their internal and external partners.

In this bank, For Strategic planning and total policies guidance there are 15 members of the boards of directors. The Chief Executive Officer, Managing Director, Deputy Managing Director and Head of Divisions are Responsible for the accomplishment of company objectives and management of day to day activities. In a management team they are led by a CEO and Managing Director. The management has been rewarded with the support and association of all internal and external partners. All facts and figure items as review significant by the management has been presented differently in the financial statements. The basic objective of which is the interrelated management of the Bank's assets and liabilities, current banking laws and regulations, and mainly acceptable banking practices.

3.6. Organization Hierarchy

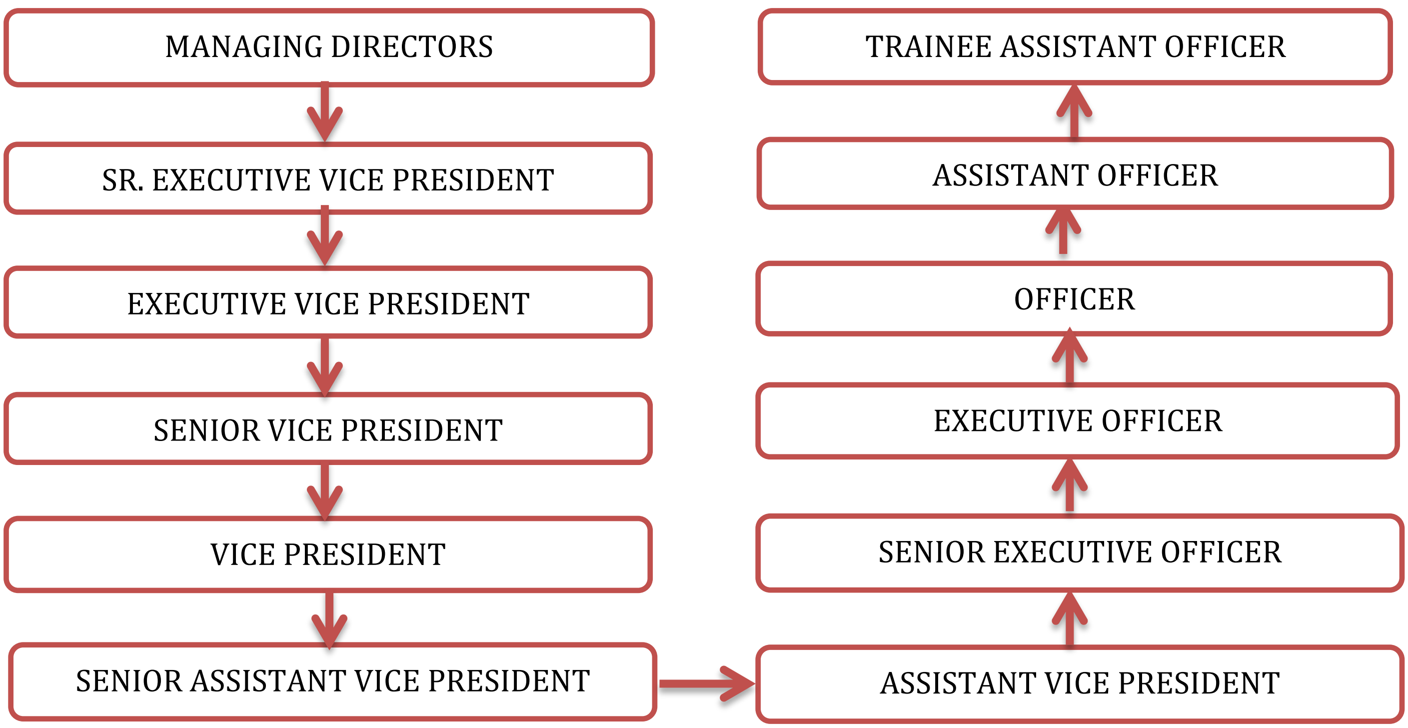

Figure 1: Organization Hierarchy

Organization hierarchy is present in all company roles that organize is very important. There are top level, middle level, and low level. This hierarchy shows how a company is organized. Top level management sets organization goals and middle level management conducts the goals, and low level management controls all work units. In the Meghna Bank there is also an organization hierarchy and I also try to present that.

3.7. Major Services of Meghna Bank

First, There are personal Banking describe like–

1. **Deposit Products**
    - ✓ Platinum Savers Account
    - ✓ Regular Savings Account
    - ✓ Sreyoshi Savings Account
    - ✓ Meghna Nirapad Fixed Deposit
    - ✓ Meghna Salary Account
    - ✓ Regular Current Account
    - ✓ Deposit Pension Scheme
    - ✓ Meghna Fixed Deposit
    - ✓ Young Star's Account

2. **Loan Products**
    - ✓ Meghna Personal Loan
    - ✓ Meghna Home Loan
    - ✓ Meghna Auto Loan

3. **MGBL Credit Card**
    - ✓ Platinum Credit Card
    - ✓ Visa Gold Credit Card
    - ✓ Visa Silver Credit Card

4. **Digital Service Request**

    This service is requested for all customers. Now Meghna Bank offers limited services but they try to increase their services. The baking system is updated day by day and also customer demand. In digital services, for customers that are very easy and helpful and also consumes time and hassle free for customers. That's why digital services get more demandable to customers.

