VISVESVARAYA TECHNOLOGICAL UNIVERSITY
JNANASANGAMA, BELAGAVI – 590018

Mini Project Report

Bank Management System

Submitted in partial fulfilment for the award of degree of

Bachelor of Engineering
In
Computer Science and Engineering

Submitted by

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CERTIFICATE

Certified that the Mini project entitled "**Bank Management System"** carried out by

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are bonafide students of 2nd Semester B.E, **RV Institute of Technology and Management** in partial fulfilment for the Bachelor of Engineering in COMPUTER SCIENCE AND ENGINEERING, of the **Visvesvaraya Technological University,** Belagavi, during the academic year 2020 - 2021. The Mini project report has been approved as it satisfies the academic requirements in respect of C Programming for Problem Solving.

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ABSTRACT

The Bank Account Management System 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 Account Management System. The Bank Account Management System undertaken as a project is based on C programming language. This project has been developed to carry out the processes easily and quickly, which is not possible with the manuals systems.

We would like to take the opportunity to thank and express our deep sense of gratitude to our mentor Dr. Asha S. Manek for giving us the opportunity to work on data structures and file handling in C. We would like to appreciate her guidance, encouragement and cooperation throughout the project. We would even like to thank her for imparting the knowledge of Data Structures & Applications and made us thorough with the course, her valuable contribution and guidance have been certainly indispensable for our project work.

We hope that we can build upon the experience and knowledge that we have gained and make a valuable contribution in coming future.

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Chapter 1
INTRODUCTION

1.1: Introduction to the project:

Bank Management System:

Bank management system project is a c programming-based project. It has a command-line interface. It is useful for managing a bank account in a bank.

This project has a lot of options. The project performs operations like creating bank account, edit account information, adding money, giving interest on amount, giving different kinds of loan and other operations without errors.

1.2: Introduction to the application

This application is made using C programming language. We have used different kinds of functions like file, structure, if-else and many more to make this project. The management system made by us is operated from the banker's end. This is a menu driven program with 7 options from creating a new account to depositing money to seeking loan.

The administrator can run those 7 options for various bank functions. The administrator needs to enter the password to enter main menu.

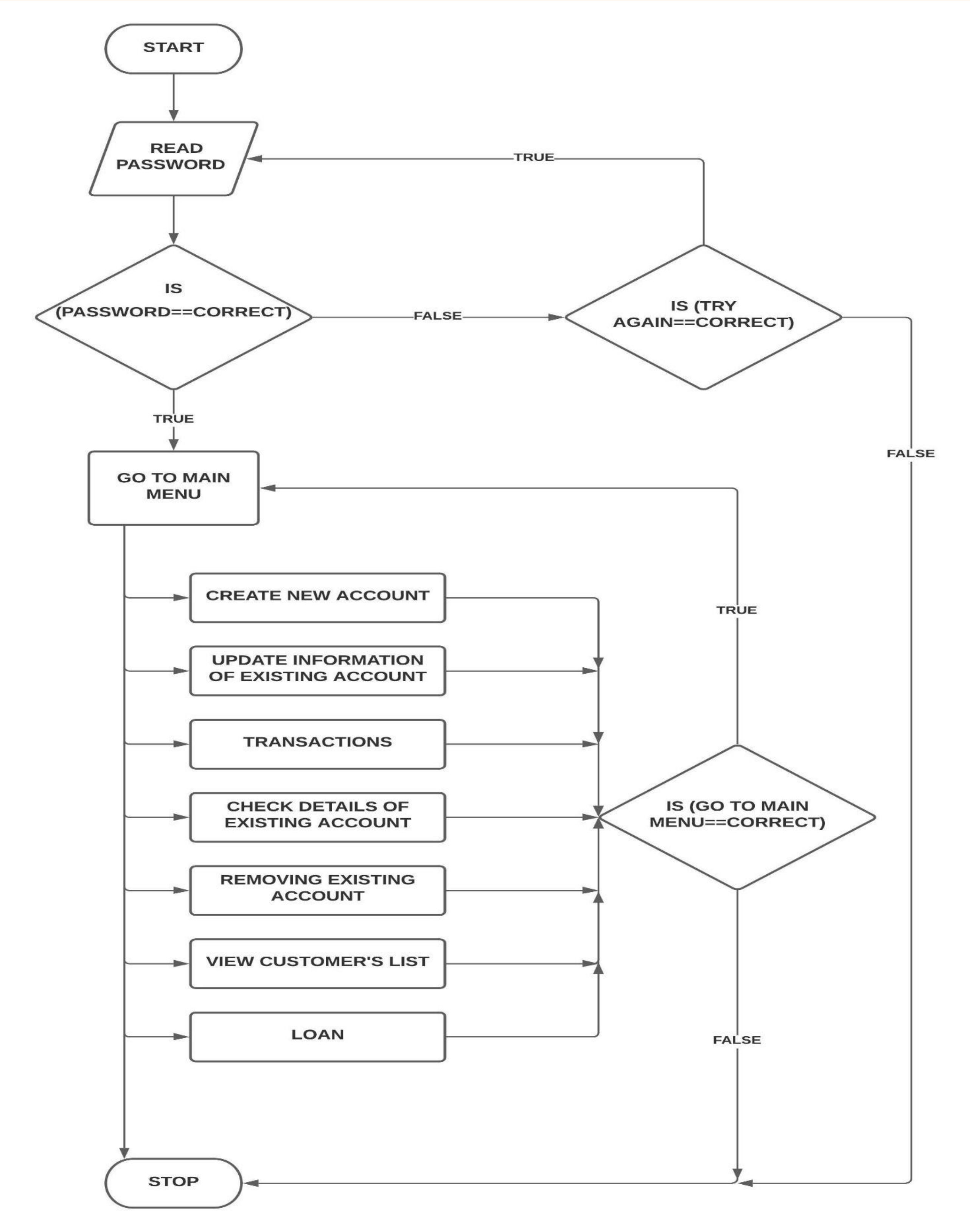
Following are the option: create a new account, update info about existing account, transactions, check details of existing account, removing existing account, view customer's list and loan.

1.3: Relevance of the application

- Bank management system can be used to save data of the costumers of a bank.
- It can be used to perform transactions i.e., deposit and withdraw money from one's bank account.
- It's also used to append the data of a costumer if he/she wants to
- It is encrypted by a password for security purpose
- It is used to give loans to people to start a business, buy a house or car.
- It can be used by rural corporative banks to perform the above-mentioned tasks with ease and very minimum price

Chapter 2

2.1: Flow chart



2.2: Algorithm

main( )

```
1.  Start
2.  Print enter password.
3.  Read password.
4.  If password matches, go to menu ().
5.  Else if TRY AGAIN= TRUE, go to step 3.
6.  Else go to close( )
```

menu( )

```
1.  Start
2.  Print welcome to the Reserve Bank of Cats
3.  Print Create new account
4.  Print Update information of existing account
5.  Print For transactions
6.  Print the details of existing account
7.  Print Removing existing account
8.  Print View customer's list
9.  Print Loan
10. Print Exit
11. Read choice
12. If (choice==1) go to new_acc( )
13. If (choice==2) go to edit( )
14. If (choice==3) go to transact( )
15. If (choice==4) go to see( )
16. If (choice==5) go to erase( )
17. If (choice==6) go to view_list( )
18. If (choice==7) go to loan( )
19. If (choice==8) go to close( )
```

new_acc( )

1. Open the record file in append mode
2. Print add record
3. Read today’s date
4. Read the account number
5. If account number is present in record file, go to step 3
6. Enter name, D.O.B., age, address, citizenship number, phone number, amount to deposit, type of account
7. Add these data in the record file
8. Close the record file
9. Print Account created successfully
10. If go to main menu == TRUE, go to menu ()
11. Else go to close( )

edit( )

1. Open the record file in read mode
2. Open new record (newrec) file in write mode
3. Print enter the account number of customer whose info you want to update
4. Read the account number
5. If account number is present in record file, go to step 9
6. If want to try again, go to step 4
7. Else if want to go to main menu, go to menu( )
8. Else go to close( )
9. If want to change phone number go to step 14
10. Enter new address
11. Enter every data of record file to newrec except address of the account number whose information we want to update
12. Add the changed address in newrec file
13. Delete record file and rename newrec file to record file and close record file and go to step 18
14. Enter new phone number
15. Enter every data of record file to newrec except phone number of that account whose information we want to update
16. Add the changed phone number in newrec file
17. Delete record file and rename newrec file to record file and close record file
18. Print changes saved
19. If go to main menu == TRUE, go to menu( )
20. Else go to close( )

transact( )

1. Open the record file in read mode
2. Open new record (newrec) file in write mode
3. Print enter the account number of customer who want to do transaction
4. Read the account number
5. If account number is present in record file, go to step 9
6. If want to try again, go to step 4
7. Else if want to go to main menu, go to menu( )
8. Else go to close( )
9. Print deposit or withdraw
10. Read choice
11. If want to withdraw go to step 16
12. Enter the amount to be deposited
13. Enter every data of record file to newrec except amount of that account which is performing transaction
14. Add the previously stored money and the amount to be deposited and add the new value in newrec file
15. Delete record file and rename newrec file to record file and close record file
16. Print deposited successfully and go to step 22
17. Enter the amount to be withdrawn
18. Enter every data of record file to newrec except amount of that account which is performing transaction
19. Subtract the withdrawn money from previously stored money and add the new value in newrec file
20. Delete record file and rename newrec file to record file and close record file
21. Print withdrawn successfully
22. If go to main menu == TRUE, go to menu( )
23. Else go to close( )

see( )

1. Open the record file in read mode
2. Print check by Account number or name
3. Read choice
4. If choice ==1, enter the account number and if account number is present in record file go to step 9 else go to step 6
5. If choice==2, enter the name and if name is present in record file go to step 9
6. If want to try again, go to step 3
7. Else if want to go to main menu, go to menu( )
8. Else go to close( )
9. Print account number, name, D.O.B., age, address, citizenship number, phone number, type of account, amount deposit and date of deposit
10. If account type is Current, print you will get no interest and go to step 13
11. float n=interest(time, deposited amount, rate of interest)
    {rate for fixed account is 9,11 and 13 percent for 1,2,3 years respectively while for saving account it's 8percent. The interest provided is in the form of simple interest}
12. Print you will get interest of n after time.
13. Close record file
14. If go to main menu == TRUE, go to menu( )
15. Else go to close( )

interest(time, deposited amount, rate of interest)

1. float SI
2. SI=(rate*time*deposited amount)/100.0;
3. return SI

erase( )

