(ATM MACHINE)

A

Report submitted in partial fulfillment

Of

the requirement for the degree

of

B.Tech.

In

Computer Science & Engineering

Under the Supervision of

(Supervisor Name with Designation)

By

Student Name (Roll No)

PSIT
Kanpur

Pranveer Singh Institute of Technology, Kanpur

Dr A P J A K Technical University

Lucknow

Certificate

This is to certify that Project Report entitled "ATM MACHINE " which is submitted by MADHUR MISHRA.

In partial fulfillment of the requirement for the award of degree B. Tech. in Department of

Computer Science and Engineering of **Pranveer Singh Institute of Technology,** affiliated

to **Dr. A.P.J. Abdul Kalam Technical University, Lucknow** is a record of the candidates

own work carried out by them under my/our supervision. The project embodies result of

original work and studies carried out by the students themselves and the contents of the

project do not form the basis for the award of any other degree to the candidate or to anybody

else.

Signature: Signature:

Dr. Vishal Nagar   (MR.PINKAL JAIN)

Head of Department   Designation

CSE Department,   CSE Department,

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Date:27/02/2022

DECLARATION

We hereby declare that this submission is our own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

Signature MADHUR

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Date:27/02/2022

ABSTRACT

An Automated Teller Machine (ATM) is a safety-critical and real-time system that is highly complicated in design and implementation. This paper presents the formal design, specification, and modeling of the ATM system using a denotational mathematics known as Real-Time Process Algebra (RTPA). The conceptual model of the ATM system is introduced as the initial requirements for the system.The architectural model of the ATM system is created using RTPA architectural modeling methodologies and refined by a set of Unified Data Models (UDMs), which share a generic mathematical model of tuples. The static behaviors of the ATM system are specified and refined by a set of Unified Process Models (UPMs) for the ATM transition processing and system supporting processes. The dynamic behaviors of the ATM system are specified and refined by process priority allocation, process deployment,and process dispatch models. Based on the formal design models of the ATM system, code can be automatically generated using the RTPA Code Generator (RTPA-CG), or be seamlessly transformed into programs by programmers. The formal models of ATM may not only serve as a formal design paradigm of real-time software systems, but also a test bench for the expressive power and modeling capability of exiting formal methods in software engineering.

ACKNOWLEDGEMENT

It gives us a great sense of pleasure to present the report of the B.Tech. Project undertaken during B.Tech. Final Year. We owe special debt of gratitude to our project supervisor MR. PINKAL JAIN, Department of Computer Science and Engineering, Pranveer Singh Institute of Technology, Kanpur for his constant support and guidance throughout the course of our work. His sincerely, thoroughness and perseverance have been a constant source of inspiration for us. It is only his cognizant efforts that our endeavours have seen light of the day.

We also take the opportunity to acknowledge the contribution of Professor Dr. Vishal Nagar, Head, Department of Computer Science & Engineering, Pranveer Singh Institute of Technology, Kanpur for his full support and assistance during the development of the project.

We also do not like to miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind assistance and cooperation during the development of our project. Last but not the least, we acknowledge our friends for their contribution in the completion of the project.

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INTRODUCTION

The term ATM stands for automated teller machine. It is an electronic device that is used by only bank customers to process account transactions. The users access their accounts through a special type of plastic card that is encoded with user information on a magnetic strip. The strip contains an identification code that is transmitted to the bank's central computer by modem. The users insert the card into ATMs to access the account and process their account transactions. The automated teller machine was invented by John Shepherd-Barron in the year 1960. This article discusses an overview of the automated teller machine (ATM).

By using an automated teller machine or ATM we can perform different financial transactions such as cash deposits, withdrawals, transfer funds, information of account, ATM PIN change, and also linking the Aadhaar number to the bank account so that the interaction between the bank staff and the customer can be reduced.

OBJECTIVE

- The project to be designed will control a simulated automated teller machine (ATM) having a magnetic stripe reader for reading an ATM card, a customer console (keyboard and display) for interaction with the customer, a slot for depositing envelopes, a dispenser for cash (in multiples of $20), a printer for printing customer receipts, and a key-operated switch to allow an operator to start or stop the machine. The ATM will communicate with the bank's computer over an appropriate communication link. Design the ATM system in detail with the architectural design. Use use cases, sequence diagrams, class structural models and behavioral modes.

FEASIBILITY

- The Feasibility Study is a tool decision makers can use to determine whether and how to undertake a certain investment. Feasibility Studies must be based on Conceptual Design decisions, i.e. the definition of the main technical and commercial aspects of a project, with any alternative solutions reduced to a minimum.

  Identification and verification of a person today is a common thing; which may include door-lock system, safe box and vehicle control or even at accessing bank accounts via ATM, etc which is necessary for securing personal information. The conventional methods like ID card verification or signature does not provide perfection and reliability. The systems employed at these places must be fast enough and robust too. Use of the ATM (Automatic Teller Machine) which provides customers with the convenient banknote trading is facing a new challenge to carry on the valid identity to the customer. Since, in conventional identification methods with ATM, criminal cases are increasing making financial losses to customers.

