Project Synopsis

ON

"ATM   SIMULATOR"

(using Core Java with Swing Function & Jframe)

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ACKNOWLEDGMENT

It gives us great pleasure to present the synopsis ofthe B.Tech mini project (**ATM Simulator**) undertaken during B. Tech III Year. This project is going to be an acknowledgment of the inspiration, drive, and technical assistance that will be contributed to it by many individuals.

We owe a special debt of gratitude to **Mr. Amir Khan (Assistant Professor Department of CEA),** for providing us with an encouraging platform to develop this project, which thus helped in shaping our abilities towards a constructive goal, through his constant support and guidance to our work.

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We also do not like to miss the opportunity to acknowledge thecontribution of all department faculty members for their guidance and cooperation.

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ABSTRACT

The project aims to put forward a solution to solving the financial applications of a customer in a banking environment. The ATM Simulator is an application for maintaining a person's account in a bank. In this project, we tried to show the working of a banking account system and cover the basic functionality of a Bank.

The main aim of this project is to develop software for Bank Account Management System. By using Core Java and using Swing function and Jframe. This project has been developed to carry out the processes easily and quickly, which is not possible with the manual systems, which are overcome by this software.

The algorithm is designed to provide an interactive content management system. The content management system deals with data entry, validation confirmation, and updating whiles the interactive system deals with system interaction with the administration and users. Thus, the above features of this project will save transaction time and increase the system's efficiency.

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INTRODUCTION

The "**ATM Simulator**" project is a model of Internet Banking. This enables the customers to perform basic banking transactions by sitting at their office or at home through a PC or laptop. The system provides the access to the customer to create an account deposit/withdraw cash from his account, and also to view reports of all accounts present. The customers can access the bank's website for viewing their Account details and perform the transactions on the account as per their requirements.

Anybody who is an Account holder in this bank can become a member of the Bank Account Management System. He has to fill out a form with his personal details and Account Number. Bank is a place where customers feel a sense of safety for their property. In the bank, customers deposit and withdraw their money. Transaction of money also is also a part of it.An automatic pin and card number are generated for the user from where he/she can able to sign in the process. There is the feature of deposition and withdrawing the money from the machine and account holders can also have mini statements of all the transactions he/she had done. All the details are stored in the backend MySQL.