Second, There are Business Banking describe like–

A. Trade Service Products

i. Trade Products:

- ✓ Letter of Credit (Documentary Credit)
- ✓ Back-to-back Letter of Credit
- ✓ Shipping Guarantee
- ✓ Export LC (Advising & Transfer)
- ✓ Letter of Guarantee
- ✓ Import Bill Handling
- ✓ Export Bill Negotiation/Collection
- ✓ Import Loan
- ✓ Letter of Trust Receipt (LTR)
- ✓ Time Loan

ii. Specialized Trade Service Products are:

- ✓ EDF loan
- ✓ Refinancing
- ✓ Packing Credit
- ✓ Time Loan / Short term loan (tailor made)
- ✓ Tailor made Structured LC

B. Cash Management Solutions

- ✓ Payment & Collection Solutions
- ✓ Bulk Cheque Processing
- ✓ Utility Bill Collection
- ✓ Vendor/Salary payment
- ✓ Cash Pick Up & Delivery
- ✓ IPO Processing as Banker of Issue and/or Lead Bank
- ✓ Internet Banking
- ✓ Automated Cheque Writing Software
- ✓ Host-to-Host Connectivity.

C. Structured Finance Solutions
D. Working Capital Finance
E. Long Term Loan & Project Finance
F. SME banking

3.8. Departmental activities of Meghna Bank (Liability and operation department)

In Meghna Bank, there are various departments to complete their activities. As an intern, I had work in their liability operation so I describe their activities that are given below:

In liability operation, they have to check their all customers file branch wise. If any problem creates and requires filling up some issues from the customer then they contact those branches and return the file for correction. After that when in the file there is no problem then that is input in their server system. If any problem is required in any branch of the customer file then they contact the liability operation department then they try to solve the problem. In their Liability operation department they have a team and that team is always working on their server and giving service to their customers. They try to serve their best quality service and try to manage the time.

The Meghna Bank plays an important role because they have organized and managed the entire branch's client's information. They create archives by branch and input all files. After that they input into a software system for life-time services and store documents by scanning. If any branch faces problems then they contact the Liability Operation Department. Without the help of the liability Operation department there cannot solve the client information problems. For this Ultimus software they can easily handle all their files and immediately support their others branches. In this Liability operation there all employees give service by this system software. There is one team that manages the file and another that is an input file in system software. And another team has given services to the other branches in a system for permission in the system. If any problem arises then that is solved by top management as department head or senior principal officer of liability operation.

3.9. Corporate Banking of Meghna Bank

Meghna Bank gives their customers a verity of goods and services. According to the needs and preferences of their customers, they frequently propose a significant amount of money. Meghna Bank's intention is to enlarge and keep a long term shared comprehension and a high yielding connection with corporate customers. They try to give the best quality service and they also upgrade their service style.

3.10. Performance of Meghna Bank

I. **Primary Activities:** In the bank their primary activities are doing a business by providing services as a set up commercial Bank and also more projects linked with banking business. Meghna Bank recently provides their services through 47 branches. They introduce their own ATM network over the country to fulfill customer demand. Meghna Bank includes more services in their business like accepting deposits, allowing withdrawal, extending credit to borrowers, trade financing, project financing, lease and hire purchase financing, credit cards, remittance service etc. And they establish mobile banking, internet banking, credit card etc.

II. **Human Resource:** In the bank, they maintain a good working environment, motivating the workforce and immediate benefit. By human resource they enhance their knowledge level, abilities, and development of skills.

III. **Financial Position and performance of the bank:** During the year of 2019 their bank was satisfactory. Their total asset and liability increased by 5.50 billion and also growth of 12.54% over the year. And overall growth results are accessible in the audit financial of the bank.

IV. **Shareholder's Equity:** Their shareholder's equity is increased by 2.56%. And 4.698 billion was the payment of the Meghna Bank.

V. **Subsidiary of the Bank:** Their subsidiary company is Meghna Bank Securities Limited. In 2019, they achieved gradual growth. After tax they were earning a net profit of tk. 2.67 million.

VI. **Appointment of Auditors:** The Bank has completed their first as statutory auditor by M/s. Mahfel Haq & Co. Chartered Accountants. And this chartered company offered themselves for reappointment and Meghna Bank also accepted. And that chartered accountant fee was BDT 300,000 plus VAT.

VII. **Recommendation Dividend:** In 2019, the board of directors decided to declare no dividend and they recommended to the shareholders in the 7th Annual General Meeting for their acceptance.

3.11. Risk Management Process of Meghna Bank

The technique of risk management is an activity that permits an organization's management to accomplish the desired profitability metrics and to intercept the deployment of unjustified resources. The risk management process of Meghna Bank focuses on a compatible outlook of many risks, going on disciplined risk analysis, evaluation, and tracking. The Danger acceptance is from the board of directors that were Policies and methods of management. There are some roles and responsibilities of the board risk management committee like risk identification and control policy, construction of organizational structure, management information system, executive risk management, board and senior management oversight, sound capital assessment, comprehensive assessment of risk in supervisor review process, and monitor and reporting.

Figure 2 : Risk Management Process

A clear understanding of various risks, measurement procedure and monitoring is the strategy of the MGBL's risk management. They always try to improve their Risk Management system. By Bangladesh Bank, they cover six core risk areas in the risk management of the bank. The areas are like–

a. Credit Risk Management
b. Foreign Exchange Risk Management
c. Asset Liability Risk Management
d. Money laundering & Terrorist Financing Risk Management
e. Internal Control and Compliance
f. Information & Communication Technology Risk

As under the Bangladesh Bank, the Meghna Bank took the steps to implement the guidelines and then calculative business risk.