1. Open the record file in read mode
2. Open new record (newrec) file in write mode
3. Print enter the account number of customer whose account has to be deleted
4. Read the account number
5. If account number is present in record file, go to step 9
6. If want to try again, go to step 4
7. Else if want to go to main menu, go to menu( )
8. Else go to close( )
9. Copy all the data of record file to newrec except the one whose account has to be deleted
10. Delete record file and rename newrec file to record file and close record file
11. Print record deleted successfully
12. If go to main menu == TRUE, go to menu( )
13. Else go to close( )

view_list( )

1. Open the record file in read mode
2. Print account number, name, address and phone number
3. Print account number, name, address and phone number of all the accounts present in record file
4. Close record file
5. If go to main menu == TRUE, go to menu( )
6. Else go to close( )

loan( )

1. Print which type of loan you want
2. Read choice
3. If choice==1, print enter the loan amount for home required and take rate of interest as 10 percent
4. If choice==2, print enter the loan amount for car required and take rate of interest as 10 percent
5. If choice==3, print enter the loan amount for business required and take rate of interest as 12 percent
6. Read amount to be taken as loan
7. Print period to repay the loan amount
8. If choice==1, take time(t) as 1 year
9. If choice==2, take time(t) as 3 years
10. If choice==3, take time(t) as 5 years
11. Compute compound interest(P)= loan amount*$(1+(rate/100))^t$
12. Print amount to be given after time(t) is p.
13. If go to main menu == TRUE, go to menu( )
14. Else go to close( )

close( )

1. Print thanks for visiting Reserve Bank of Cats
2. Print this project is made by Aditya Kumar and Sarvesh Sharma
3. Stop

CHAPTER 3

3.1: Implementation details & Code

```
//~~~~~~~~~~~~~    Bank Management System ~~~~~~~~~~~~~~


//Aditya Kumar
//Sarvesh Sharma

#include<stdio.h>
#include<stdlib.h>
#include<windows.h>

int i,j;

int main_exit;

void menu();

struct date {
        int month,day,year;
};

struct {


        char name[60];
        int acc_no,age;
        char address[60];
        char citizenship[15];
        double phone;
        char acc_type[10];
        float amt;
        struct date dob;
        struct date deposit;
        struct date withdraw;
   }add,upd,check,rem,transaction;

float interest(float t,float amount,int rate)
{
        float SI;
        SI=(rate*t*amount)/100.0;
        return (SI);
}
```

```
void fordelay(int j)
{
   int i,k;
   for(i=0;i<j;i++)
       k=i;
}


void new_acc()
{

   int choice;
   FILE *ptr;

   ptr=fopen("record.dat","a+");
   account_no:
   system("cls");
   printf("\t\t\t\ ADD RECORD ");
   printf("\n\n\nEnter today's date(mm/dd/yyyy):");
   scanf("%d/%d/%d",&add.deposit.month,&add.deposit.day,&add.deposit.year);
   printf("\nEnter the account number:");
   scanf("%d",&check.acc_no);
   while(fscanf(ptr,"%d %s %d/%d/%d %d %s %s %lf %s %f
   %d/%d/%d\n",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.age,a
   dd.address,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add.deposi
   t.day,&add.deposit.year)!=EOF)
   {

         if (check.acc_no==add.acc_no)
         {
            printf("Account no. already in use!");
            fordelay(1000000000);
            goto account_no;
         }

   }

         add.acc_no=check.acc_no;
         printf("\nEnter the name:");
         scanf("%s",add.name);
         printf("\nEnter the date of birth(mm/dd/yyyy):");
         scanf("%d/%d/%d",&add.dob.month,&add.dob.day,&add.dob.year);
         printf("\nEnter the age:");
         scanf("%d",&add.age);
         printf("\nEnter the address:");
         scanf("%s",add.address);
         printf("\nEnter the citizenship number:");
```

```
        scanf("%s",add.citizenship);
        printf("\nEnter the phone number: ");

        scanf("%lf",&add.phone);
        printf("\nEnter the amount to deposit:$");
        scanf("%f",&add.amt);

        printf("\nType of account:\n\t#Saving\n\t#Current\n\t#Fixed1(for 1 year)\n\t#Fixed2(for 2
        years)\n\t#Fixed3(for 3 years)\n\n\tEnter your choice:");

        scanf("%s",add.acc_type);

        fprintf(ptr,"%d %s %d/%d/%d %d %s %s %lf %s %f
        %d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.a
        ddress,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,a
        dd.deposit.year);



         fclose(ptr);
         printf("\nAccount created successfully!");
         add_invalid:
         printf("\n\n\n\t\tEnter 1 to go to the main menu and 0 to exit:");
         scanf("%d",&main_exit);
         system("cls");

         if (main_exit==1)
                 menu();

         else if(main_exit==0)
                 close();

         else
          {
                 printf("\nInvalid!\a");
                 goto add_invalid;
           }

}



void view_list()
{

    FILE *view;
    view=fopen("record.dat","r");
    int test=0;
    system("cls");
    printf("\nACC. NO.\tNAME\t\t\tADDRESS\t\t\tPHONE\n");

    while(fscanf(view,"%d %s %d/%d/%d %d %s %s %lf %s %f %d/%d/%d",
    &add.acc_no,add.name, &add.dob.month, &add.dob.day, &add.dob.year,
    &add.age,add.address,add.citizenship, &add.phone,add.acc_type, &add.amt,
    &add.deposit.month, &add.deposit.day, &add.deposit.year)!=EOF)
    {
        printf("\n%d\t %s\t\t\t%s\t\t\t%.0lf",add.acc_no,add.name,add.address,add.phone);
        test++;
    }

    fclose(view);

    if (test==0)
    {
        system("cls");
        printf("\nNO RECORDS!!\n");
    }


     view_list_invalid:

     printf("\n\nEnter 1 to go to the main menu and 0 to exit:");
     scanf("%d",&main_exit);
     system("cls");

     if (main_exit==1)
        menu();

     else if(main_exit==0)
        close();

     else
     {
       printf("\nInvalid!\a");
       goto view_list_invalid;
      }

}


void edit(void)
{
    int choice,test=0;
```

```
FILE *old,*newrec;
old=fopen("record.dat","r");
newrec=fopen("new.dat","w");

printf("\nEnter the account no. of the customer whose info you want to change:");
scanf("%d",&upd.acc_no);


 while(fscanf(old,"%d %s %d/%d/%d %d %s %s %lf %s %f %d/%d/%d",&add.acc_no,add.name,
 &add.dob.month, &add.dob.day, &add.dob.year, &add.age,add.address,add.citizenship,
 &add.phone,add.acc_type, &add.amt,&add.deposit.month,
 &add.deposit.day,&add.deposit.year)!=EOF)
{
   if (add.acc_no==upd.acc_no)
   {
       test=1;
       printf("\nWhich information do you want to change?\n1.Address\n2.Phone\n\nEnter your
       choice(1 for address and 2 for phone):");

       scanf("%d",&choice);
       system("cls");

         if(choice==1)
           {
                printf("Enter the new address:");
                scanf("%s",upd.address);

                 fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f
                 %d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.ag
                 e,upd.address,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,ad
                 d.deposit.day,add.deposit.year);

                 system("cls");
                 printf("Changes saved!");
            }

         else if(choice==2)
           {
                 printf("Enter the new phone number:");
                 scanf("%lf",&upd.phone);

                 fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f
                 %d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.ag
                 e,add.address,add.citizenship,upd.phone,add.acc_type,add.amt,add.deposit.month,ad
                 d.deposit.day,add.deposit.year);

                 system("cls");
```

```
                    printf("Changes saved!");
            }
    }
    else
                     fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f
                    %d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.ag
                    e,add.address,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add
                    .deposit.day,add.deposit.year);
  }

fclose(old);
fclose(newrec);
remove("record.dat");
rename("new.dat","record.dat");

 if(test!=1)
 {
        system("cls");

        printf("\nRecord not found!!\a\a\a");

        edit_invalid:

        printf("\nEnter 0 to try again,1 to return to main menu and 2 to exit:");
        scanf("%d",&main_exit);
        system("cls");

        if (main_exit==1)
                menu();

        else if (main_exit==2)
                close();

        else if(main_exit==0)
                 edit();

        else
                {
                    printf("\nInvalid!\a");
                    goto edit_invalid;
                 }
   }




   else
```

```
        {
            printf("\n\n\nEnter 1 to go to the main menu and 0 to exit:");
            scanf("%d",&main_exit);
            system("cls");
            if (main_exit==1)
                menu();
            else
                close();
         }
}


void transact(void)
{
           int choice,test=0;
           FILE *old,*newrec;
           old=fopen("record.dat","r");
           newrec=fopen("new.dat","w");


            printf("Enter the account no. of the customer:");
            scanf("%d",&transaction.acc_no);

            while (fscanf(old,"%d %s %d/%d/%d %d %s %s %lf %s %f %d/%d/%d", &add.acc_no,
            add.name, &add.dob.month, &add.dob.day, &add.dob.year, &add.age, add.address,
            add.citizenship, &add.phone, add.acc_type, &add.amt, &add.deposit.month,
            &add.deposit.day, &add.deposit.year) != EOF)
           {

                if(add.acc_no==transaction.acc_no)
                {
                      test=1;
                      if(strcmpi(add.acc_type,"fixed1")==0||strcmpi(add.acc_type,"fixed2")==0||strcmpi(ad
                      d.acc_type,"fixed3")==0)
                      {
                                  printf("\a\a\a\n\nYOU CANNOT DEPOSIT OR WITHDRAW CASH IN
                                  FIXED ACCOUNTS!!!!!");
                                  fordelay(1000000000);
                                  system("cls");
                                  menu();
                      }
                      printf("\n\nDo you want to\n1.Deposit\n2.Withdraw?\n\nEnter your choice(1 for
                      deposit and 2 for withdraw):");
                      scanf("%d",&choice);

                      if (choice==1)
                      {
```

```
                printf("Enter the amount you want to deposit:$ ");
                scanf("%f",&transaction.amt);
                add.amt+=transaction.amt;
                fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f %d/%d/%d\n",
                add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.address,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.deposit.year);
                printf("\n\nDeposited successfully!");
        }
        else
        {
                printf("Enter the amount you want to withdraw:$ ");
                scanf("%f",&transaction.amt);
                add.amt-=transaction.amt;
                fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f %d/%d/%d\n",
                add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.address,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.deposit.year);
                printf("\n\nWithdrawn successfully!");
        }

    }

    else
    {
                fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f %d/%d/%d\n",
                add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.address,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.deposit.year);
    }

}

  fclose(old);
  fclose(newrec);
  remove("record.dat");
  rename("new.dat","record.dat");
  if(test!=1)
  {
        printf("\n\nRecord not found!!");
        transact_invalid:
        printf("\n\n\nEnter 0 to try again,1 to return to main menu and 2 to exit:");
        scanf("%d",&main_exit);
        system("cls");
        if (main_exit==0)
                transact();
        else if (main_exit==1)
```

```
                        menu();
                else if (main_exit==2)
                        close();
                else
                {
                        printf("\nInvalid!");
                        goto transact_invalid;
                }

        }
        else
        {
                printf("\nEnter 1 to go to the main menu and 0 to exit:");
                scanf("%d",&main_exit);
                system("cls");

                if (main_exit==1)
                        menu();
                else
                        close();
        }

}



void erase(void)
{
        FILE *old,*newrec;
        int test=0;
        old=fopen("record.dat","r");
        newrec=fopen("new.dat","w");
        printf("Enter the account no. of the customer you want to delete:");
        scanf("%d",&rem.acc_no);
        while (fscanf(old,"%d %s %d/%d/%d %d %s %s %lf %s %f
        %d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.a
        ge,add.address,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&a
        dd.deposit.day,&add.deposit.year)!=EOF)
        {
                if(add.acc_no!=rem.acc_no)
                        fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f
                        %d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.yea
                        r,add.age,add.address,add.citizenship,add.phone,add.acc_type,add.amt,add.de
                        posit.month,add.deposit.day,add.deposit.year);

                 else
                {
```