Now a day's, managing a bank is a tedious job up to a certain limit. So software that reduces the work is essential. Also, today's world is a genuine computer world and is getting faster and faster day by day. Thus, considering the above necessities, software for ATMs has become necessary which would be useful in managing the bank more efficiently.
All transactions are carried out online by transferring from accounts in the same Bank or international bank. The software is meant to overcome the drawbacks of the manual system.
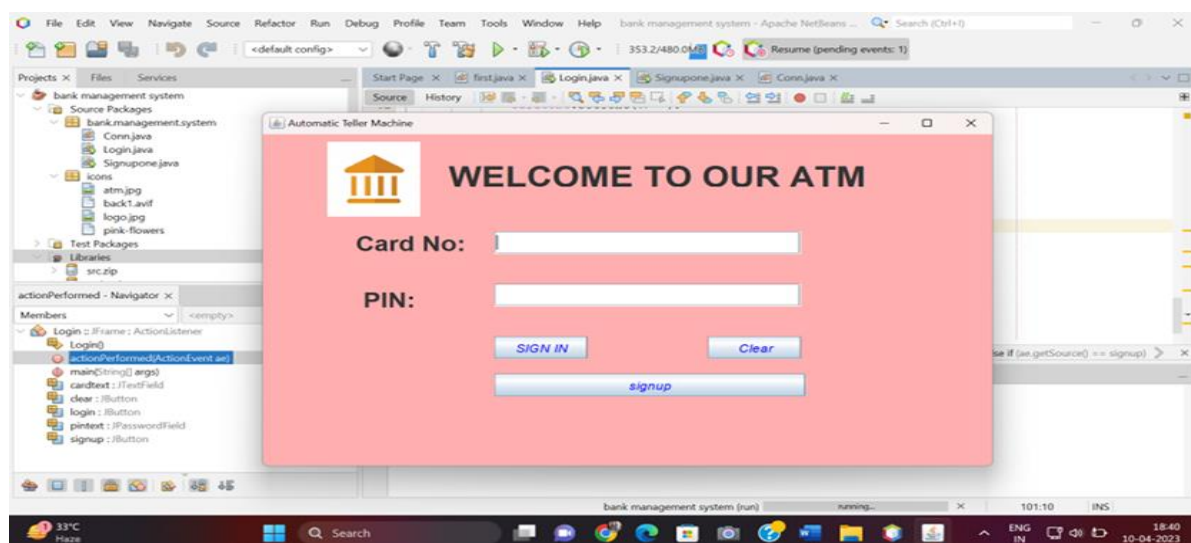
