Object Oriented Programming (OOP)

Name: BABAR HANIF ID: SP0-BSCS-0020

Name: ABDULLAH MUHAMMAD IBRAHIM ID: SP20-BSCS-0027

Miss Rida Ayesha

OOP Final Project Report

BANK MANAGEMENT SYSTEM

TABLE OF CONTENT

BANK MANAGEMENT SYSTEM

Introduction:

The Bank Management System is an application for maintaining a person's account in a Bank. In this project, I tried to show the working of a banking account system and cover the pillars of OOP in (Bank Management System). To develop a project for solving financial applications of a customer in banking environment in order to nurture the needs of a banking user by providing various ways to perform banking tasks.

Abstract:

The objective of the project is to design a Bank Management System application, which enables the customers to search and operate Bank account. Our motivation for the project came from my enthusiasm and strong urge to learn JAVA and object-oriented programming concepts which is one of the fastest growing technologies in today's world. The Bank Management System project mainly consists of per defined users, the customers who access the information provided by the system and the administrator who modifies and updates the information available in the data. All the data needed for the application is stored in the form classes. The report contains the details of all the tasks carried out during the entire software development life cycle of the bank account management Project. This document depicts all the details of the project starting from the project design to testing and examining.

Project Overview:

This project performs many tasks like we have defined as follows:

BANK MANAGEMENT SYSTEM

1. Create Account

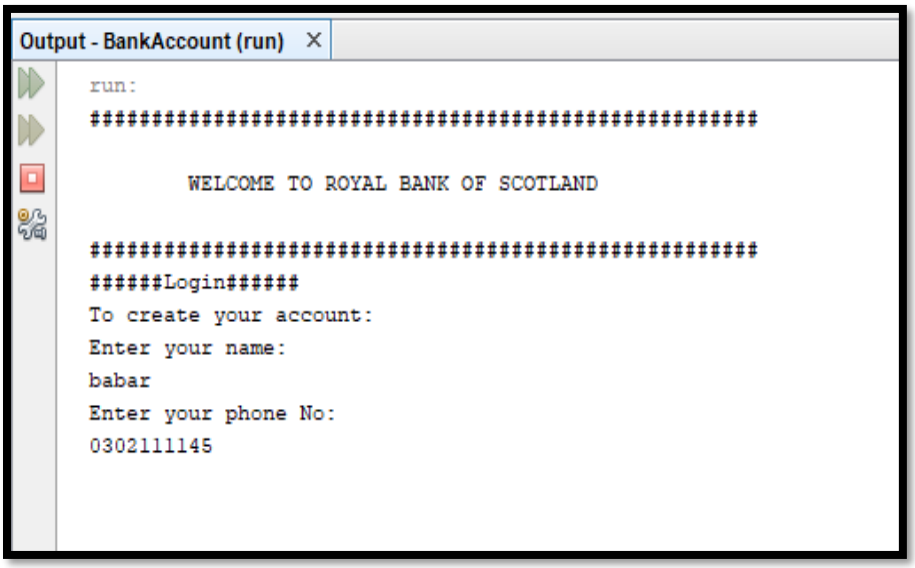
To create an account enter a valid name and a valid phone no in order to Activate the new account.

Code

```
Scanner sc = new Scanner(System.in);

        System.out.println("#########################################################");
        System.out.println("\n\tWELCOME TO ROYAL BANK OF SCOTLAND");
        System.out.println("\n#########################################################");
        System.out.println("########Login########");
        System.out.println("To create your account:\nEnter your name: ");
        name = sc.nextLine();
        System.out.println("Enter your phone No:");
        phone = Integer.parseInt(sc.nextLine());
        Account acc1 = new Account(name, phone);
        acc1.types();
```

Output



2. Account Types

After create enter Name and Phone no it ask for account types.

Code

```
   public void types(){


    System.out.println("\n\tWhich type of Account you want to create?\n\t1) Current Account\n
\t2) Saving Account\n\t3) Fixed Deposit Account");
        choice = Integer.parseInt(sc.nextLine());

        switch(choice){

            case 1:
                CurrentAcc ca1 = new CurrentAcc(0, name, phone);
                System.out.println("\tYour account has been successfully created!\n");
                ca1.cashopt();
                break;
            case 2:
                System.out.println("\tBefore finishing with your registeration, you must depo
sit an amount about 500rs or more.");
                System.out.println("\tEnter the amount:");
                balance = Float.parseFloat(sc.nextLine());

                do{
                    if(balance>=1000){
                        break;
                    }
                    else{
                        System.out.println("\tMinimum starting deposit must be 500rs!");
                        System.out.println("\tEnter the amount:");
                        balance = Float.parseFloat(sc.nextLine());
                    }
                }while(1000>balance);

                SaveAcc sa1 = new SaveAcc(balance, name, phone);
                System.out.println("\tYour account has been successfully created!\n");
                sa1.cashopt();
                break;
```

```
            case 3:
                System.out.println("\tBefore finishing with your registeration, you must depo
sit an amount:");
                System.out.println("\tEnter the amount:");
                balance = Float.parseFloat(sc.nextLine());

                FixedAcc fa1 = new FixedAcc(balance, name, phone);
                System.out.println("\tYour account has been successfully created!\n");
                fa1.cashopt();
                break;

            default:
                System.out.println("\tInvalid option!\n");
                break;
            }
```