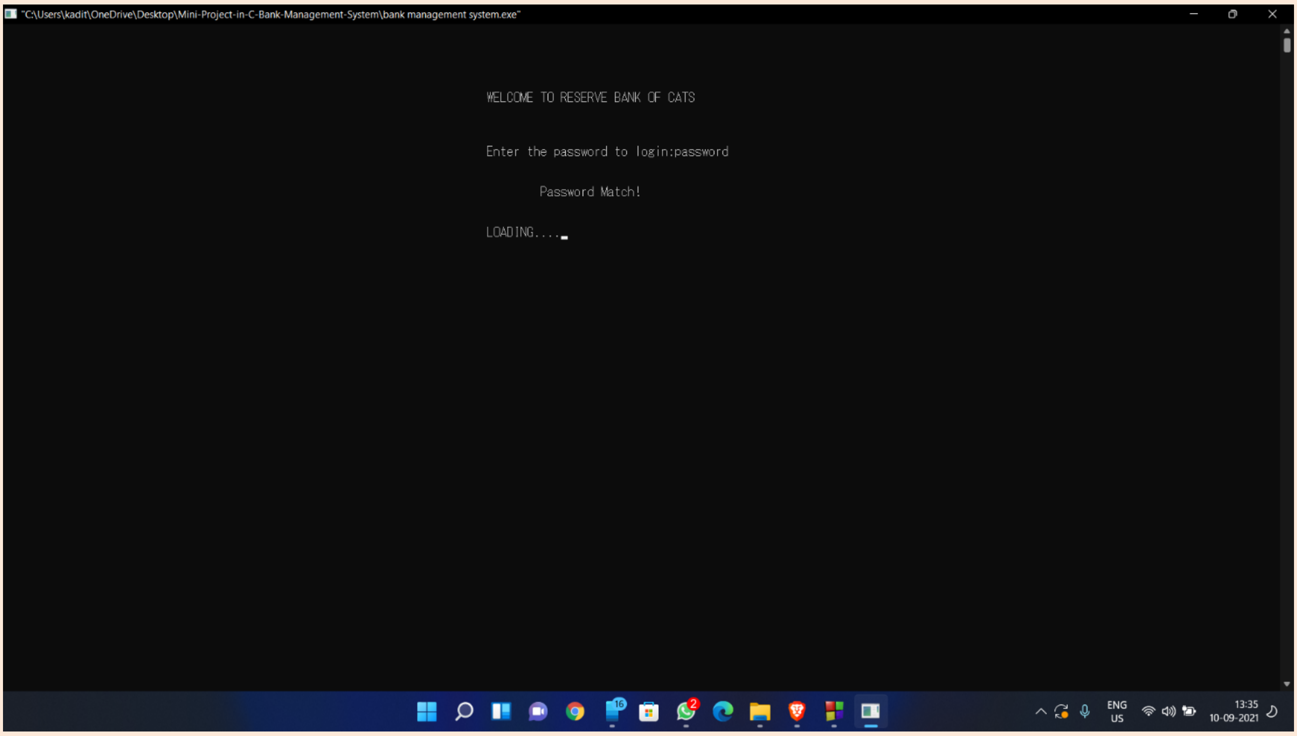
```
                test++;
                printf("\nRecord deleted successfully!\n");
        }
}

fclose(old);
fclose(newrec);
remove("record.dat");
rename("new.dat","record.dat");

if(test==0)
{
        printf("\nRecord not found!!\a\a\a");
        erase_invalid:
        printf("\nEnter 0 to try again,1 to return to main menu and 2 to exit:");
        scanf("%d",&main_exit);

        if (main_exit==1)
                menu();

        else if (main_exit==2)
                close();

        else if(main_exit==0)
                erase();




        else
        {
                printf("\nInvalid!\a");
                goto erase_invalid;
        }
   }

  else
  {
        printf("\nEnter 1 to go to the main menu and 0 to exit:");
        scanf("%d",&main_exit);
        system("cls");
        if (main_exit==1)
                menu();
        else
                close();
   }
  }


void see(void)
{
        FILE *ptr;

        int test=0,rate;
        int choice;
        float time;
        float intrst;

        ptr=fopen("record.dat","r");

        printf("Do you want to check by\n1.Account no\n2.Name\nEnter your choice:");
        scanf("%d",&choice);
        if (choice==1)
        {
                printf("Enter the account number:");
                scanf("%d",&check.acc_no);

                while (fscanf(ptr,"%d %s %d/%d/%d %d %s %s %lf %s %f
                %d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,
                &add.age,add.address,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.dep
                osit.month,&add.deposit.day,&add.deposit.year)!=EOF)
                {

                        if(add.acc_no==check.acc_no)
                        {
                                system("cls");
                                test=1;

                                printf("\nAccount NO.:%d\nName:%s \nDOB:%d/%d/%d \nAge:%d
                                \nAddress:%s \nCitizenship No:%s \nPhone number:%.0lf \nType Of
                                Account:%s \nAmount deposited:$ %.2f \nDate Of Deposit:
                                %d/%d/%d\n\n", add.acc_no, add.name, add.dob.month, add.dob.day,
                                add.dob.year, add.age,add.address,add.citizenship,add.phone,
                                add.acc_type, add.amt, add.deposit.month, add.deposit.day,
                                add.deposit.year);


                                if(strcmpi(add.acc_type,"fixed1")==0)
                                {
                                        time=1.0;
                                        rate=9;
                                        intrst=interest(time,add.amt,rate);
                                        printf("\n\nYou will get $%.2f as interest on %d/%d/%d",
                                        intrst, add.deposit.month,add.deposit.day,add.deposit.year+1);
                                }

                                else if(strcmpi(add.acc_type,"fixed2")==0)
                                {
                                        time=2.0;
                                        rate=11;
                                        intrst=interest(time,add.amt,rate);
                                        printf("\n\nYou will get $.%.2f as interest on %d/%d/%d",
                                        intrst, add.deposit.month,add.deposit.day,add.deposit.year+2);

                                }

                                else if(strcmpi(add.acc_type,"fixed3")==0)
                                {
                                        time=3.0;
                                        rate=13;
                                        intrst=interest(time,add.amt,rate);
                                        printf("\n\nYou will get $.%.2f as interest on %d/%d/%d",
                                        intrst,add.deposit.month,add.deposit.day,add.deposit.year+3);

                                }

                                else if(strcmpi(add.acc_type,"saving")==0)
                                {
                                        time=(1.0/12.0);
                                        rate=8;
                                        intrst=interest(time,add.amt,rate);
                                        printf("\n\nYou will get $.%.2f as interest on %d of every
                                        month",intrst,add.deposit.day);

                                }



                                else if(strcmpi(add.acc_type,"current")==0)
                                {
                                        printf("\n\nYou will get no interest\a\a");
                                }

                        }
                }
        }
        else if (choice==2)
        {
                printf("Enter the name:");
                scanf("%s",&check.name);
```

```
while (fscanf(ptr,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,
&add.age,add.address,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.dep
osit.month,&add.deposit.day,&add.deposit.year)!=EOF)
{
        if(strcmpi(add.name,check.name)==0)
        {
                system("cls");
                test=1;
                printf("\nAccount No.:%d\nName:%s \nDOB:%d/%d/%d \nAge:%d
                \nAddress:%s \nCitizenship No:%s \nPhone number:%.0lf \nType Of
                Account:%s \nAmount deposited:$%.2f \nDate Of
                Deposit:%d/%d/%d\n\n",add.acc_no,add.name,add.dob.month,add.do
                b.day,add.dob.year,add.age,add.address,add.citizenship,add.phone,add
                .acc_type,add.amt,add.deposit.month,add.deposit.day,add.deposit.year
                );

                if(strcmpi(add.acc_type,"fixed1")==0)
                {
                        time=1.0;
                        rate=9;
                        intrst=interest(time,add.amt,rate);
                        printf("\n\nYou will get $.%.2f as interest on
                        %d/%d/%d",intrst,add.deposit.month, add.deposit.day,
                        add.deposit.year+1);
                }

                else if(strcmpi(add.acc_type,"fixed2")==0)
                {
                        time=2.0;
                        rate=11;
                        intrst=interest(time,add.amt,rate);
                        printf("\n\nYou will get $.%.2f as interest on
                        %d/%d/%d",intrst,add.deposit.month, add.deposit.day,
                        add.deposit.year+2);
                }

                else if(strcmpi(add.acc_type,"fixed3")==0)
                {
                        time=3.0;
                        rate=13;
                        intrst=interest(time,add.amt,rate);
                        printf("\n\nYou will get $.%.2f as interest on %d/%d/%d",
                        intrst,add.deposit.month, add.deposit.day, add.deposit.year+3);

                }
```

```
            else if(strcmpi(add.acc_type,"saving")==0)
            {
                time=(1.0/12.0);
                rate=8;
                intrst=interest(time,add.amt,rate);
                printf("\n\nYou will get $.%.2f as interest on %d of every
                month", intrst, add.deposit. day);
            }

            else if(strcmpi(add.acc_type,"current")==0)
            {
                printf("\n\nYou will get no interest\a\a");
            }

        }
    }
}


fclose(ptr);

if(test!=1)
{
    system("cls");
    printf("\nRecord not found!!\a\a\a");
    see_invalid:
    printf("\nEnter 0 to try again,1 to return to main menu and 2 to exit:");
    scanf("%d",&main_exit);
    system("cls");

    if (main_exit==1)
        menu();

    else if (main_exit==2)
        close();

    else if(main_exit==0)
        see();


    else
    {
        system("cls");
        printf("\nInvalid!\a");
        goto see_invalid;
    }
```

```
        }

        else
        {
                printf("\nEnter 1 to go to the main menu and 0 to exit:");
                scanf("%d",&main_exit);
        }

        if (main_exit==1)
        {
                system("cls");
                menu();
        }

       else
        {
                system("cls");
                close();
        }

}


void close(void)
{
        printf("\n\n\n\n\n\n\n\n\t\t\t\t\t\t\t\t\t\tTHANKS FOR VISITING RESERVE BANK OF
        CATS");
        printf("\n\n\n\t\t\t\t\t\t\t\t\t This project is made by Aditya Kumar and Sarvesh Sharma\n\n\n
        \n\n");
}

void menu(void)
{
        int choice;
        system("cls");
        system("color 8");

        printf("\n\n\n\n\t\t\t\t\t\t\t\t\t\tWELCOME TO RESERVE BANK OF CATS");
        printf("\n\n\n\n\n\t\t\t\t\t\t\t\t\tCUSTOMER ACCOUNT BANKING MANAGEMENT
        SYSTEM");

        printf("\n\n\n\n\t\t\t\t\t\t\t\t\tWELCOME TO THE MAIN MENU");
        printf("\n\n\t\t\t\t\t\t\t\t\t\t1.Create new account\n\t\t\t\t\t\t\t\t\t\t2.Update information of existing
        account\n\t\t\t\t\t\t\t\t\t\t3.For transactions\n\t\t\t\t\t\t\t\t\t\t4.Check the details of existing
        account");

        printf("\n\t\t\t\t\t\t\t\t\t\t5.Removing existing account\n\t\t\t\t\t\t\t\t\t\t6.View customer's
        list\n\t\t\t\t\t\t\t\t\t7.Exit\n\n\n\n\n\t\t\t\t\t\t\t\t Enter your choice:");

        scanf("%d",&choice);
        system("cls");
        switch(choice)
        {
                case 1:new_acc();
                        break;
                case 2:edit();
                        break;
                case 3:transact();
                        break;
                case 4:see();
                        break;
                case 5:erase();
                        break;
                case 6:view_list();
                        break;
                case 7:close();
                        break;
        }
}

int main()
{
        char pass[20],password[20]="password";
        int i=0;

        printf("\n\n\n\n\n\n\t\t\t\t\t\t\t\tWELCOME TO RESERVE BANK OF CATS \n\n\n\n\t\t\t\t
        \t\t\t\tEnter the password to login:");
        scanf("%s",pass);
        if (strcmp(pass,password)==0)
        {
        printf("\n\n\t\t\t\t\t\t\t\t\tPassword Match!\n\n\n\t\t\t\t\t\t\t\tLOADING");
        for(i=0;i<=6;i++)
                {
                        fordelay(100000000);
                        printf(".");
                }

                system("cls");
                menu();
        }



        else
        {
                printf("\n\n\t\t\t\t\t\t\t\tWrong password!!\a\a\a");
                login_try:
                printf("\n\n\n\t\t\t\t\t\t\t\tEnter 1 to try again and 0 to exit:");
                scanf("%d",&main_exit);
                if (main_exit==1)
                {
                        system("cls");
                        main();
                }

                else if (main_exit==0)
                {
                        system("cls");
                        close();
                }
                else
                {
                        printf("\nInvalid!");
                        fordelay(1000000000);
                        system("cls");
                        goto login_try;
                }
        }
        return 0;
}
```