3.12. Business Ethics of Meghna Bank

Reputation Risk is the inherent destruction to the position and identity of the Bank, arising from events such as flow in production levels or service nature, acquiescence, corporate governance, and management frustration and defection from business ethics, etc. There are few corporate ethics deal discuss below–

- Agreement of low
- Preserve of rules and regulation
- Protection of the bank's reputation
- Concern for stakeholders
- Law, action and excellence
- Productive and logical management control
- Respect of autonomy and consistency of ethics
- Getting involved in a community
- Screening clients

3.13. Roles of Core Banking solutions in banking System

The modern technology change the traditional banking system and now a days modern technology is easier human life style because in the bank sector is more updated day by day. By the e-banking system all customer pay all bills from anywhere, just download the software in their android phone and then from anywhere they pay bills, and also 24 hours they collect money from bank account by ATM. Most popular things is that has happened recently is that now people can open accounts from anywhere with their devices. Core banking system is help to the customer by get services easily like anytime customer get services by ATMs, Internet Banking, and Mobile Banking. This core banking system give services by use technology those services get too simply procedures. There are some cores objects include:

- Core banking is day by day improving customer experience because customers get services anytime & anywhere. That is very important for the banking system.
- Core banking system is uses technology that's why automated the banking system. Bank and customer both are benefited because their time is saved and work easier. With this automation system huge amounts of information are stored easily and remove manual systems.
- Core banking system is quickly accessible and solves the problem after that gives service quickly to the customer. And also there are changes to the customization.

Core banking system is the bank automation system that helps to get customer satisfaction, efficiency and profitability. Core banking system provides a unique system and those systems are classified by bank criteria. By the core banking system client and bank employee both are benefited like quick and easy access, less manpower, and less error etc. And that is why we create good relationships with customers.

Chapter 4

DISCUSSION OF FINDING AUTOMATION OF BANKING SYSTEM BY ULTIMUS SOFTWARE

4. AUTOMATION OF BANKING SYSTEM BY ULTIMUS SOFTWARE

Automation is a process or computer base system that is run automatically and the technique of making an application. For use of automation in bank system there are so many advantages build like:

- Reduce cost
- Human intervention
- Enhance quality and
- Grow manufacturing speed.

Automation in the banking sector improves the customer's satisfaction and that is reducing the traditional banking process. Automation was improving the banking system because that is easier to manage the overall banking system. By the various systems software developed for a bank and gets more services to their customers. The Meghna Bank also automates their banking system by using various systems software's such as Ultimus Software. How change automation in the banking sector-

A. **Superior Banking system:** That digital technology is superior to the banking system and Used ABCD digital technology like artificial intelligence, Big data analysis, cloud computing, and Device in different operations as know your customer. That increases cost efficiency and better customer experience.
B. **ATM Protection:** Customers help by this automation because customers get service anytime and anywhere by ATM. And that is very secure because there are face detection and CCTV cameras. AI technique use of protection so there decrease risk,
C. **Quick fraud detection:** Customers trust the bank and the bank need to achieve their trust so automation helps build this trust. The banks set the fraud detection system then the bank increases efficiency, reduces costs, and gets satisfaction to the customers.
D. **Risk Management:** By using automation technology there risk management is very helpful to reduce risk. And Manage all the data and information correctly.

E. **Providing Security:** The banking sectors improve by using automation technology. Using this technology, bank provides customers with better service and ensures their customer's money. And customers transaction their money without thinking or sharing information.

4.1. Ultimus Software Development Life Cycles

Software is suitable for every industry and all of the industry is growing day by day for use of those types of software. Software industries grow after the second war and after that create job opportunities and also change in economy. Now I am discussing about software development life cycles (SDLC) of Ultimus Software. This is a very important part for every software development. In Meghna bank, they provide service to the customer by using Ultimus Software and the user of this software is an employee of the Liability Operation department. Bank authority is the client and business analysis information gathered from the bank authority or Management team. All methods are discussed below:

Figure 3: Software Life Cycles

Above the figure shows that the software development cycle such as planning, Analysis, Design, Implementation, Testing & Integration, and Maintenance. This is a very important part for all software development processes. The Software Analyst maintains all of the parts in this cycle.

4.1.1. Planning of Ultimus Software

When Meghna Bank thinks that they have a need this type of software then they contract with business analysis of one of the IT Company and they collect all requirement of this software basis like what type of software is it, who is using, how they want to use that and which types of services they want to give.

After that, all requirement processes were done then business analysis had planning and measurement of the costs and risks. When business analysis or project managers get the project then they determine then the project feasibility, plan the schedule, and also how they implement this project by low cost. All the planning was recorded and when all requirements were understood then project manager created a report that is SRS (Software Requirement Specification) and that report should be understood from top to bottom by developers. Then review with user expectation. There are some functions of Project management.

1. **Scoping:** Firstly, project developers set the limits of the project. They have product, quality, time, cost, and resources.
2. **Planning:** This is the most important for developers. Project developers identify the tasks required to finish the project. They can identify the task in two ways those are Work Breakdown Structure and Milestone.
3. **Estimating:** Project developers identifying the resources required to fulfill the project. Efficiency was not a hundred percent because no workers performed at 100% and I think almost 75% was almost enough to finish the project, and 10-40% can happen during interruptions. There are 4 types of estimates and I think they used one of those estimates for estimating project duration like optimistic duration, pessimistic duration, expected duration, and most likely duration.
4. **Scheduling:** Project developers developing the plan to fulfill the project. There are two types of scheduling that one is forward and another is reverse.
5. **Organizing:** Project Manager making sure that the project developers understands their roles and responsibility. Project managers must recruit talented people and

also highly motivated people, Select the task according to the person, plan for the prospective, and create small teams.