Output

```
Output - BankAccount (run)
run:
############################################################

        WELCOME TO ROYAL BANK OF SCOTLAND

############################################################
########Login########
To create your account:
Enter your name:
babar
Enter your phone No:
0301122345
        Which type of Account you want to create?
        1) Current Account
        2) Saving Account
        3) Fixed Deposit Account
1
        Your account has been successfully created!
```

Current Account

Code

```
public class CurrentAcc extends Account{

    private float balance;
    float amount;
    Scanner sc = new Scanner(System.in);

    CurrentAcc(float balance, String Name, int phone){
        super(Name, phone);
        this.balance = balance;
    }
```

Output

```
        Which type of Account you want to create?
        1) Current Account
        2) Saving Account
        3) Fixed Deposit Account
1
        Your account has been successfully created!


        Do You want to:
        1] Deposit Amount
        2] Withdraw Amount
        3] View Amount
        4] LOAN
        5] Quit
        Enter your choice:
1
        Enter deposit amount:
5000
        Your cash has been deposited successfully!
```

Saving Account

Code

```
public class SaveAcc extends Account{

    private float balance;
    int month = 0;

    Scanner sc = new Scanner(System.in);

    SaveAcc(float balance, String Name, int phone){
        super(Name, phone);
        this.balance = balance;
    }

    float getbalance(){
        return balance;
    }

    float prof(){
        float val;

        val = (balance*2)/100;
        val = val+balance;

        return val;
    }
```

Output

```
        Which type of Account you want to create?
        1) Current Account
        2) Saving Account
        3) Fixed Deposit Account
2
        Before finishing with your registeration, you must deposit an amount about 500rs or more.
        Enter the amount:
1000
        Your account has been successfully created!

        Do You want to:
        1] Deposit Amount
        2] Withdraw Amount
        3] View Amount
        4] LOAN
        5] Quit
        Enter your choice:
```

Fixed Account

Code

```
public class FixedAcc extends Account{
    private float balance;
    float prof,amount;
    Scanner sc = new Scanner(System.in);
    int month = 0;

    FixedAcc(float balance, String Name, int phone){
        super(Name, phone);
        this.balance = balance;
    }

    float withdraw (float amount){
      if (this.balance < 0)
      {
```

```
            System.out.println("\tYou Insufficient!\n");
        }
        else
        {
            this.balance -= amount;
        }

        return this.balance;
    }
```

Output

```
        Which type of Account you want to create?
        1) Current Account
        2) Saving Account
        3) Fixed Deposit Account
3
        Before finishing with your registration, you must deposit an amount:
        Enter the amount:
500
        Your account has been successfully created!


        Do You want to:
        1] Deposit Amount
        2] Withdraw Amount
        3] View Amount
        4] LOAN
        5] Quit
        Enter your choice:
```

3. Deposit

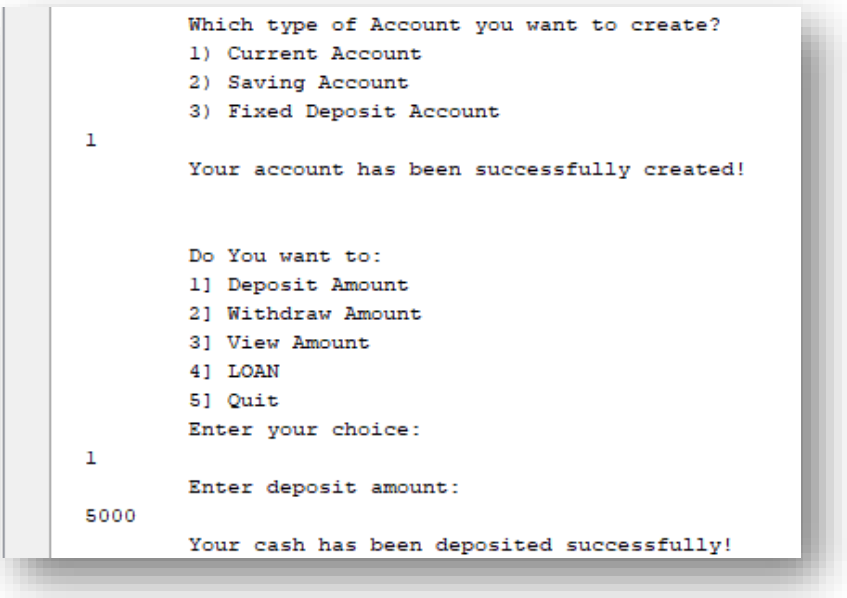
After logging in despite of withdrawing you can also deposit the cash to your account.