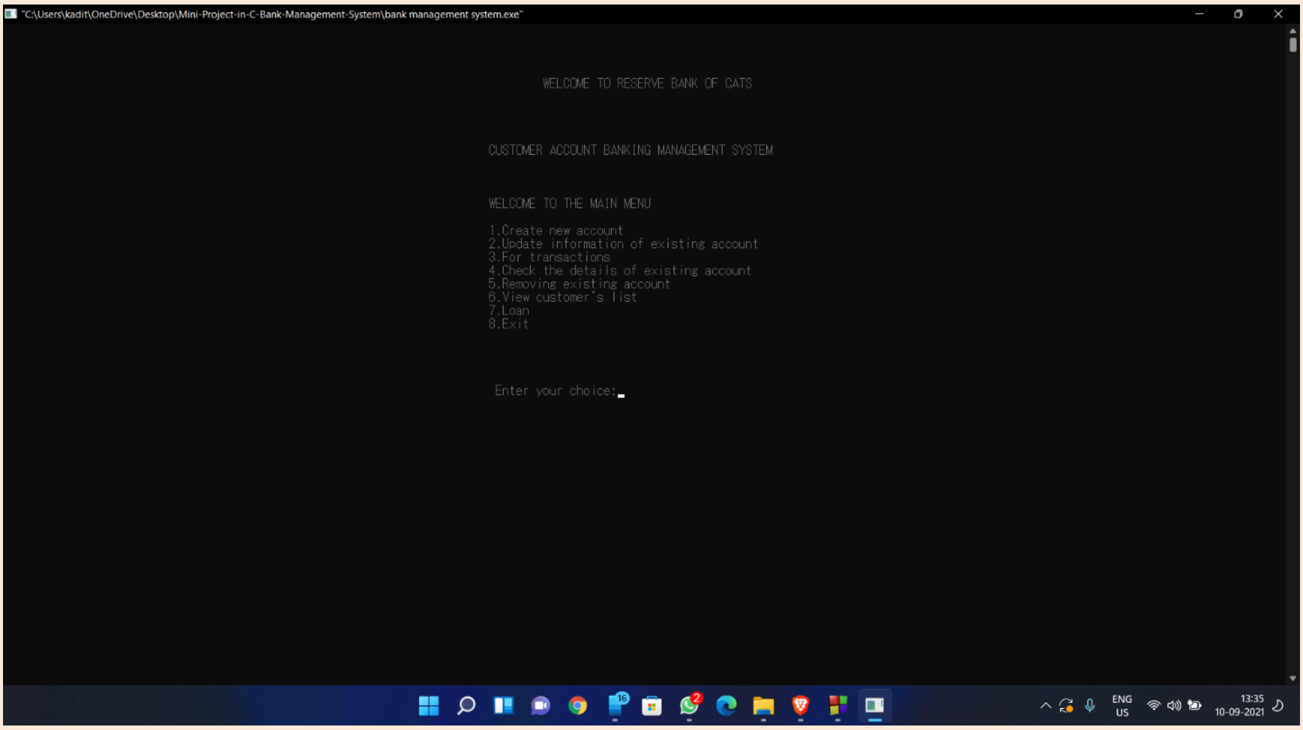
3.2: Experimental Results/Snapshots



"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"

```
WELCOME TO RESERVE BANK OF CATS

Enter the password to login:password

       Password Match!

LOADING....
```

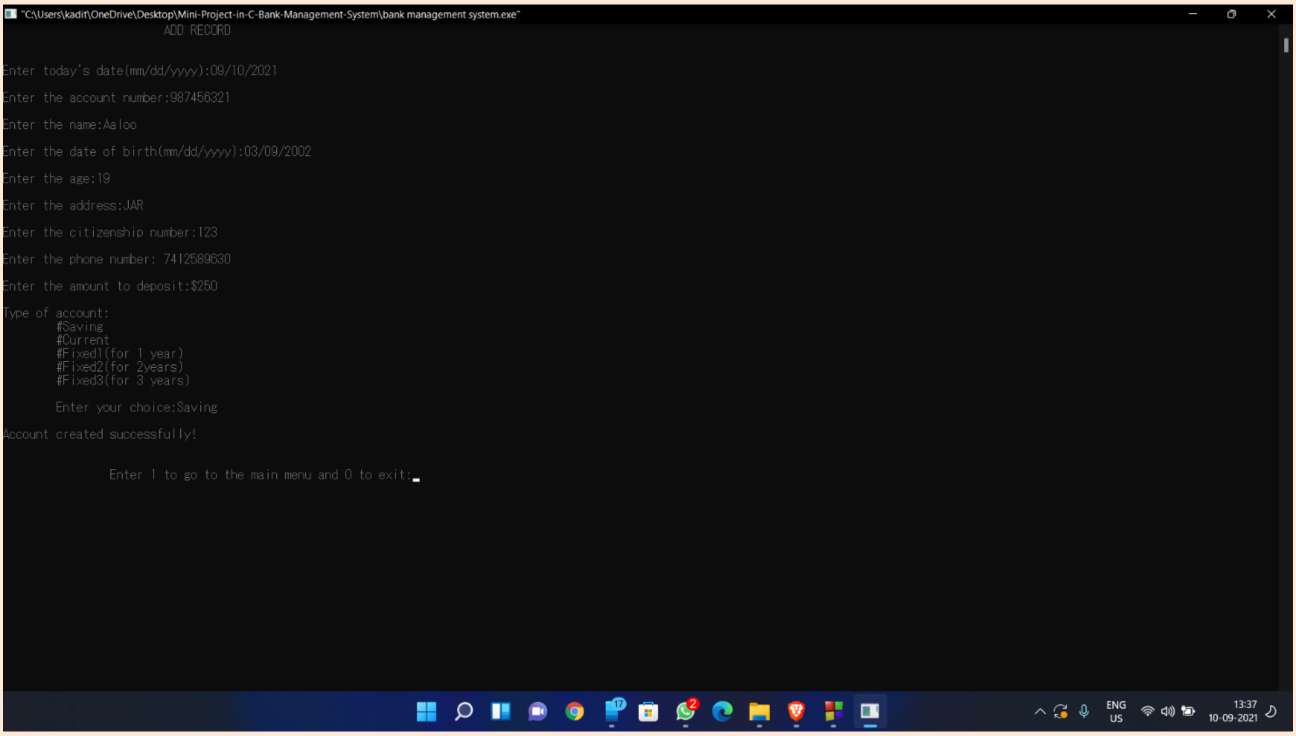
Figure 1 showing the login page of our bank



"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"

```
        WELCOME TO RESERVE BANK OF CATS


CUSTOMER ACCOUNT BANKING MANAGEMENT SYSTEM


WELCOME TO THE MAIN MENU

1.Create new account
2.Update information of existing account
3.For transactions
4.Check the details of existing account
5.Removing existing account
6.View customer's list
7.Loan
8.Exit


 Enter your choice:
```