6. **Directing:** Organizing the whole project and there are 4 steps: Forming (Orientation Stage), Storming (Internal Problem Solving Stage), Norming (Growth and Productivity Stage), and Performing (Evaluation and Control Stage). Leadership is very important for this step
7. **Controlling:** Project Manager monitoring the overall Progress reporting, Change management, Expectations management, and Schedule adjustments—critical path analysis (CPA)
8. **Closing:** Project Manager or project analysts evaluate the success and failure.

4.1.2. System Analysis Process of Ultimus Software

The Meghna Bank has a banking system that is Ultimus Software and that is processes, collects, and stores all customer data of the bank and outputs the information when those are needed by the Bank. There are uses of systems analysis and design methods so I will describe all of the methods that are used in Ultimus System Software. Ultimus Software was built for a data process, store and collect data. There is the use of an information system and information technology of system analysis and design. To create this system they had system analysis and project managers like system builders, system designers, system users, and system owners. Also, there was project and process management like system initiation, system analysis, system design, and system implementation. There are two types of drivers: business and technology and they are used in Transaction processing systems, Management information systems, Design support systems, Executive information systems, Expert systems, Communication and collaboration systems, and Office automation systems.

- **System Owners:** The bank management is the owner of this system and their primary concern was system cost, value, benefits, and system giving back to the business.

- **System Users:** In this system of the bank there are only internal users like bank workers.
- **System Designer:** There are Database Administrator, Network architects, Web designers, and security expects for this system software.
- **System Builder:** There also have programmers (Application, System, and Data Management), Network Administrators, and Webmasters.
- **System Analyst:** A system analyst monitors all the programmers, network Administrators, design experts, consultants, database administrator, system Owner, Users, and various committees.

Systems Analysts work in a team that is permanently assigned. They work with the financial system team, human resource systems team, operation system team, research and development system team, unassigned developers, and all of the departmental computing. A system analyst must have some skills like knowing IT, programming, business problem solving, communication skills, flexibility, adaptability, and Ethics.

4.1.3. System Design Process of Ultimus Software

System design is a procedure of designing the segment and makes a technical solution that assures the functional requirement for a system like software and hardware architecture, modules, interface, and components.

List of Process

I. **Prepare for system design:** For Established system design there needed to support technical environment and tools. And also needed training of the team members. System design is addressed with involved team members. Finally, established a team and environment for system design.

II. **Define technical architecture:** In terms of system hardware, system software, and supporting tools, where the system has identified the foundation and structure. Across the architecture of the various system components for distribution is developed by the strategy.

III. **Define System Standard:** There are some ordinary processes, techniques, tools and conventions that are also used over the entire project. The project is identified in an effort to optimize efficiency and introduce the entire project.

IV. **Create physical Database:** They use actual databases and that will be used for defining systems, validating systems, and optimizing systems. Also confirm accuracy and reliability of the data. And they find database and system files.

V. **Prototype System Components:** Develop more components of the solution, confirm better illustrated and proposed solutions. Their prototype and proof of concept results.

VI. **Produce Technical Specifications:** for all components of the system, setting the stage for System Construction are translated where the operational requirements of the system and into a series of technical design specifications.

System design focuses on subjects, objects and programs. Architecture, Modules, Components, Interface, Data those are system elements. There are some tasks happen when system design processes such as

- initialize design definition
- established design characteristic
- For obtaining system elements access alternatives and
- Manage the design.

During system design there are some affect technology trade off like

- Sale of product
- Cost time
- Efficiency
- User experience and support
- Reduce cost
- Maintainability
- Reliability and
- Scalability

All system architects handle all of the things mentioned above and that is must handle especially because design software architects should reduce error. After all, time and cost also can decrease. All parts are important. If one part is missing then they cannot develop a reliable software system.

There are examples of system design:

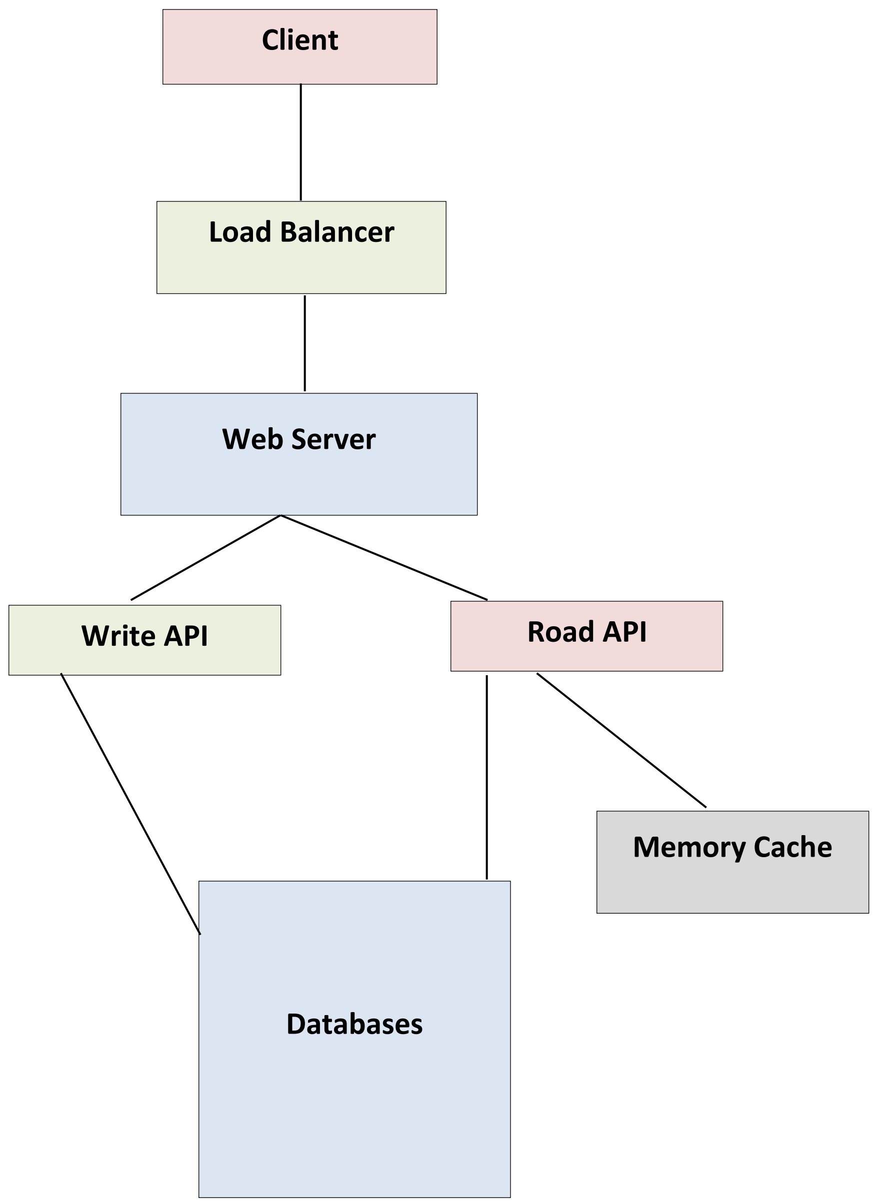

Figure 4: System Design and Architect Model

Overhead the diagram there are discussions that in system design and architecture there is transaction different information from Client to Server. Transaction the data there is needed for permission and to handle this request there is need to balance the load. In a web server, there are different ways to handle the web API. Because there is some information given from the database, some information given from a cache server and some given from another gateway.

4.1.4. System Development and Implementation Process of Ultimus Software

System Development Process is the activity of explaining, designing, testing, implementing, deliverables, and automated tools that partners use to progress and constantly upgrade the latest information system and software. If they try to maintain or ensure quality then they must use CMM (Capability Maturity Model). CMM is the framework for implementing information system development and processes management. In CMM there are five levels and for system development those five maturity levels will be completed. For this Ultimus Software Development there also used CMM because they aren't done and optimize without the CMM. How use those levels in software that will be discuss below–

- **Maturity Level 1 (Initial):** When the software is established then firstly this stage will come and that will be predictable and not prescribed here. This is the worst level for a business. When Ultimus software was in this initial stage that management also faced those problems and took the risk.
- **Maturity Level 2 (Repeatable):** At this level, the software management team planned, performed, measured, marked project cost, scheduled, and functionality. But still, more issues arise.
- **Maturity Level 3 (Defined):** At this level, their software was developed and processes established. This stage is also called methodology. This stage is very important for software development and implementation. The software management team sets a goal for how and in which way that software was implemented and developed.

- **Maturity Level 4 (Managed):** This level is extra measured and controlled because quality and productivity were established. At this level, they used quantitative data to set on predictable processes that were set for the user requirement basis.
- **Maturity Level 5 (Optimized**): That is established based on level 4. At this final stage the Management team enhanced their software with predictable data and implementation. At that level, software was more stable and almost growing. Also try to improve and respond with user needs.

In this CMM model, we cannot skip any of the levels. From one level to the next level it takes more time and it's so difficult to complete the level. So, CMM is the most important part for implementation software or projects. In this way the Management team was established or adapting and growing user or customer needs.

SOFTWARE DEVELOPMENT TOOLS

There are some tools used to develop this Ultimus system. I think to develop this software their software architecture could use those tools. Those are describing below:

Software	Adobe Dreamweaver, Adobe Photoshop
Programming Language	C#, ASP.NET CORE,
Database Management System	Oracle
Version Controlling System	Git, Github
Web Server	IIS Server

A. **Adobe Dreamweaver**

This is a web development tool that originated for Adobe. Dreamweaver assists developers to create a website by online and offline, allowing developers to design, code and lead websites with mobile content. In this software there can be coding by using HTML (Hypertext Markup Language), CSS (Cascading Style Sheets).

B. **Adobe Photoshop**

Adobe Photoshop was made by Adobe Inc. This is a tool that helps the designer. A graphic designer can make a website design with Adobe Photoshop. Every website is two things of web design. One is the prototypes of the website and another is the implements of prototypes into a design. So Adobe Photoshop enhances visualization of websites that helps to make a good decision to interactive design and visualization.