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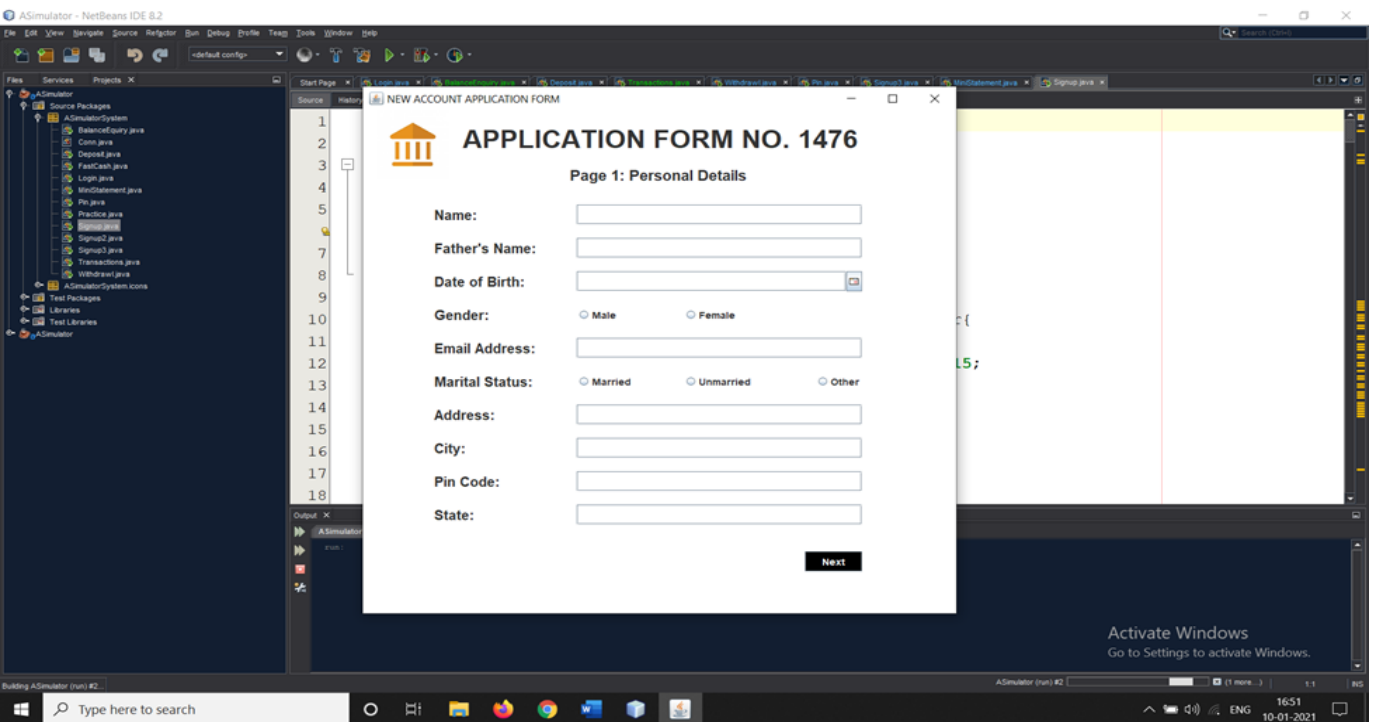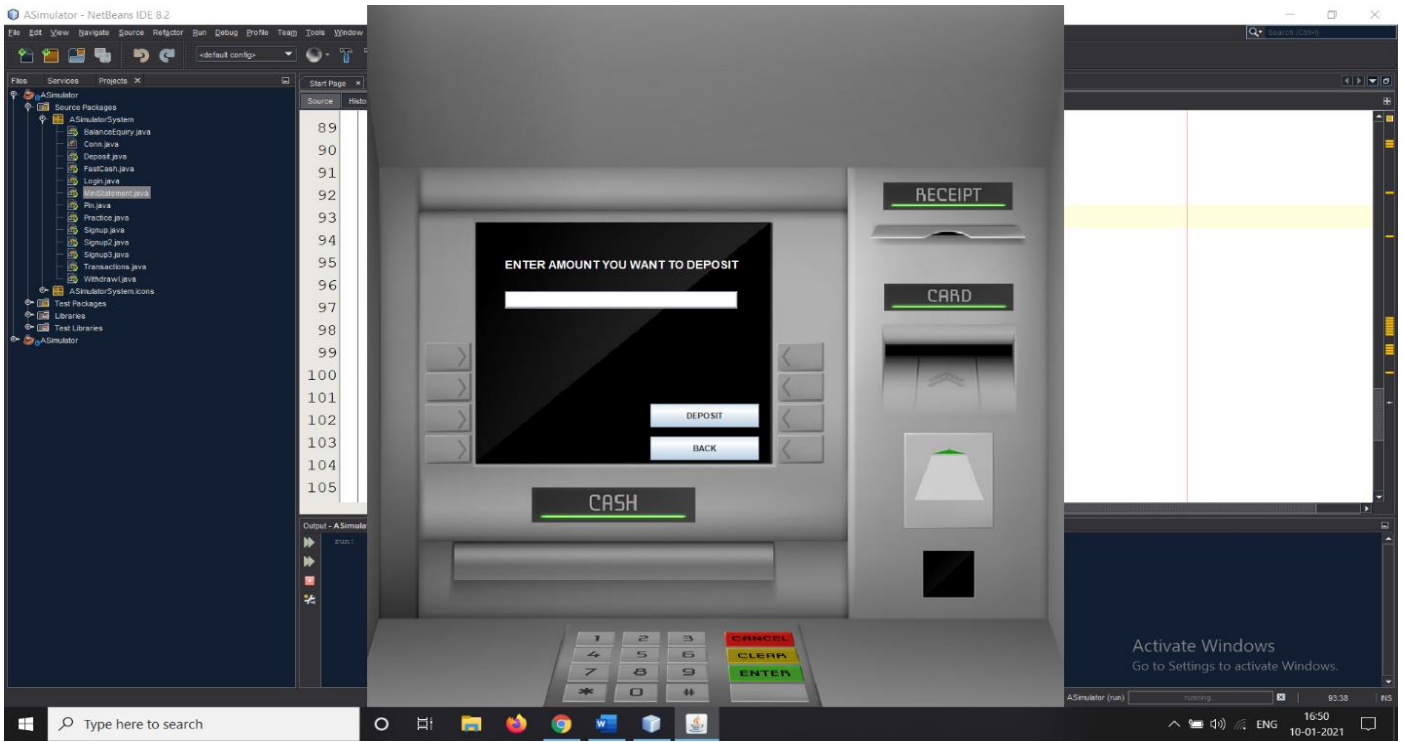
CORE JAVA: Java is a popular high-level, class-based object-oriented programming language originally developed by Sun Microsystems and released in 1995. Currently, Java is owned by Oracle and more than 3 billion devices run Java. Java runs on a variety of platforms, such as Windows, Mac OS, and various versions of UNIX. Java is used to develop numerous types of software applications like Mobile apps, Web apps, Desktop apps, Games and much more.