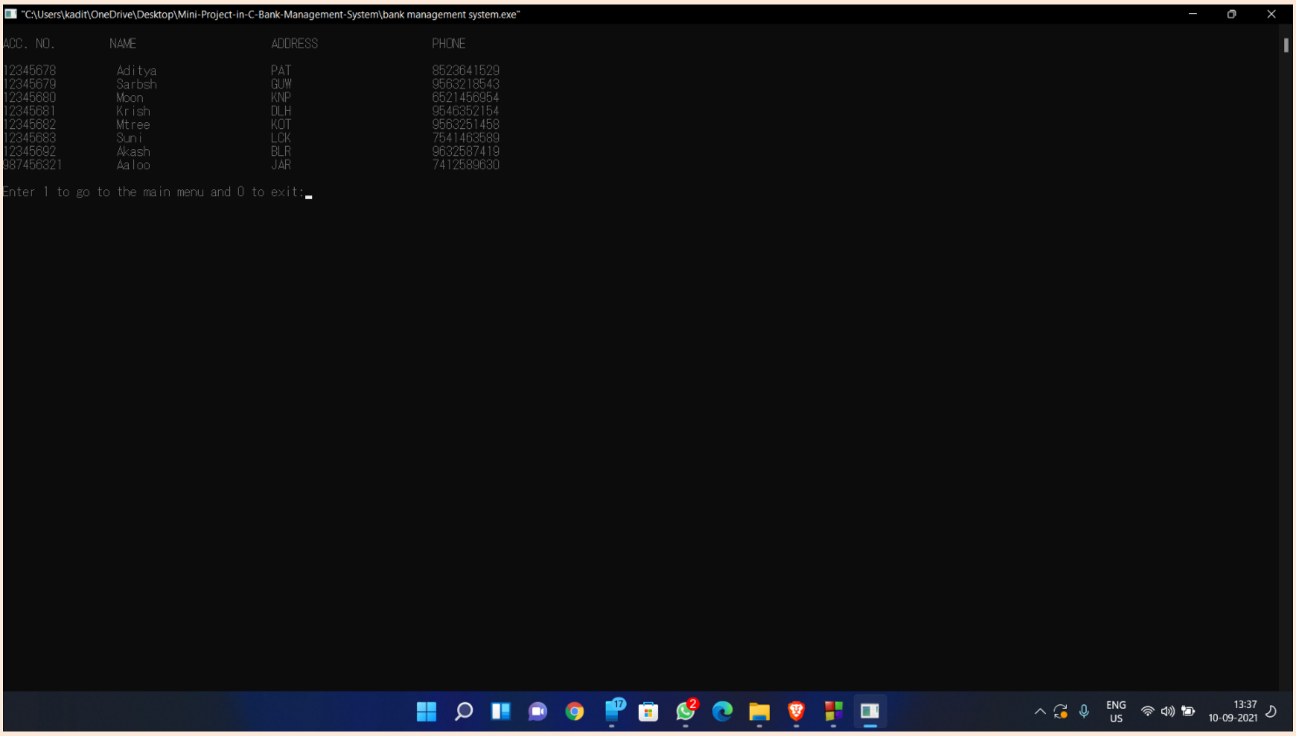
Figure 2 showing the main menu of our bank



"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"
ENG
US
13:37
10-09-2021

```
                         ADD RECORD


Enter today's date(mm/dd/yyyy):09/10/2021

Enter the account number:987456321

Enter the name:Aaloo

Enter the date of birth(mm/dd/yyyy):03/09/2002

Enter the age:19

Enter the address:JAR

Enter the citizenship number:123

Enter the phone number: 7412589630

Enter the amount to deposit:$250

Type of account:
        #Saving
        #Current
        #Fixed1(for 1 year)
        #Fixed2(for 2years)
        #Fixed3(for 3 years)

        Enter your choice:Saving

Account created successfully!


                Enter 1 to go to the main menu and 0 to exit:
```

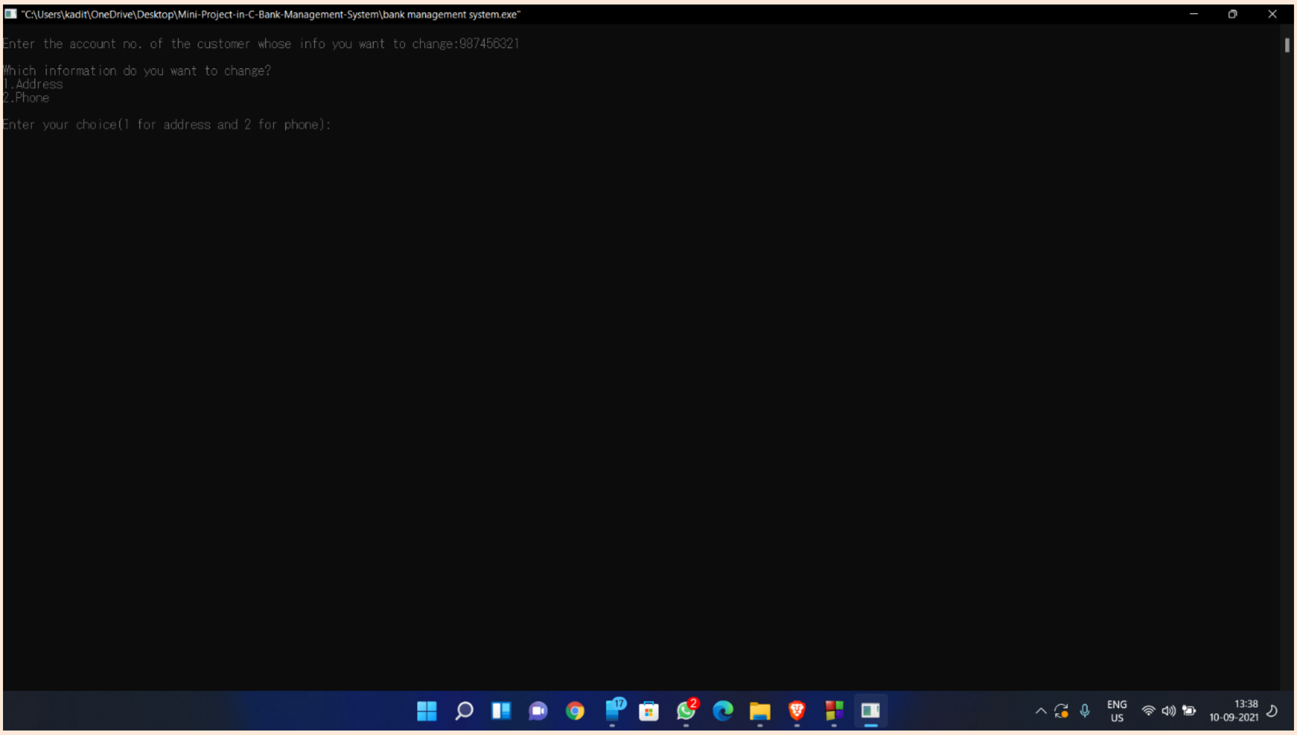
Figure 3 showing adding an account in bank



"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"
ENG
US
13:37
10-09-2021

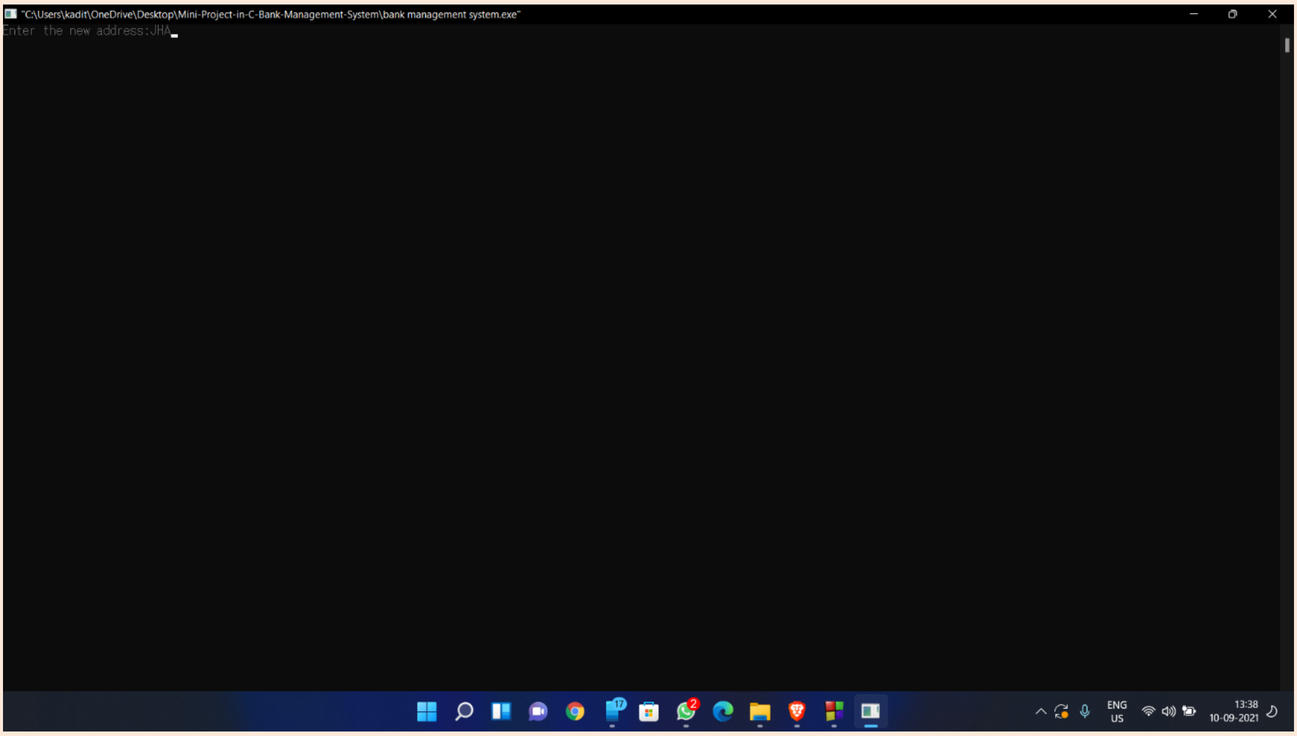
```
ACC. NO.        NAME                    ADDRESS                 PHONE

12345678         Aditya                 PAT                     8523641529
12345679         Sarbsh                 GUW                     9563218543
12345680         Moon                   KNP                     6521456954
12345681         Krish                  DLH                     9546352154
12345682         Mtree                  KOT                     9563251458
12345683         Suni                   LCK                     7541463589
12345692         Akash                  BLR                     9632587419
987456321        Aaloo                  JAR                     7412589630

Enter 1 to go to the main menu and 0 to exit:
```