C. **C#**

C Sharp is an object-oriented programming language that originates from Microsoft Corporation. C Sharp is similar to Java and based on C++. C sharp is enhanced to build many secure and robust applications that run Dot Net. C sharp built-in supports those Garbage Collection, Nullable Types, Exception Handling, Lambda Expression, LINQ (Language Integrated Query), Asynchronous Operation, Generic Method and Types, User-Defined Types and so many. OOP is the most popular programming paradigm. OOP is based on Class and Object. A class is a blueprint of an object. OOP has four principles: Inheritance, Encapsulation, Abstraction, and Polymorphism.

D. **ASP.NET Core**

ASP.NET is an open-source web framework built on C Sharp, created by Microsoft, for building a modern web application. ASP Stands for Active Server Page. ASP.NET Core is the latest version of ASP.NET that builds to create web applications and services that are fast, secure, cross-platform, and cloud-based.

E. **Oracle**

OracleDB (Oracle Database) is an RDMS (Relational Database Management System) made by Oracle Corporation. Data is a most powerful monument for the modern world. Data is stored in the table in row and column wise. A database is a set of data tables that store in storage on a computer. The database is many types such as Relational Database, Object-oriented Database, Distributed Database, Data warehouses, NoSQL Database, Graph Database, Open Source Database, Cloud Database, Multi model Database, Document/JSON Database, and Self-driving Database. Most commonly uses two types of database: one of the SQL (Structured Programming Language) another NoSQL (Not Only SQL). SQL was introduced by IBM in the 1970s and Oracle was a significant contributor. Many top tech companies use Relational Databases. Relational Databases are OracleDB, TSQL, MySQL and PostgreSQL. All Relational Databases use SQL as their standard database language for storing, manipulating and retrieving data from a storage. OracleDB has many types Enterprise Edition, Standard Edition, Express Edition, Oracle Lite and Personal Edition. Oracle Database is giving many features such as availability, security, scalability, performance, analytics and management.

F. <u>Git & Github</u>

Git is software for tracking any changes of files. Git was developed by Linus Torvalds in 2005. Git is fully open-source software. Git is used to storing software source code for collaboration with all other team members. Github is a web-based version controlling system for software developers that collaborate with each other.

G. <u>IIS Server</u>

IIS stands for Internet Information Services. Microsoft creates a web server that is IIS. IIS server only supports the Windows platform. IIS Express is a lightweight version of IIS. IIS supports many protocols such as HTTP, HTTP/2, and HTTPS, FTP, FTPS, SMTP, and NNTP.

Implementation

System analysts used so many techniques for the design implementation. Through coding implement the design into source code. To identify defects and errors there all the modules get together into the training environment. And into this environment combine the information system and install the new system. There are some test related tasks like test case generation, testing criteria, and resource allocation for testing and that is added for a test report. A rest report contains error and those are prepared through a test plan. For implementation the system there needed training. Training systems or software operators guide their team members to implement the project and they train users, guideline users and they follow some methods also and those help implement the project properly.