Code

```
void depositAmt(){
       float amount;
       System.out.println("\tEnter deposit amount: ");
       amount = Integer.parseInt(sc.nextLine());
       if(0 > amount){
           System.out.println("\tInvalid amount!\n");
           depositAmt();
       }
       else{
           balance = balance + amount;
           System.out.println("\tYour cash has been deposited successfully!\n");
       }


   }
```

Output



4. Cash Withdrawal

After logging in it also enables us to withdraw the cash from the account.

Code

```
void withdrawAmt(){
        float prof;
        float amount;
        System.out.println("\tEnter how many months ago you created you account");
        month = Integer.parseInt(sc.nextLine());
        if(month>=1){
            prof = ((this.balance*3)/100)*month;
            System.out.println("\tEnter amount to be withdrawn: ");
            amount = Integer.parseInt(sc.nextLine());
            this.withdraw(amount);
                System.out.println("#########################################################");
                System.out.println("\tYour request has been completed,\n\tYou will also recie
ve %3 monthly profit of your total which is " + prof);
                System.out.println("\tThe total amount you recieved  " + (amount+prof) );
                System.out.println("\tYour remaining balance is "+ this.balance);
                System.out.println("#########################################################");
        }



        else{
                System.out.println("\tyou are not eligible because you can only withdraw afte
r exactly a month");
            }
        }
```

BANK MANAGEMENT SYSTEM

Output

```
        Do You want to:
        1] Deposit Amount
        2] Withdraw Amount
        3] View Amount
        4] LOAN
        5] Quit
        Enter your choice:
2
        Enter withdrawal amount:
1000
        Your cash has been withdrawn successfully!
```

5. View Amount

After logging in it also enables us to check the cash from the account.

Code

```
void viewAmt(){
        System.out.println("\tAccount Balance: " + this.balance);
    }
```

OUTPUT

```
            Do You want to:
            1] Deposit Amount
            2] Withdraw Amount
            3] View Amount
            4] LOAN
            5] Quit
            Enter your choice:
3
            Account Balance: 4000.0
```

6. Loan and its types

User can also take loan from our bank.

Code

```
public void loan_types(){
     System.out.println("\tdo you want loan:");
               String ask_loan = sc.nextLine();
                if(ask_loan.equals("yes")){

                    boolean quit = false;
                    int a;

                    do{

                        System.out.println("\n\tDo You want to: \n\t1]LOAN FOR HOME\n\t2]LOAN
 FOR BUSSINESS\n\t3]LOAN FOR OTHERS \n\t4] Quit\n\tEnter your choice: ");
                        a = sc.nextInt();
                        switch(a){

                            case 1:
                                home();
                                break;
                            case 2:
                                bussiness();
                                break;
                            case 3:
                                other();
                                break;
                            case 4:
                                quit = true;
                                break;
                            default:
                                System.out.println("\tInvalid option!\n");
                                break;
                            }
                    }while(quit!=true);
                }
                else {

                    System.out.println("\tThank you for your response\n");
                }
```

Output

```
          Do You want to:
          1] Deposit Amount
          2] Withdraw Amount
          3] View Amount
          4] LOAN
          5] Quit
          Enter your choice:
4
          do you want loan:
yes
          Do You want to:
          1]LOAN FOR HOME
          2]LOAN FOR BUSSINESS
          3]LOAN FOR OTHERS
          4] Quit
          Enter your choice:
```

- **Loan for home**

Code

```
public void home(){
        System.out.println("########################################");
        System.out.println("\tLOAN CONDITIONS: \n\tInterest Rate is 4% after 12 months \n\tMi
nimum Amount 2,00,000  \n\tMaximum 20,00,000 \n\tTime Period 2 to 5 years");
        System.out.println("########################################");

        System.out.println("\tHow much loan you want:");
        int loan = sc.nextInt();

        System.out.println("\tHow many years would you like to repay?");
        int time = sc.nextInt();


        if(loan >= 200000){
            if(time==1){
                System.out.println("\tSUCCESSFULLY your loan application accepted ");
                System.out.println("\tyou repay" + loan + "with 12months");
            }
            else{
                System.out.println("\tSUCCESSFULLY your loan application accepted ");
                int interest = loan*4/100;
                int year = (time-1)*interest;
                System.out.println("\tyou repay " + (loan+year) + " with in " + time + " year
s" );
            }
        }
        else{

            System.out.println("\tyou must apply for loan upto 2,00,000\n");
        }



    }
```