Figure 4 confirming the addition of account in bank


"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"
ENG
US
13:38
10-09-2021

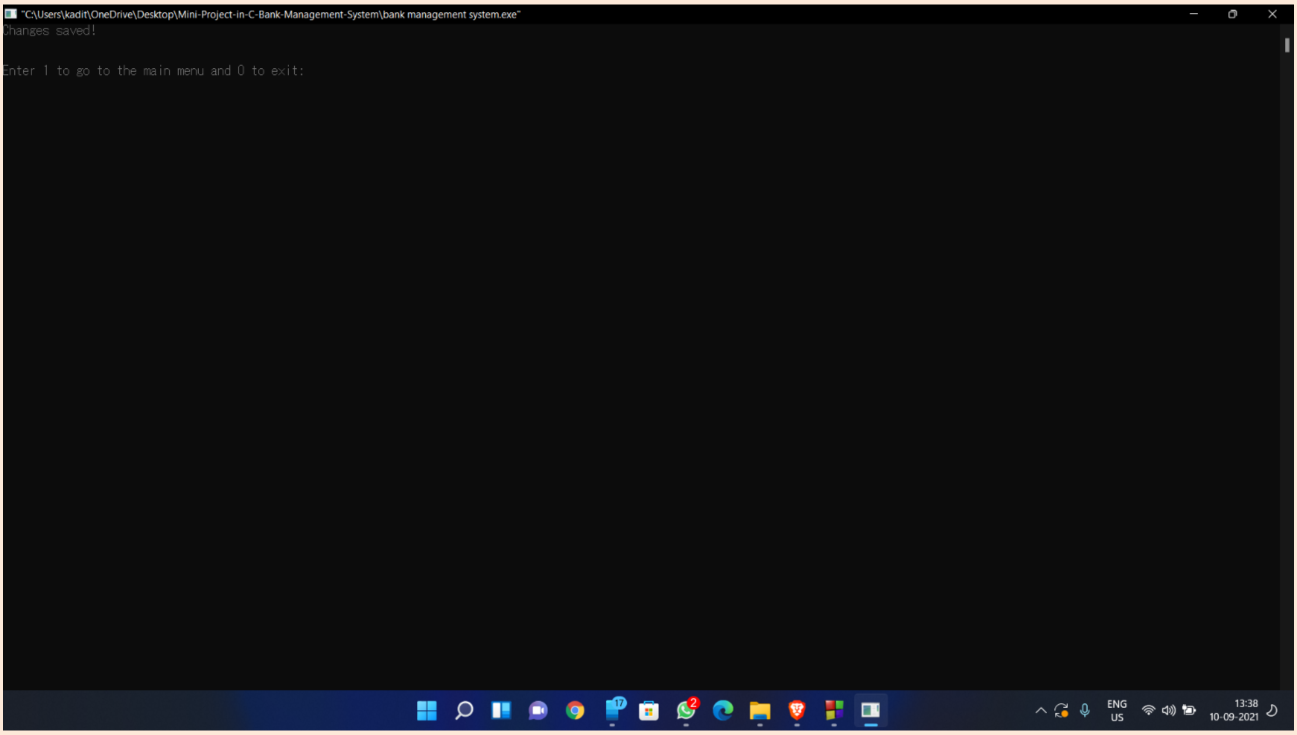
```
Enter the account no. of the customer whose info you want to change:987456321

Which information do you want to change?
1.Address
2.Phone

Enter your choice(1 for address and 2 for phone):
```

Figure 5 showing editing of information (part 1)


"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"
ENG
US
13:38
10-09-2021

```
Enter the new address:JHA_
```

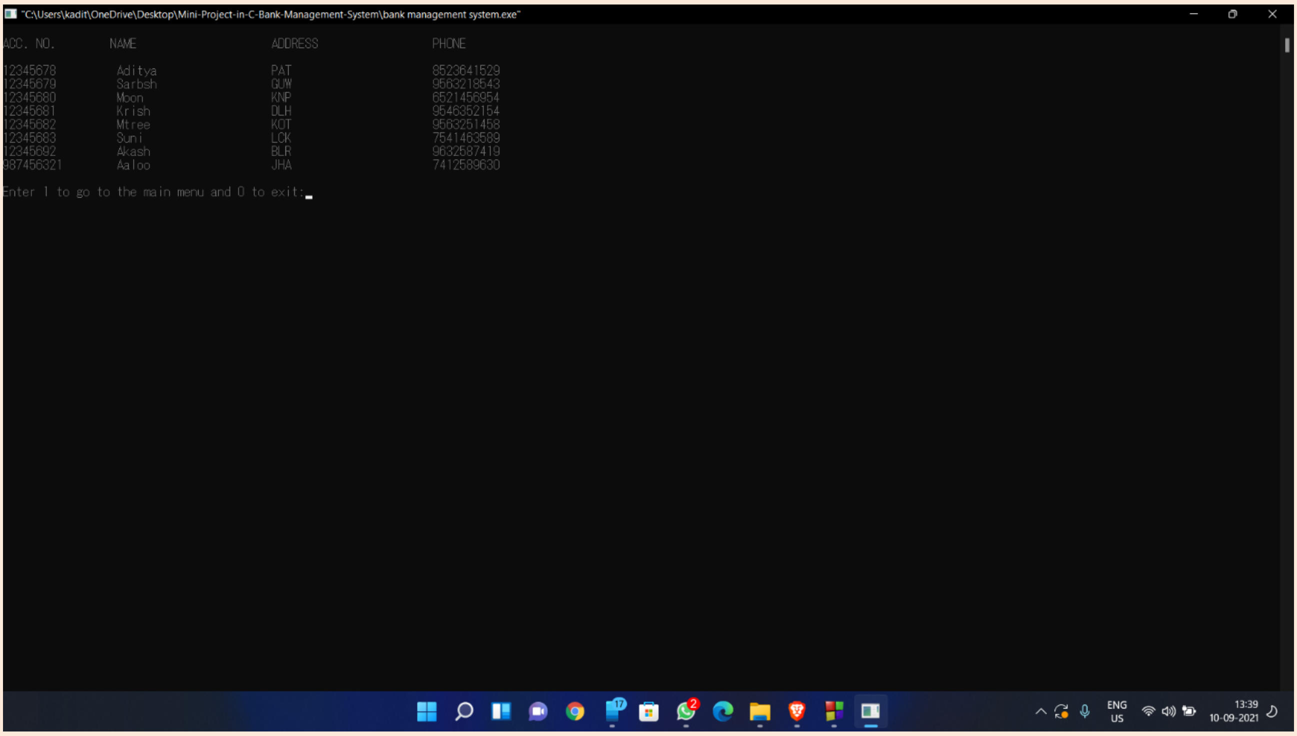
Figure 6 asking the new updated information (part 2)



"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"

```
Changes saved!


Enter 1 to go to the main menu and 0 to exit:
```

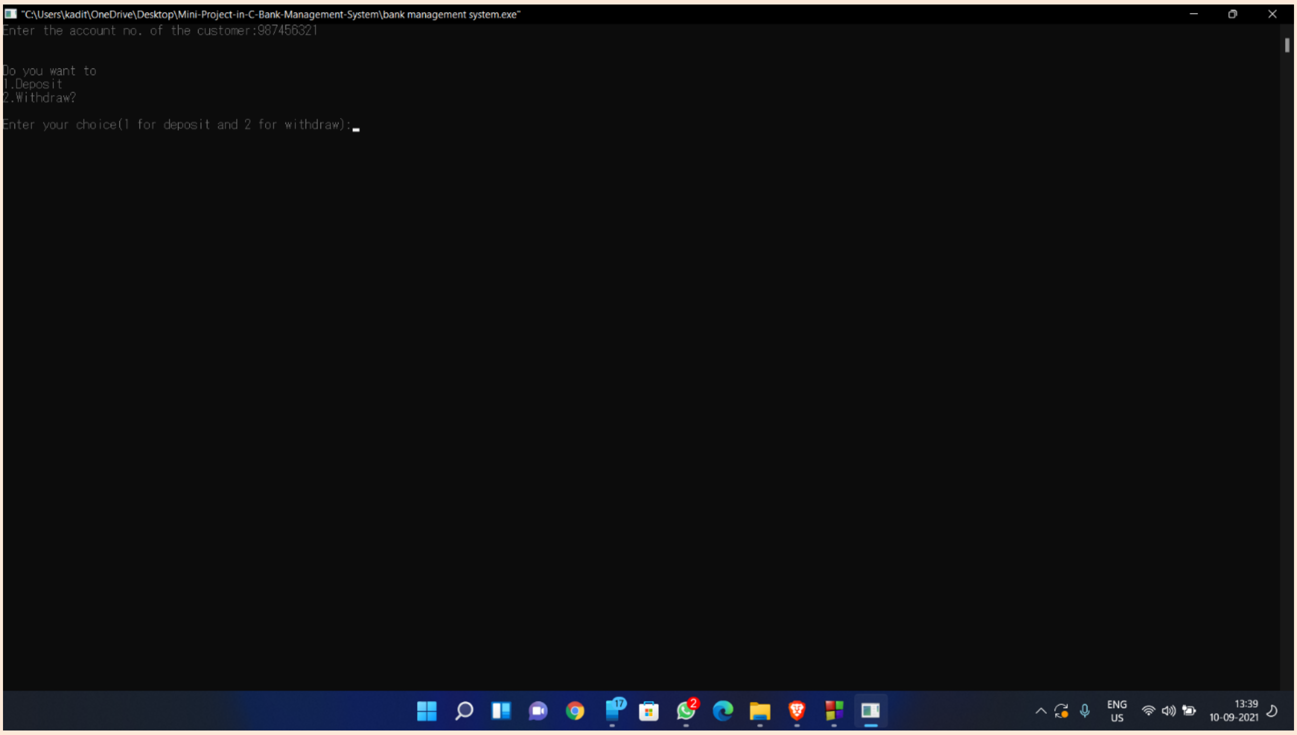
Figure 7 confirming that the changes are saved (part1)



"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"

```
ACC. NO.        NAME                    ADDRESS                 PHONE

12345678         Aditya                 PAT                     8523641529
12345679         Sarbsh                 GUW                     9563218543
12345680         Moon                   KNP                     6521456954
12345681         Krish                  DLH                     9546352154
12345682         Mtree                  KOT                     9563251458
12345683         Suni                   LCK                     7541463589
12345692         Akash                  BLR                     9632587419
987456321        Aaloo                  JHA                     7412589630

Enter 1 to go to the main menu and 0 to exit:_
```