Bank Management System Data Flow

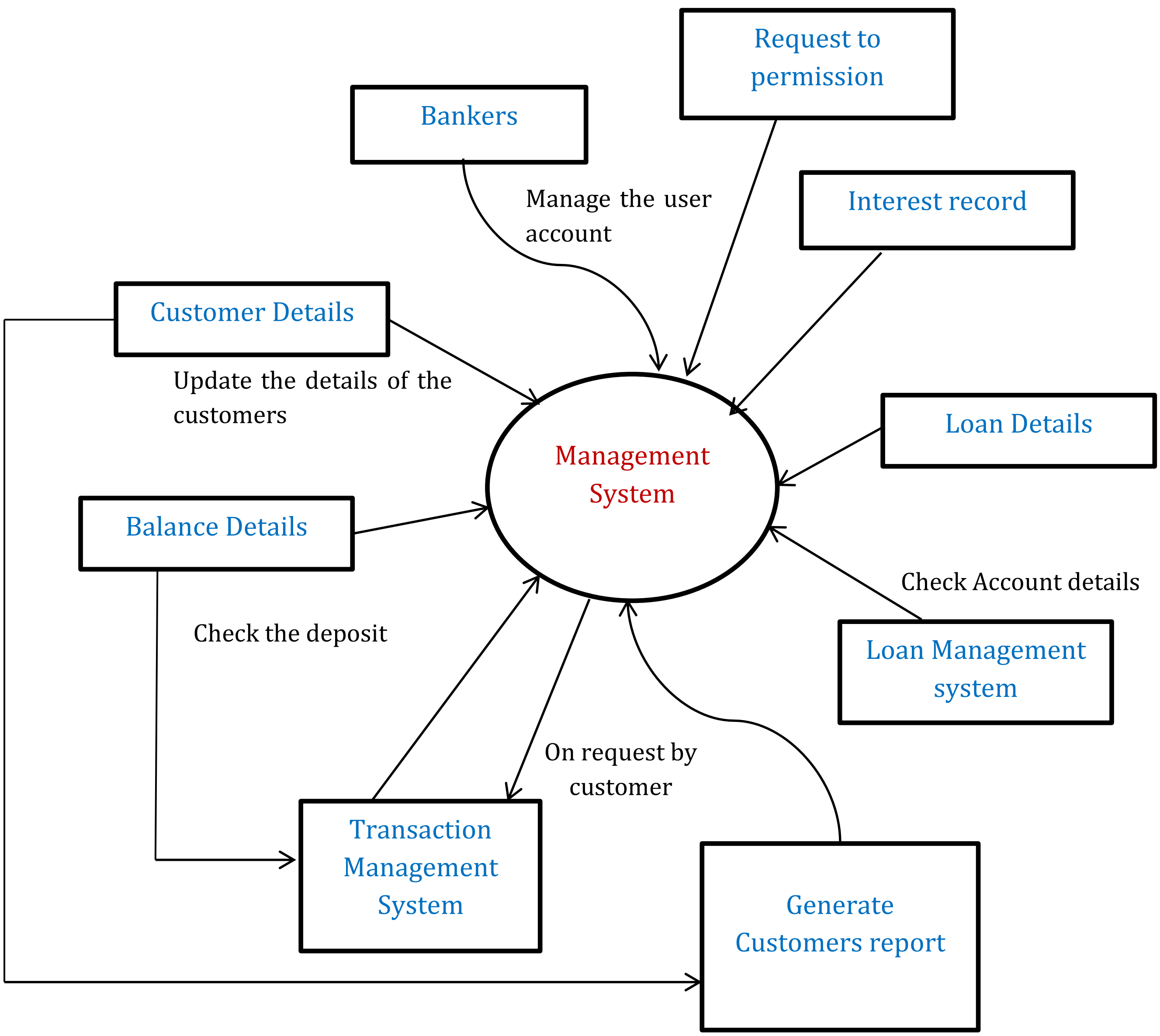

Figure 5: System Data Flow

In a system how Bank management handles their data flow in system software. Banker manages all customer accounts and Request to permission is approved. In this data flow there shows which way to flow data in the management system.

4.1.5. Testing and Integrations Process of Ultimus Software

The testing process has improved the quality and reliability of the system. That is a very costly, time-consuming, and difficult approach. The Individual test is needed for the smallest system and the team test is needed for the biggest system. And this Ultimus software system needs an individual test. There are some types of testing such as Unit testing, Integration tests, and Functional testing.

There are some Roles for system testing

- Requirement system testing is based on user expectation
- Before testing, they must know business logic and understand which purpose this system will use.
- Testing processing should try to finish early.
- This system should be performed on stable software.
- This testing process should do done by a third party.
- There must be two conditions that should be done: one is valid and another is invalid.
- Testing should be tried to reduce costs.
- Create documentation of testing cases and results.

When Ultimus software implements their software management must be done this testing part because this part is so important for a software system.

Quality Assurance

It is an evaluation of software or system and guarantees that the system meets the requirements and specifications. Quality Assurance is a level of confidence to serve good products to the customers. System or software quality assurance is the method that adds procedures and tools applied to confirm that software meets the user's expectation by the software analyst. Some objects are having a system or software management and analyst that they observe all the time to the software implementation process and finish until software will have developed. And those problems did not solve upper management that is solved by the Quality assurance department.

4.1.6. Maintenance Process of Ultimus Software

Users insert all the activities like phone support or physical on-site support and that is needed when the system is installed. When a user uses that system software then they face some problems, so that time needs maintenance and implement those issues that happened after a while. In maintenance, they also checked or resolved issues even after the testing process was done. For a large system, this maintenance process needed to assist for the longest time and short time needed for the smallest system. Maintenance changes the existing system and enhances the system features. There are some types described below:

- **Corrective Maintenance**: They are correcting the problems that were unable to be solved.
- **Adaptive Maintenance:** There are replace function
- **Perfective Maintenance:** If any change was required then that is implemented as a user needs and expects.

Ultimus Software fills up this process and this way this system implements successfully.

System Security

System security is very important for system software that is protected from theft, unauthorized access and modification. For Ultimus software that is very important because this system uses the bank for their customer information purpose. So that is maintained carefully and there are two things: system privacy and system integrity.

- System privacy is to protect the system from unauthorized access and in the system there is data processed also anxiety to quality and reliability of system integrity.
- This System security is very important for the Meghna Bank because they service customers with their customer money. So bank system security is very important

and Ultimus software of the Meghna Bank stores all member documents and information in their system software.

- System Analyst of Ultimus software had developed the system then they obviously developed by security analyses and how the system software was more secure. Also analyze the risk factor of their system security.
- More secure to the system they must use security development methods.

4.1.7. Brief discussion about the Ultimus Software

In the Meghna Bank, there Liability Operation department Manage the Ultimus System Software. The Ultimus System software is the core banking system of the Meghna Bank. This Ultimus Software system helps their management get hold of investment-disinvestment decisions. Ultimus software has some features:

- ✓ Put in a new user in system software.
- ✓ Change and remove existing users from system software.
- ✓ Lock or unlock existing users from the system.
- ✓ A kind of user linking in various groups.
- ✓ Any other branch cannot take out data without permission of the liability operation department of the Meghna Bank.
- ✓ Data input into the system after all the processing like an analysis file and find the problem. After that if any problems arise then they contact the customer branch and solve the problem anyhow. If all proceedings finished successfully then they input data into the system.
- ✓ Through Ultimus Software the Meghna Bank computerized all their customer manual files.
- ✓ In Ultimus software is capable of handling a huge amount of databases and there are various accounts holders like current account, saving account, fixed deposit account, joint account, young star account etc.
- ✓ Ultimus software is also file management utility software.
- ✓ The Meghna Bank reduces their cost by using this software and also reduces time cost.

- ✓ The Meghna bank large amounts of data stored by this software on a daily basis. And they have no fixed scalability.
- ✓ This software has flexibility because it can easily change the previous data.
- ✓ This software helps to develop the agility of the Meghna Bank. This technology reduces traditional ways and quickly helps to adjust with this system and also Increase their profit and decrease their cost.