Output

```
        Do You want to:
        1]LOAN FOR HOME
        2]LOAN FOR BUSSINESS
        3]LOAN FOR OTHERS
        4] Quit
        Enter your choice:
1
##########################################
        LOAN CONDITIONS:
        Interest Rate is 4% after 12 months
        Minimum Amount 2,00,000
        Maximum 20,00,000
        Time Period 2 to 5 years
##########################################
        How much loan you want:
500000
        How many years would you like to repay?
3
        SUCCESSFULLY your loan application accepted
        you repay 540000 with in 3 years
```

- **Loan for business**

Code

```
public void bussiness(){
        System.out.println("##########################################");
        System.out.println("\tLOAN CONDITIONS: \n\tInterest Rate is 2%  \n\tMinimum Amount 1,
00,000  \n\tMaximum 10,00,000 \n\tTime Period 1 to 3 years");
        System.out.println("##########################################");

        System.out.println("\tHow much loan you want:");
        int loan = sc.nextInt();

        System.out.println("\tHow long would you like to repay?");
        int time = sc.nextInt();


        if(loan >= 100000){
```

```
                System.out.println("\tSUCCESSFULLY your loan application accepted ");
                int interest = loan*2/100;
                int year = (time)*interest;
                System.out.println("\tyou repay " + (loan+year) + " with in " + time + " year
s" );

        }
        else{

            System.out.println("\tyou must apply for loan upto 1,00,000\n");
        }



    }
```

Output

```
        Do You want to:
        1]LOAN FOR HOME
        2]LOAN FOR BUSSINESS
        3]LOAN FOR OTHERS
        4] Quit
        Enter your choice:
2
##########################################
        LOAN CONDITIONS:
        Interest Rate is 2%
        Minimum Amount 1,00,000
        Maximum 10,00,000
        Time Period 1 to 3 years
##########################################
        How much loan you want:
1500000
        How long would you like to repay?
2
        SUCCESSFULLY your loan application accepted
        you repay 1560000 with in 2 years
```

- **Loan for others**

Code

```
public void other(){
        System.out.println("##########################################");
        System.out.println("\tLOAN CONDITIONS: \n\tInterest Rate is 3%  \n\tMinimum Amount 50
,000  \n\tMaximum 5,00,000 \n\tTime Period 1 to 4 years");
        System.out.println("##########################################");

        System.out.println("\tHow much loan you want:");
        int loan = sc.nextInt();

        System.out.println("\tHow many years would you like to repay ?");
        int time = sc.nextInt();

        System.out.println("\tWhat are you borrowing for ?");
        String others = sc.next();

        if(loan >= 50000){

                System.out.println("\tSUCCESSFULLY your loan application for " + others + " a
ccepted.");
                int interest = loan*3/100;
                int year = (time)*interest;
                System.out.println("\tyou repay " + (loan+year) + " with in " + time + " year
s" );

        }
        else{

            System.out.println("\tyou must apply for loan upto 50,000\n");
        }
```

OUTPUT

```
        Do You want to:
        1]LOAN FOR HOME
        2]LOAN FOR BUSSINESS
        3]LOAN FOR OTHERS
        4] Quit
        Enter your choice:
3
########################################
        LOAN CONDITIONS:
        Interest Rate is 3%
        Minimum Amount 50,000
        Maximum 5,00,000
        Time Period 1 to 4 years
########################################
        How much loan you want:
90000
        How many years would you like to repay ?
1
        What are you borrowing for ?
car
        SUCCESSFULLY your loan application for car accepted.
        you repay 92700 with in 1 years
```

7. QUIT

After the User Complete all task are correctly perform then the user close the account.

Code

```
}
                else {

                    System.out.println("\tThank you for your response\n");
                }
}
```

Output

```
        Do You want to:
        1]LOAN FOR HOME
        2]LOAN FOR BUSSINESS
        3]LOAN FOR OTHERS
        4] Quit
        Enter your choice:
4

        Do You want to:
        1] Deposit Amount
        2] Withdraw Amount
        3] View Amount
        4] LOAN
        5] Quit
        Enter your choice:
5
        Thank You for creating Account

BUILD SUCCESSFUL (total time: 36 minutes 13 seconds)
```

THANK YOU!