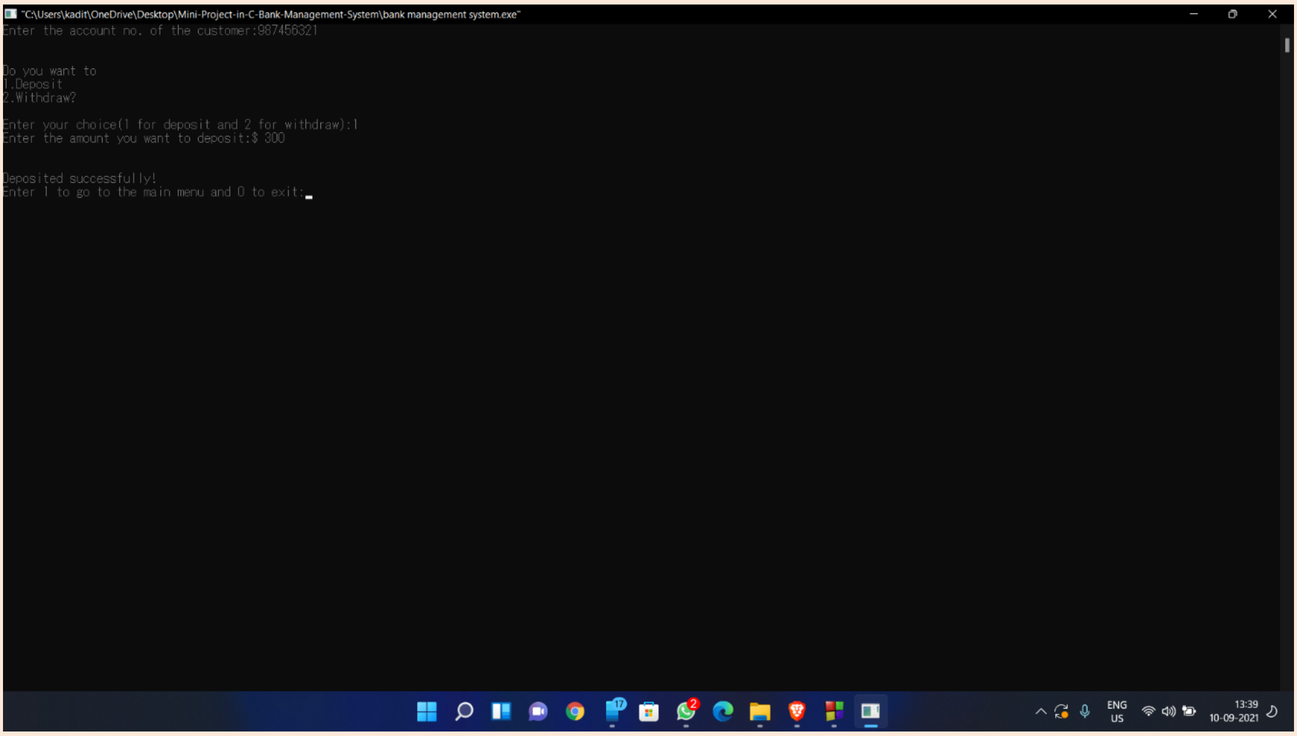
Figure 8 confirming that the changes are saved (part2)



"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"

```
Enter the account no. of the customer:987456321


Do you want to
1.Deposit
2.Withdraw?

Enter your choice(1 for deposit and 2 for withdraw):_
```

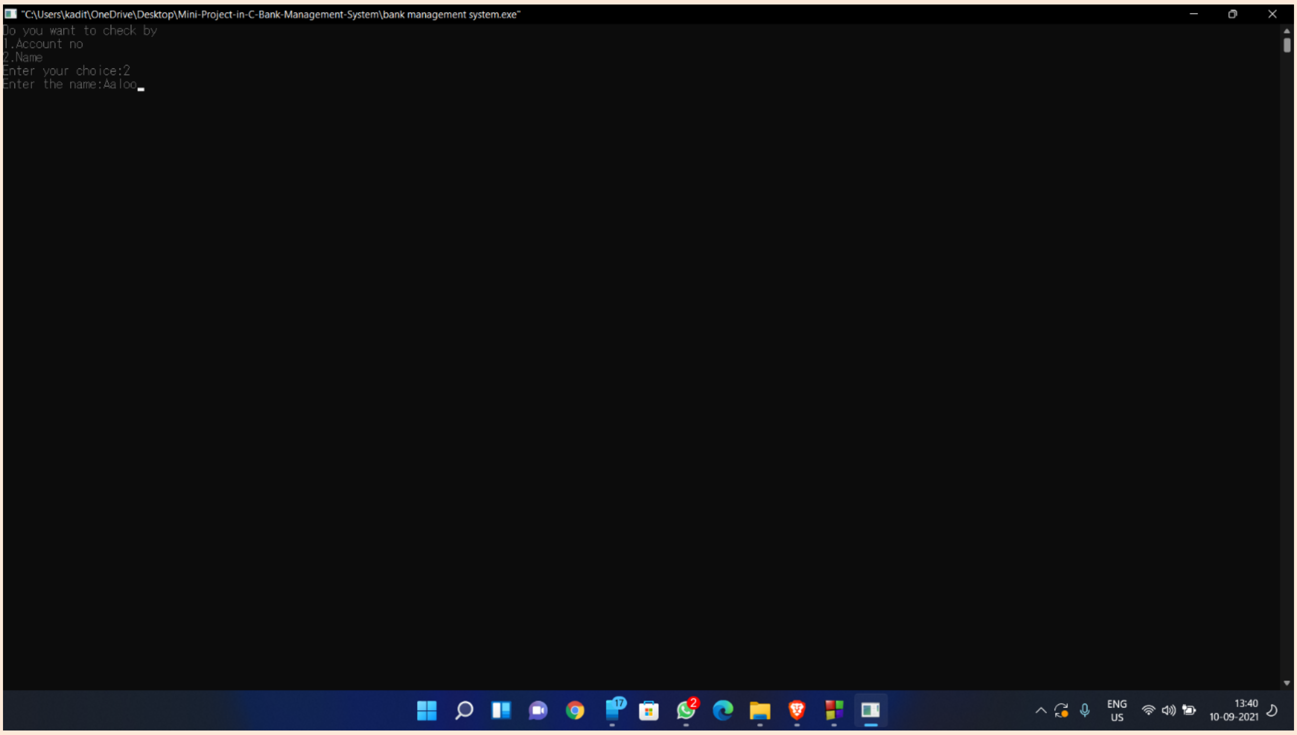
Figure 9 asking customer which kind of transaction they want to perform



"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"

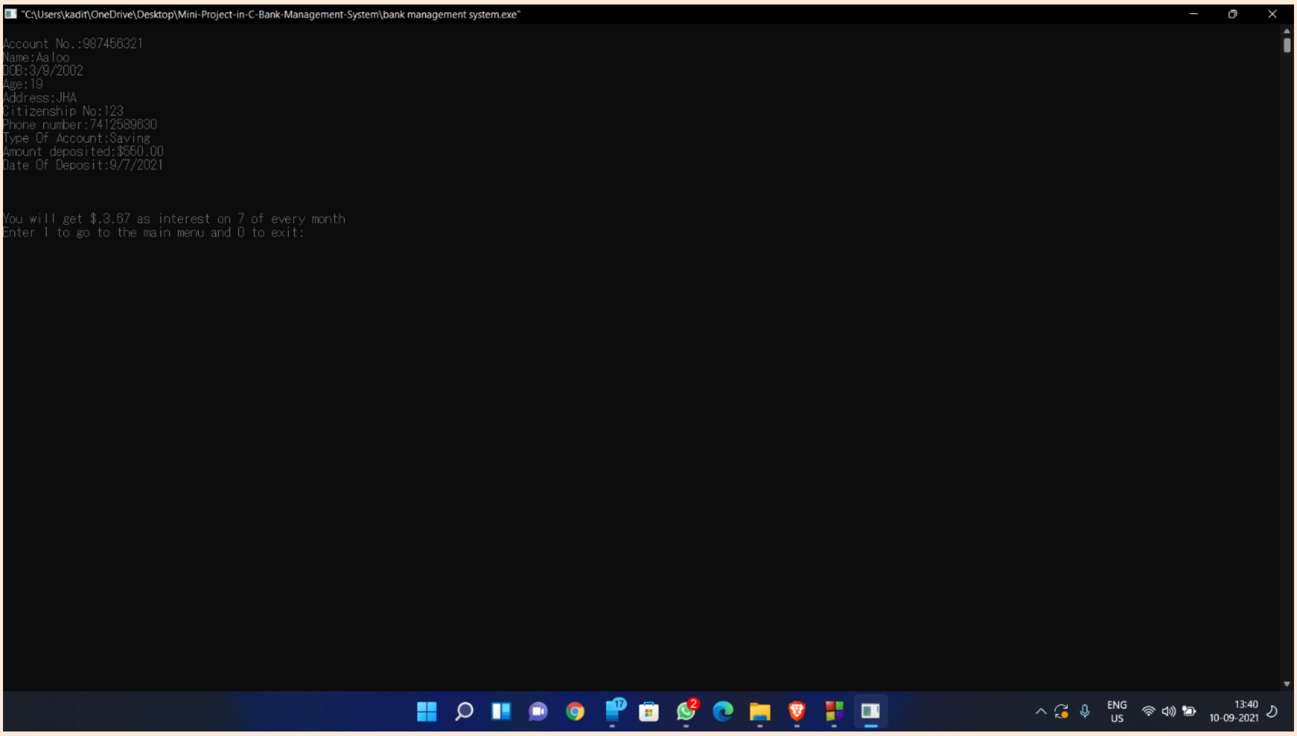
```
Enter the account no. of the customer:987456321


Do you want to
1.Deposit
2.Withdraw?

Enter your choice(1 for deposit and 2 for withdraw):1
Enter the amount you want to deposit:$ 300


Deposited successfully!
Enter 1 to go to the main menu and 0 to exit:_
```