- Java is Open Source which means it's available free of cost.
- Java is simple and so easy to learn
- Java has powerful development tools
- Java is platform independent

MySQL: MySQL is currently the most popular database management system software used for managing the relational database. It is open-source database software, which is supported by Oracle Company. It is a fast, scalable, and easy-to-use database management system in comparison with Microsoft SQL Server and Oracle Database. It is commonly used in conjunction with PHP scripts for creating powerful and dynamic server-side or web-based enterprise applications.

Swing method: **Java Swing** is a part of Java Foundation Classes (JFC) that is *used to create window-based applications*. It is built on top of AWT (Abstract Windowing Toolkit) API and entirely written in Java. Unlike AWT, Java Swing provides platform-independent and lightweight components. The javax.swing package provides classes for java swing API such as JButton, JTextField, JTextArea, JRadioButton, JCheckbox, JMenu, JColorChooser, etc.

JFrame: The javax. swing.JFrame class is a type of container that inherits the java. awt.Frame class. JFrame works like the main window where components like labels, buttons, and text fields are added to create a GUI.

THE PROCESS USED FOR ATM SIMULATOR

Step 1: Importing the required libraries:

  Awt, Jframe, javax.swing

Step 2: A sign-in page will open where the account holder has to insert his/her
  Card no and pin

Step 3: If the User doesn't have an Account click on the signup button and fill in all
  the details

Step 4: After filling in all the detail automatic Card No and Pin is generated

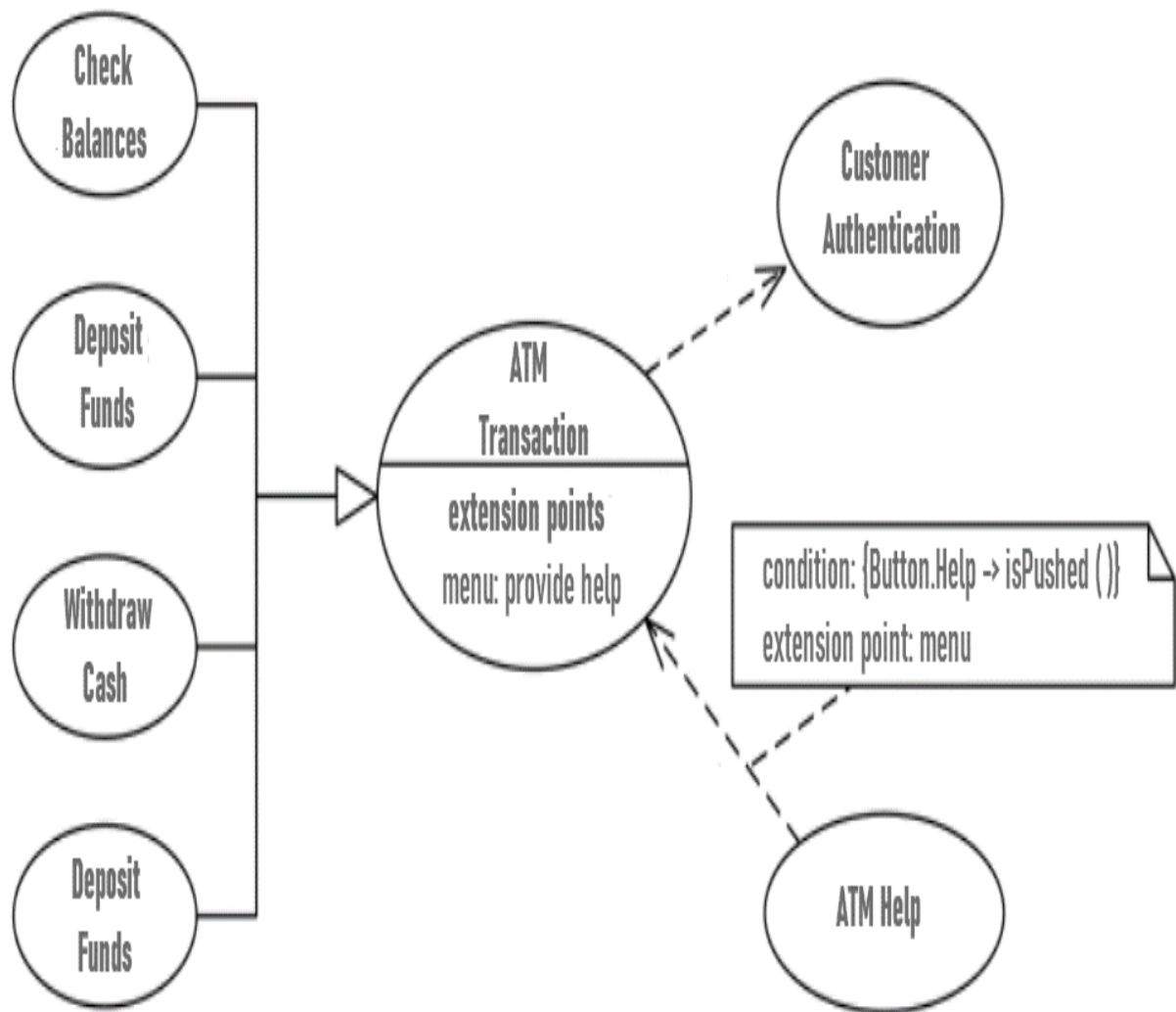Step 5: All the features of the Atm machine can be used

