MANTECH Publications

Journal of Applied Business, Economics and Strategic Management
Volume 5, Issue 2, May-August 2022

The Modeling of the Banking System

Priya Dutta[1], Sanjana Khtawr[2]
Assistant Professor[1], Student[2]
Department of Business Economics
Dr. Ambedkar Institute of Management Studies and Research
Corresponding Author's Email: *sanjanakhatwar65@gmail.com[2]*

Abstract

This project was built primarily for a banking sector's Account division in order to provide a better interface for all banking transactions. This technology seeks to improve the aesthetics of user interfaces while also implementing all financial activities. This service is only offered to clients of savings banks, not current account holders. The user has the privilege of using the bulk of the system purely for viewing reasons; the customer's only online transactions are check book requisitions and fund transfers between his personal accounts because the data format is relatively basic and free. The project was created with a distributed architecture and database storage in mind.

Keywords: *Queue, Computer modeling, service time, simulation, bank*

INTRODUCTION

Banking and finance are important parts of every country's economy. In order to have a happy and successful financial picture, the bank or financial institution itself must work properly in terms of profit and customer satisfaction. To achieve the above stated goals, the bank or financial institution should have a fully automated transaction processing system. The current application satisfies the majority of the demands of consumers in order to better support them. The goal is to create an efficient automated system for a typical banking or financial business.

PROBLEMS IN THE EXISTING SYSTEM

- It is limited to a single system.
- It is less user-friendly.

- It is having lots of manual work (Manual system does not mean that you are working with pen and paper, it also include working on spread sheets and other simple software's).
- The present system is very less secure.
- It is unable to generate different kinds of report.

PROBLEM STATEMENT

This project was created primarily for a banking sector's Account Division to give a better interface for all banking activities. The existing system has a lot of manual effort (manual work does not always imply working with pen and paper; it also includes working with spread sheets and other rudimentary applications).

The current system is quite insecure. This system aims to improve the aesthetics of the user interfaces and to execute all banking processes such as depositing, withdrawing, customer account information, transaction information, and so on.

METHODOLOGY

A. Asp.Net

.NET Framework provides means to access functionality that is implemented in programs that execute outside the .NET environment. The Common Language Runtime (CLR) is Microsoft's.NET initiative's virtual machine component. It is Microsoft's implementation of the Common Language Infrastructure (CLI) standard, which provides a computer code execution environment.

B. Java Script

Netscape Communication Corporation created JavaScript, a script-based computer language. JavaScript was initially known as Live Script before being renamed JavaScript to reflect its ties with Java. JavaScript allows for the creation of both client and server components for Web-based applications.

PROPOSED WORK

The proposed system automates all the following activities to implement error free, time and cost saving process.

- Supply of Account Information
- New Account Creations
- Deposits
- Withdraws
- Check book issues
- Stop payments
- Transfer of accounts
- Report Generations

SOLUTION OF THESE PROBLEMS

The following actions are included in the creation of the new system, which attempt to automate the entire process while keeping the database integration method in mind.

- User friendliness is provided in the application with various controls.
- The system makes the overall project management much easier and flexible.
- It can be accessed over the Internet.
- Various classes have been used to provide file upload and mail features.
- There is no risk of data mismanagement at any level while the project development is under process.
- Report generation feature is provided using Crystal Reports to generate different kinds of reports like bar graphs, pie charts and table type charts etc.

It provides high level of security using different protocols like https etc.

The present application is being created as a prototype using the 3-tier design. The three-tier architecture is the most often utilised technique for online applications nowadays. The web browser serves as the client in this approach, IIS handles business logic, and a separate tier MS-SQL Server performs database tasks.

Although the three-tier method improves scalability and separates business logic from the display and database levels, it does not fully divide the application into specialised, functional layers. The 3-tier design may be sufficient for prototype or small online applications. However, with the increasing complexity of web application demands, a three-tiered model falls short in numerous crucial aspects, including adaptability and scalability. These flaws are caused mostly by the fact that the business logic tier is still too broad, with too many functions combined into one tier that might be divided out into a finer-grained model.

A. Work Flow

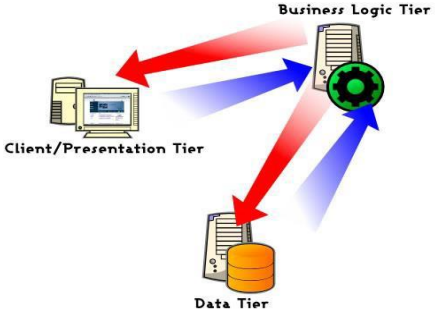

Fig 1: 3- Tier Architecture

The suggested system can be completely constructed using the three-tier approach, since all levels are perfectly specified as part of the project. The n-tier design may be utilised in the future to build integration touch points and give richer user interfaces while growing the system. The standard n-tier design is depicted in the diagram below.

B. Output Design

Fig2. Login Page

Fig3. Administrator Page

Fig4. User Page

Fig5. Customer Info

PERFORMANCE REQUIREMENTS

Performance is assessed in terms of the application's output. The formulation of requirements is critical in the study of a system. Only when the need requirements are accurately provided can a system be designed to fit into the appropriate environment. It is mostly up to the users of the present system to provide the need specifications because they are the ones who will ultimately utilise the system. This is because the needs must be known at the early phases so that the system may be constructed accordingly. It is extremely difficult to update a system after it has been created, therefore developing a system that does not meet the needs of the user is pointless.

The requirement specification for any system may be summarised as follows:

- The system should be able to interface with the existing system
- The system should be accurate
- The system should be better than the existing system

The existing system is completely dependent on the user to perform all the duties.

CONCLUSION

Working on this intriguing and hard project has been a real pleasure for me. This project proved helpful for me as it offered actual understanding of not only programming in ASP.NET and C#.NET web based application and no some extent

Windows Application and SQL Server, but also about all handling method linked with "SIMULATION of BANKING SYSTEM". It also gives information on the most recent technologies utilised in constructing web-enabled applications and client-server technology, which will be in high demand in the future. This will give greater possibilities and advice in building initiatives autonomously in the future.

FUTURE DEVELOPMENTS

- We can include credit card transactions in the future
- Bank reconciliation features will be included in future
- By including some modules such as Payroll, Accounts Payables etc, we can evaluate the balance sheet of the bank for financial year.
- Mobile banking facilities will be included in future in order to provide better communication to customers.

REFERENCES

1. Sven Kiljan Harald Vranken, Koen Simoensd, Danny De Cocke, Marko van Eekelena, "Technical report: security of online banking systems" Open University, Netherlands, February 10,2014
2. http://en.wikipedia.org/wiki/Online_banking
3. Rajpreet Kaur Jassal1, Dr. Ravinder Kumar Sehgal, "ComparativeStudyofOnlineBankingSecuritySystemofvariousBanksinIndia International Journal of Engineering, Business and Enterprise Applications (IJEBEA) 6 (1), September-November., 2013, pp90-96.
4. http://en.wikipedia.org/wiki/Internet_safety
5. https://www.hsbc.com/internet-banking/types-of-online-attack