Figure 10 showing transaction performed successfully


"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"
ENG
US
13:40
10-09-2021

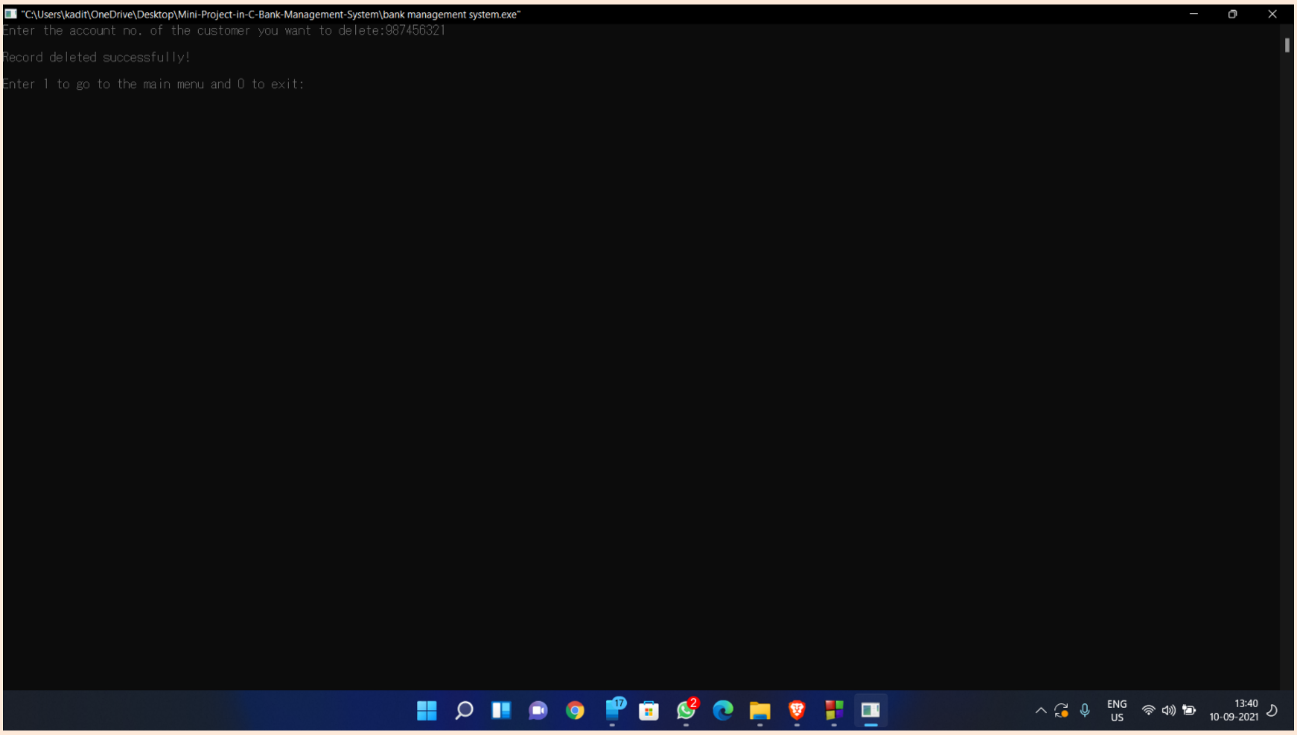
```
Do you want to check by
1.Account no
2.Name
Enter your choice:2
Enter the name:Aaloo
```

Figure 11 showing the ways to check details of an account


"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"
ENG
US
13:40
10-09-2021

```
Account No.:987456321
Name:Aaloo
DOB:3/9/2002
Age:19
Address:JHA
Citizenship No:123
Phone number:7412589630
Type Of Account:Saving
Amount deposited:$550.00
Date Of Deposit:9/7/2021



You will get $.3.67 as interest on 7 of every month
Enter 1 to go to the main menu and 0 to exit:
```

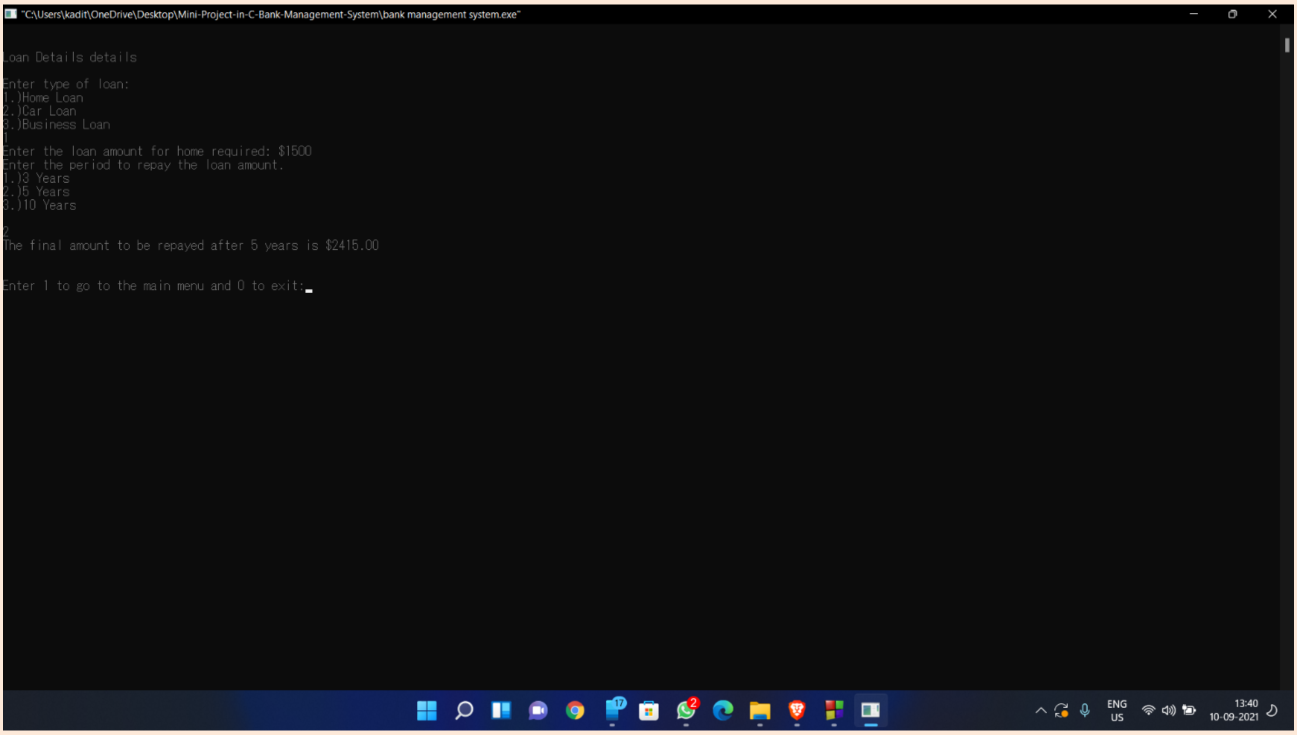
Figure 12 showing details of an account



"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"

```
Enter the account no. of the customer you want to delete:987456321

Record deleted successfully!

Enter 1 to go to the main menu and 0 to exit:
```

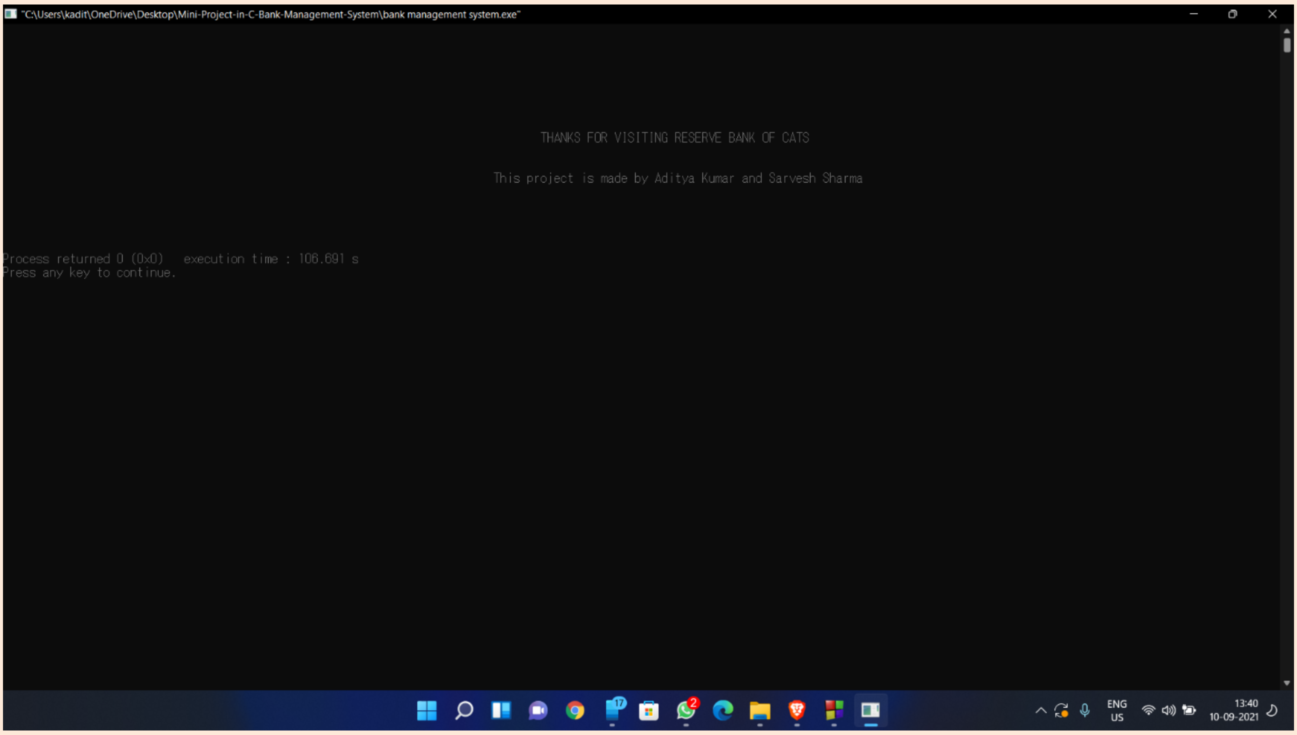
Figure 13 showing how to delete an account



"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"

```


Loan Details details

Enter type of loan:
1.)Home Loan
2.)Car Loan
3.)Business Loan
1
Enter the loan amount for home required: $1500
Enter the period to repay the loan amount.
1.)3 Years
2.)5 Years
3.)10 Years

2
The final amount to be repayed after 5 years is $2415.00


Enter 1 to go to the main menu and 0 to exit:_
```

Figure 14 showing different types of loan and final amount to be repaid


"C:\Users\kadit\OneDrive\Desktop\Mini-Project-in-C-Bank-Management-System\bank management system.exe"
ENG
US
13:40
10-09-2021

```
                                                            THANKS FOR VISITING RESERVE BANK OF CATS

                                                       This project is made by Aditya Kumar and Sarvesh Sharma



Process returned 0 (0x0)   execution time : 106.691 s
Press any key to continue.
```

Figure 15 showing the exit of our system

Conclusion

Bank management system is a virtualization of transactions in banking system. The banking system are used by user and administrator but due to limited knowledge and resources we have made a banking system which can only be controlled by administrator i.e., if a user make a transaction or changes address or phone number it has to be done via some administrator who knows the password and working of the system. In the bank management system that we have made there are many future optimizations that needs to be done including having automatic account number generator, recognising whether the phone number exists or not and so on.

Future extension

We are planning to keep managing the project and improving it based on user feedback. Here is our to do list for future

- We will add a feature to assign automatic account number.
- We'll try to make it more user friendly than it is now.
- We'll try to make it customer usable too by giving them power to do transaction and edit their profile by themselves.

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