Revolutionizing the Future : A Paradigm Shift in Banking Management Systems

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A R T I C L E I N F O

A B S T R A C T

Bank management governs various concerns associated with banks in order to maximize profits. The concerns broadly include liquidity management, asset management, liability management and capital management. But still there might be some flaws in this system. These flaws may be holes in rules and regulations, bribery, excuses of lunch, bank's slow server, employees' attitude towards work, long waiting times in customer services etc. So, these issues can be solved by an interface connected directly to the bank's administration through which a person can do their daily minimal banking jobs not through an ATM but through their smartphone. Here comes our project BMS which is a CLI program scripted through python, and data managed by DBMS. The user can perform transactions between accounts of the same bank, check balance, create or delete accounts, deposit or withdraw amounts.

I. INTRODUCTION

The project entitled "Bank management system" is a CLI program that provides the customers of a financial institution with access to financial transactions in a public space without the need for a human clerk or bank taller (manpower). Thousands of banks perform millions of transactions every day and thousands of users use the banking system in day-to-day life. As we know that if the number of users increases, we need more banks and more stability". It means increasing manual work and we put more money in the bank. It is more risky and not much secure. If we developed a computerized banking system so there is no need to open more branches as well, the manpower is reduced and maximum information is stored automatically in the banking server.

Transaction: In banking transaction is the execution of a program that performs an administrative or real time function, often by accessing shared data sources, usually on behalf of a banking user who has an account in the respective bank. This transaction is executed by the program and it automatically does the transactions with balance and it checks if all conditions are satisfied or not in respective proses. This is the more secure and automatic process which does all the transactions with accuracy of calculation.

In our project we provide the facility to link Aadhaar with AC NO. and we also provide the facility to change the location of the account with the branch that means the user can change the branch which is convenient for it. They will also change or update data like address, mobile number using online banking system.

II. RELATED WORK

Esther Shein Python. (2015) An open-source scripting language, has become the most popular introductory teaching language at top U.S. universities, especially Georgia Tech University. Because it is a scripting language, Python automates tasks that would otherwise need to be performed manually. Python programs also tend to be shorter than equivalent programs written in Java because of its built-in high-level data types and its dynamic typing. John Guttag, professor of electrical engineering and computer science at MIT, believes more colleges are using Python as an introductory programming language because it has a very large set of highly useful libraries that have been built over the years that support things that are easy to use from the language proper. Shriram Krishnamurthi, a professor of computer science at Brown University, agrees Python has made people feel more comfortable about exposing programming to a much broader audience of students. Krishnamurthi says Python may be fashionable right now, but he believes it lacks staying power.

Heda Samimi. (2013) This workshop introduces the Python programming language to the participants. Python is a general-purpose programming language that can be used to teach programming concepts. Participants will learn Python and greatly benefit from performing hands-on exercises. The participants will write the lines of code by following the instructor and/or the provided handouts. The instructor and his assistant(s) will help the individuals with their questions and problems. The instructor will use a Windows machine to cover the topics. The participants are expected to bring their own laptops. The Instructor and his assistant(s) will be available to help the participants with the installation of the needed software for the workshop prior to the start of the workshop. The topics include, among other things, displaying messages, working with variables, using operators, performing computations, making decisions, creating loops, and working with lists.

Sodhi, Awasthi, Sharma etal. (2019) Artificial Intelligence, Machine Learning and Deep Learning are the buzzwords that have been able to grasp the interest of many researchers for various numbers of years. Enabling computers to think, decide and act like humans has been one of the most significant and noteworthy developments in the field of computer science. Various algorithms have been designed over time to make machines impersonate the human brain and many programming languages have been used to implement those algorithms. Python is one such programming language that provides a rich library of modules and packages for use in scientific computing and machine learning. This paper aims at exploring the basic concepts related to machine learning and attempts to implement a few of its applications using python. This paper majorly used the Scikit-Learn library of Python

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for implementing the applications developed for the purpose of research.

Sean Lee, D. Deng, Peng, K. Purvisetal.(2017) The cooperation of agents in smart grids to form coalitions could bring benefit both for the agent itself and the distribution power system. To tackle the problem as a game of partition form function poses significant computing challenges due to the huge search space for the optimization problem. In this paper, we propose a stochastic optimization approach using PBIL algorithm with top-k Merit Weighting and a customized strategy for choosing the initial probability to solve the problem. Empirical results show that the proposed algorithm gives competitive performance compared with a few stochastic optimization Algorithms.