LITERATURE REVIEW

One of the cardinal components of the banking industry is ATM service and the extent to which customers feel comfortable to patronize its service. This study therefore investigates ATM service and customer satisfaction in the Upper East region of Ghana. More specifically, the study looked at ATM service quality and customer satisfaction and factors that influence ATM usage. The study uses primary data collected from 200 respondents using convenience and simple random sampling methods. The logistic regression model was used to analyze the data. Multi collinearity and heteroskedasticity were corrected using the variances inflation factor (VIF) and robust standard errors respectively. The results suggest that customer's satisfaction could be improved by convenience, security and privacy and reliability of the ATM services, as evidenced by a p-value of 0.0000 at 1% significance level. The results further indicate that convenience, security and privacy have positive effects on customer satisfaction at 1% significant levels, whereas reliability has negative effects on customer satisfaction at 1% significant levels. Also, security and privacy, ATM user fees, educational level and location of the ATM are found to be the major factors that influence customers' willingness to use a particular ATM services in the studied area.It is recommended that, management of the various banks in the region should use participatory approaches to ensure active involvement of its customers with regards to ATM operations and policies safeguarding it usage

SYSTEM REQUIREMENTS

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- The ATM system shall accept a unique ID from the customer.

- The ATM system shall accept the customer selection for a range of banking transactions.

- The ATM system shall accept the account type from the customer for deposits, balance query, and for payments on account.

SOFTWARE REQUIREMENTS

- The transaction management software used to manage the transaction and keep track of resources shall be BMS version 2.0. The card management software used to verify pin no and login shall be CMS version 3.0. Yamaha codes 367/98 for active speakers. The database used to keep record of user accounts shall be Oracle version7.0.

\DESIGN AND IMPLEMENTATION

- This Project work is centered on the design of a computerized automated teller machine. With the aim of achieving the proper and swift implementation of the use of the machine in withdrawing money using First Bank PLC as a case study. This project work is divided into five Chapters. Chapter one comprises of the background of the study, which gives an overview of an Automated teller machine as well as the following sub heading such as the problem of the study, significance, scope of the study and definition of terms. Chapter two gives clear details on related literatures review about the subject matter. Chapter three talks about system analysis and design while chapter four explains the implementation of the new developed system and chapter gives the summary and conclusion of the project work. The software was design using visual basic 6.0, the design was subdivided into module which link one form to another. The problem that prompted the development of the software is as stated as followed

CODING

- # for stopping program execution for some time

- import time

- print (" ATM MACHINE ")

- print("Please insert Your CARD")

- #for card processing

- time.sleep(5)

- password = 1234

- #taking atm pin from user

- pin = int(input("enter your atm pin: "))

- #user account balance

- balance = 5000

- #checking pin is valid or not

- if pin == password:

1

```
#loop will run user get free

while True:

    #Showing  info to user

    print("""

                        1 == balance

                        2 == withdraw balance

                        3 == deposit balance

                        4 == exit

                        """

    )

    try:

        #taking an option from user

        option = int(input("Please enter your choice : "))

    except:

        print("Please enter valid option")


    #for option 1

    if option == 1:

        print(f"Your current balance is {balance} :")

    if option == 2:

        withdraw_amount = int(input("please enter withdraw_amount : "))


        balance = balance - withdraw_amount

        print(f"{withdraw_amount} is debited from your account:")


        print(f"your updated balance is {balance}:")


    if option == 3:
```

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- deposit_amount = int(input("please enter deposit_amoun:t"))

- balance = balance + deposit_amount

-

- print(f"{deposit_amount} is credited to your account")

- print(f"your updated balance is {balance} :")

- if option == 4:

- break

- else:

- print("wrong pin Please try again")

RESULT OF CODE

- ATM MACHINE

- Please insert Your CARD

- enter your atm pin: 1234

-

- 1 == balance

- 2 == withdraw balance

- 3 == deposit balance

- 4 == exit

-

- Please enter your choice : 1

- Your current balance is 5000 :

-

- 1 == balance

- 2 == withdraw balance

- 3 == deposit balance

- 4 == exit

-

1

- ◼ Please enter your choice : 3

- ◼ please enter deposit_amoun:t4000

- ◼ 4000 is credited to your account

- ◼ your updated balance is 9000 :

- ◼

- ◼   1 == balance

- ◼   2 == withdraw balance

- ◼   3 == deposit balance

- ◼   4 == exit

- ◼

- ◼ Please enter your choice : 2

- ◼ please enter withdraw_amount : 9000

- ◼ 9000 is debited from your account:

- ◼ your updated balance is 0:

- ◼

- ◼   1 == balance

- ◼   2 == withdraw balance

- ◼   3 == deposit balance

- ◼   4 == exit

- ◼

- ◼ Please enter your choice : 4

FUTURE REFERENCE

- ◼ Technology helps drive increased ATM functionality, ease of use and security for customers and ATM deployers alike.

- ◼ For example, card-less ATMs allow pre-staged withdrawals via contactless, mobile, wearables, or 'cash by code' as described below. With no card entry slot, the machines look different, but are potentially more secure as skimming is impossible.

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- Drive-up ATMs mean customers can withdraw or deposit cash without getting out of their car. This improves convenience and security, especially for businesses wanting to bank takings at night.

COCNLUSION

- From this presentation, one can observe that **an ATM system is associated with the bank transactions of the consumers**. ¡Majorly, the ATM system is utilized for the money associated transactions from the consumers. Consumers make major use of ATM to withdraw money from their bank account.

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