Step 6: The customer can deposit the money or withdraw the money, he/she can use
  the fast cash system also

Step 7:Account holder can see their mini statement of all the transactions done by
  his/her side.

TECHNOLOGY USED:

  Core JAVA(Frontend)
  MySQL (Backend)

Use Case Diagram for Customer Authentication

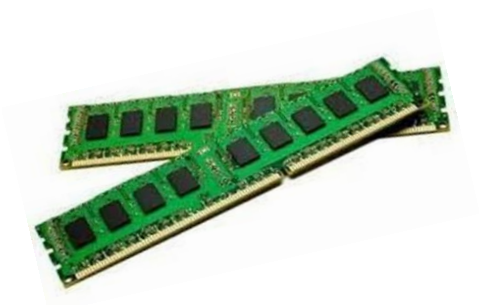## Software Requirements(Minimum):

Windows 7,10,11 (any)

JAVA

MySQL

1. Java Awt
2. JFrame
3. Javax.swing

Hardware Requirements(Minimum):

1) Processor: i3 processor-based computer or further
2) Storage: 4GB Ram

   5 GB Hard Disk Space
3) Device: Laptop or desktop (any)

AIM OF THIS PROJECT

The main aim of designing and developing this Internet banking System Java primarily based .The engineering project is to provide secure and efficient net banking facilities to banking customers over the Internet. Apache Server Pages, MYSQL database used to develop this bank application where all banking customers can log in through the secured web page by their account login id and password. Users will have all options and features in that application like getting money from western union, money transfers

FUTURE PROSPECTS

When you think of online banking, you probably think about a computer (either a desktop or laptop), a three or four-step security process, and then an interface that lets you view the balance of your various bank accounts and credit cards, whilst permitting you to transfer money and pay bills. And you're not wrong either. The most valuable future looks are the following below:

1- More branches of the bank, maybe it will be international, that means more ATM machines outside.
2- Customer issues development based on their needs, so the help desk will be aware of their needs and easy to use.
3- Developing a mobile App for a banking system that helps users to the obtained operations without go to the bank only needs to sign in using their A/C NO. And password and then use your own PIN. Finally, the system will update automatically.

REFERENCES:

- https://www.javatpoint.com/atm-program-java
- https://www.geeksforgeeks.org/java/
- https://netbeans.apache.org/ (platform used)

BOOKS:

Core java fundamental volume-I
Java Black Book

ONLINE GITHUB REPOSITORY:

FACULTY GUIDELINES:

Mr. Amir Khan,(Technical Trainer at GLA University)

The End