Fanguy and Chang. (2021) The educational benefits of collaboration are well known. Collaborative writing platforms, such as Google Docs, provide students with opportunities to write collaboratively from any location at any time. Despite the benefits of writing collaboratively, such assignments require a number of start-up tasks that may cause mental processing irrelevant to the learning goal. One such task is the creation of shared documents and the granting of permissions to edit the document among group members. In order to avoid taxing students with unnecessary cognitive processing, the present paper posits that instructors should be responsible for creating and sharing collaborative documents. However, as this may be a burdensome task for instructors due to large numbers of students and assignments, a customized computer system, Collab_doc_maker, is introduced that automatically replicates Google Docs, organizes them into predetermined folders and subfolders, and grants editing permissions to members of student groups.

III. METHODOLOGY

Bank Management System is an independent project implemented in python utilizing the core concept of Database Management System, Object-Oriented Programming. The Integrated Development Environment that was used for writing and managing the source is Visual Studio Code. The bank management system is used for Managing bank accounts, checking balances, transactions, and other banking kinds of stuff.

IV. ALGORITHM

- START.
- We'll import mysql.connector as a.
- Then we will create a new database named bank, in which one tables account with columns [name |acno| dob|ad| phn| ob].
- Then we will connect the python code to a database named as bank.
- We will create a cursor to pass dbms syntax and then execute and commit chNow we will create a function called main in which we take input from the user and then according to that input we do some baking tasks by calling their specific functions. Now we will create a function called main in which we take input from the user and then according to that input we do some baking tasks by calling their specific functions.
- Each task has its own function. There are 6 functions openacc(), depoamo(), witham(), balance(), dispacc(), closeac().
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- In openacc() we let the user input the details and then pass them to dbms using the cursor we created earlier.
- In depoamo() we ask the user to enter the amount to deposit and account number to deposit through input streamline. And then using those details, passing them to sql using python cursor.
- Similarly In witham() we ask the user to enter the amount to withdraw and account number to withdraw from through input streamline. And then using those details, passing them to sql using the python cursor.
- In balance() we ask the user to enter the account number to show the balance of.
- In dispacc() we take the account no from the user and then using sql query we will fetch the details and then print them using the print function.· In closeac() we pass the account number and then simply through cursor pass the sql query to delete the row containing that accountnumber.
- At the end of every function we use commit to save the transaction made in the database and also we call the main() function so that the program does not stop unless the user wants to.
- STOP.

V. FLOWCHART

VI. OUTPUT

1. OPEN NEW ACCOUNT
2. DEPOSIT AMOUNT
3. WITHDRAW AMOUNT
4. BALANCE ENQUIRY
5. DISPLAY CUSTOMER DETAILS
6. CLOSE AN ACCOUNT
7. DISPLAY ALL ACCOUNT
8. Exit

Enter Task No :

```
mysql> select * from account;
+-----------+-------------+----------+------------+-----------+---------+
| Name      | Account_no  | DOB      | Phone      | Address   | Balance |
+-----------+-------------+----------+------------+-----------+---------+
| PRIYANSHU | 12345678901 | 21072003 | 1234567890 | JHARKHAND |       0 |
+-----------+-------------+----------+------------+-----------+---------+
1 row in set (0.00 sec)
```

VII. CONCLUSION

- We can easily create an account, deposit and withdraw amounts, check balance, display all account holders, and close an account.
- I personally gained some knowledge in DBMS and its syntax and also gained a basic knowledge in Python.
- The program is running fine with no errors. The user can perform any task prompted by the CLI. It is also very efficient and fast.
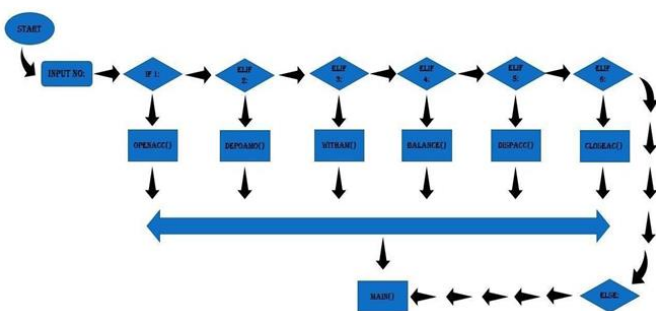
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