4.1.8. Automated technology in the Meghna Bank

The Meghna Bank delivers services to many corporate or government organizations and universities. This bank can come up with technology with corporate ERP, Billing system in real time clearance/payment. And also consistently provide service to the customers. University fees are also paid on a real time basis. And all transactions are controlled through an automated and secure software system. Discuss some services those already automated in the Meghna Bank such as:

a) The Meghna Bank transaction by internet banking and mobile apps.
b) File Transfer Protocol and Secure File Transfer Protocol based transfer, email, Web portal of their account statement.
c) There are also notifications and payment alerts.
d) They provide real time payments.
e) They report to test their system software daily, weekly, Monthly basis.
f) They have cash withdrawal services.
g) There is an NFC card for any POS machine.
h) Customers use their self-service request portal.
i) The Meghna Bank has online transactions from home.
j) Also they have 24 hours, 7 weeks service.

The Meghna Bank has some software to provide external and internal services. Through this automation they improve their services and satisfy their customers. They try to develop by automation because they do not invest on physical infrastructure so there are so many scopes are available to invest on digital infrastructure.

In 2021, The Meghna Bank published their tender notice in “Loan Automation Process Solution”. The Meghna Bank is moving in digital services and gives better customers experience. That loan automation process solution is quick and easy for customers and it does provide services to vendor in few days after submission proposal.

In Future, the Meghna Bank will provide many financial services activities are fully automated and they are continuously working on it like cash disbursement, revenue management, and general operations. If they are automated of many activities than accuracy level is high. That is creating work smarter, easy, better and faster. By using this automation technology the Meghna Bank is profitable than other bank. So that is the biggest thing for our country because the Meghna bank impact on economy by the automation system.

Chapter 5

FINDING AND RECOMMENDATIONS AND CONCLUSION

5.1. Finding & Recommendation

The banking system is improved by using automation technology. With the other countries Bangladesh also grew up with automation technology in the banking sector. This Ultimus system software is used for store and process management. And this Ultimus software is written in a low level language and this is a customizing program. The Ultimus system Software design and understanding is difficult, hard to manipulate, and high speed.

This Report I have put my best effort and try to prepare it properly. I have used the knowledge that I gained in my major courses of University life. So I recommend that I think this Ultimus system software of the Meghna Bank needs to be update because there are some issues. And also I think that the use of automation technology in others country's banking systems update day by day. So I recommend that the Meghna Bank also focus on more use of technology. If the Meghna bank wants to develop their banking system then they must focus on automation technology. And try to develop their system and get more services for their customers. If they improve and focus in this sector then they get first rank in Bangladesh. I want some recommendation for The Meghna Bank such as:

- I want to say that they need to improve their management system as soon as possible because there are lacking some.
- More training is arranged for existing employees and to hire more intelligent employees.
- They need to create more systems for better services to get their customers.
- Also, I think they need to create unique service ideas by using Automation technology, in this way they get more customers.
- Always update their system software so that they give better services from another bank.
- They need to use those technologies that cannot be used yet in another bank.

5.2. Conclusion

This report is helping us to know that Automation improves the banking sector. The Meghna Bank is a successful commercial bank in Bangladesh. They improve in banking sectors by trained its focus on Automation technology. In all their departments they use various software systems for their employees and customers also. The Meghna Bank improves day by day and they reorganize their system in management. Their training section is increasing for their existing employees because there were some lackings. The Meghan Bank tries to improve in the banking sector by Using Automation Technology. As a medium size bank there are big scopes to invest on digital infrastructure because they do not invest on physical infrastructure.

The Meghna bank uses the Ultimus Software system for their database management system and that system software helps the bank management and their employees to easily handle their customer's information. Through this software, they handle their customer's data and manage other services. Those Automation technologies help to organize the bank system and create more securely, hassle-free, save time, easily handle, and quickly find out the customer's details.

If the Meghna Bank increases the use of Automation technology then they can easily develop their bank in Bangladesh. Foreign countries are advancing the use of Automation technology that's why they are ahead of our country. So I think Meghna Bank will use this automation on the banking system by Ultimus Software system and also they will add more systems in their bank. Also customers will get better service in future from the Meghna Bank. The Bank also achieved top levels of a bank sector in Bangladesh.

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Appendix: 1

(Joining Letter)

MEGHNA BANK LTD.
together we sail

MGBL/HO/HRD/2021
March 08, 2021

Manjurul Haque Khan
Director
Career counseling center
United International University

Dear Sir/Madam,

Internship

With reference to your letter- Ref No: NIL, dated March 6, 2021, we are pleased to inform that the Management of the Bank has agreed to allow Ms. Sumaya Habiba, bearing ID No. 111181119, a student of BBA program of your University to do his/her Internship at Meghna Bank Limited, Liability Operations, HO, Dhaka for a period of 3 months with effect from his/her date of joining within 15 days from the date of this letter. During his/her internship, he/she will have to abide by the Rules & Regulations of the Bank and will receive honorarium of Tk. 3000/- per complited month.

Please note that the internship is allowed purely to help the internees meet their academic requirements only and as such, no role over/absorption in the regular grade of the Bank should be expected by them.

Thanking you

Rashedul Alam
Head of Human Resources

Copy to:

- Liability Operations, Head Office, Dhaka
- Ms. Sumaya Habiba, Road: 3, Baten Nogor, Gabtoli Mazar Road, Mirpur-1, Dhaka

Received
Sumaya Habiba

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