# ATM SIMULATOR

Java Project by Group-12(CS)
Members:
Sushant Holikar-Lcs2020006
Siddhartha Shekhar-Lcs2020007
Yanamaddi Nithin-Lcs2020009
Gagan P-Lcs2020005
Chalak-Lcs2020034
Abhishek Saini-Lcs2020039

# Overview

**The presentation will go over the following topics:-**

1) What is an ATM
2) How does an ATM work
3) Benefits of an ATM
4) How our project can be used in real life
5) Ways to improve our project
6) My contribution to this group project

# What is an ATM

- An automated teller machine (ATM) is an electronic banking outlet that allows customers to complete basic transactions without the aid of a branch representative or teller. Anyone with a credit card or debit card can access cash at most ATMs.

- ATMs are convenient, allowing consumers to perform quick self-service transactions such as deposits, cash withdrawals, bill payments, and transfers between accounts. An ATM even allows you to purchase stamps.

- An ATM can usually be found near bank branches but are not limited to that sector. The number of ATMs has drastically increased in recent years due to their easy-to-use features . ATMs can be found in airports,railway stations, metro stations and many areas with high foot-fall.

# How does an ATM work

- The input device for an ATM is a card reader, which initially identifies the account. A keypad is used to enter passwords and select transactions. A depository allows the user to deposit cash or checks.

- When the user enters the card number and pin, the ATM checks the bank database and verifies the details. Once this process is completed the machine is directly linked to your bank account and all the transactions you make will be reflected in your bank account as well.

- ATMs now-a-days use browser-based interface. This type of ATM connects to a host computed  through a web server. This host computer stores the details and remotely completes the transactions which u make on the physical machine

# Benefits of an ATM

- **Since our project is made to simulate an ATM I would like to list a few advantages of an ATM :-**

1. Access to hard Cash Anywhere at Anytime
2. ATM Machines offer Financial Inclusion( In low income countries they offer a way to complete transactions for cheap)
3. ATM Machines offer wide range of services( Many ATMs offer stamps as well)
4. ATM machines are Cheaper to Maintain(As compared to bank outlets)
5. ATM machines Serve an Important Function in times of Crisis (For example : When lockdown took place in our country)
6. ATMs are definitely the fastest and most secure way to withdraw cash from your account. Thanks to ATMs we can skip the hassle of going to banks to withdraw money.

# How Our Project Can Be Used In Real Life Scenarios

Our project is  certainly  futuristic and has a lot of features as compared to the currently existing atms  in the market.

I believe that our project can(& will) benefit the society in the following ways:-

1. **First off, in terms of security,**

The registered  account holder gets an email as soon as the atm card linked with his account is inserted. If someone else tries to use the card(theft related ),the user gets sufficient time to contact the bank customer service/block his card online even before the thief has time to perform a transaction.

The user has to enter pin for each and every transaction instead of entering it only at first, making the whole ATM more secure than one can even imagine.

For every transaction performed, the user gets an email giving full info about the transaction, time of transaction, place, etc.. Making it easy to keep a track of transactions.

# How Our Project Can Be Used In Real Life Scenarios

**2.secondly,**

We have given an option to carry out the transactions even without an atm card!!But the user must remember the atm card number.
When the user tries to use "cardless" login, he needs to enter his card number and then an otp is sent to the registered mobile number. After entering the otp, the user has to enter his pin, which adds to the security.

This we believe will greatly help the people in real life scenarios, as a burden of carrying an atm card always and having to keep good care of it is removed.

**3.Lastly,**

Having been inspired by Google Pay's request money, We have included a feature through which the users can transfer money directly with the help of atm and withdraw the transferred money. This will remove the need to go to banks to request a money transfer, hence saving time and effort.

# Objective of our project

- To create a computer based system which can handle day-to-day processes that take place in an ATM.

- The project aims to make the process of banking a user-friendly experience, so that more people are accustomed to such systems in the upcoming days.

- Each user has their own user ID , i.e , their card number(which is unique of-course). The user can access all his account details simply by entering the card number and the corresponding PIN

- The system created is secure, hence only the authorized user can access his/her account. This is because our simulator asks not only for a PIN, but also an OTP which is sent to the user's mobile number.

# Objectives of our project

- Data of all transactions is stored in a separate database which can be accessed by the administrator only. Using JDBC with MySQL we have incorporated a DBMS into our project which will store all the user's data after each transaction.

- We have also tried to design our project in such a way that our code , which runs the simulator, can be easily modified depending on how the client wants to use it.Our structured approach aides in extension of this software when needed. The client which uses this software can easily change the functionality of the code to suit his needs.

- To increase security we have implemented an OTP based login system in our project. Not only that , the user will also get an email every-time he/she logs into their acc. Hence, the user is notified every-time when someone logs into their account.

# Ways to improve our project

In our project we have implemented a database managed ATM simulator using concepts of core java, JDBC and MySql. However, i would like to list a few points outlining ways in which we can improve our project :

1. By adding GUI to our ATM simulator and making it look more presentable. Since we were not familiar with the concept of Java-swing , we were not able to implement it.
2. Adding a web-browser based interface which lets the user access our ATM on his/her favourite browser. This will make our ATM-simulator easily accessible.

# Contributions Of Each Group Member

Thank You