BANK MANAGEMENT SYSTEM

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# Bank Management System

## Mohsin Khan | 21K-4530

## Muhammad Nohail | 21K-4608

## M.Naimatullah Khan | 21K-4540

# Abstract

The purpose of this project Is the partial fulfilment of the basic bank management system. The design and development of this bank management system provides more secure approach in managing bank record and customers data and information. The system will play a great role in strengthening the relation between bank and the customer by providing right solution and easy to use interface. The language used to develop the project is c++.

The project will keep the daily record of the domain “Bank Management” as a complete Banking system. It can keep the information of account type, transaction performed, deposit, and customer details. It will provide different portals for manager and cashier. The user has the options of transfer amount, pay utility bills, balance inquiry and mobile top up. Furthermore, it will also provide brief history of transactions with date and time.

# Introduction

Online Banking (Internet Banking or E-Banking) allows customer of financial institutions to perform financial transactions on a secured program operated by the institution. Which can be virtual bank, credit union or building society.

Online banking is an umbrella term for the process by which a person can perform banking transactions electronically without visiting physically to that specific institution at specific location far away from home. Online banking is a process which is not new to the banks or their customers. Banks are giving their services to their customers through computer softwares for many years. In the past banks were reluctant to provide their services to the customer through internet because of security threats and hope we have resolved the issue.

# Requirements

## Software Requirements

The basic software requirements for the project are as follows:

* Language: c++
* Operating System: Windows, mac or linux
* Compiler: Dev c++

## Hardware Requirements

The program needs the following hardware requirements:

* Ram: 256 mb
* HDD or SSD: 40 Gb
* Processor: dual core or core2duo

# Program Requirements

Program requirements are all the requirements needed to fulfil the expectations by the customer. It also includes the functionality of the program. These must be relevant and detailed.

## Functional Requirements

Some of the main functional requirements are as follows:

## create\_account()

To create account for the new customer of Bank. The function will assign account number to the customer. The main thing is that the control of the function is only limited to the manager of the bank.

## modify()

The modify function is also managed by the manager of the bank to fulfil the concept of encapsulation. The function will be used for the future changes in the account of the customer.

## show\_account()

This function will show the detailed preview of the account to the customer with information and history of transactions.

## dep()

The deposit function will be used by the cashier and customer will not have access to it because of security issues. It will be used to add specific amount to the account of the customer.

## draw()

The draw is basically the withdraw functions through which the customer can send money to any one any time he wants.

# Non Functional Requirements

The program also includes following non functional requirements

## Filing

The filing of the program is done by the basic concept of filing in c++ by using including the source header “fstream”. The filing was the essential part of the program due to which we were able to manage the record of the bank and customers

## Encapsulation

To fulfil this concept of object oriented programming we used access specifier with the use of mutators and accessors. Encapsulation is the first and basic concept of OOP and program without it is incomplete.

## Inheritence

Hierarchical inheritance is used between the Base class of Employee with the derived classes of Manager and Cashier. The concept is no doubt one of our favorite part but we faced difficulty in where to implement it.

Diagram

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# Challenges and Discussion

One of the irritating challenge what we faced was the issue of compiler because dev c++ which we used was of older version which was not running new concepts included in Object Oriented Programming.

Processors were slow back in the day, and performance mattered. Even virtual function calls were a big deal, so they had to be used carefully. Try to imagine a day when a single virtual function call took several microseconds.

You could be as object oriented as you liked, but there was this one big object in the middle with lot of member functions that you could not refactor because it controlled a single big-ass piece of hardware.

It was my first C++ project, and my first project as lead. There were some problems I wasn’t able to tackle with but, Fortunately, I had a couple of very gentle, kind colleagues to help me with the C++ questions.

# Conclusion

Hope that the report define each and every aspect of the program and the project made will for sure help in growth of Online Banking. We tried our best and put our efforts. Hoping for good results from your side. Thank You!