Software Development of E-Banking System Using Java

A Minor Project Report (Project Work I)

Submitted in partial fulfilment of requirement of the

Degree of

BACHELOR OF TECHNOLOGY in
(Electronics and Communication Engineering)

BY

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MEDI-CAPS UNIVERSITY, INDORE- 453331, July-Dec 2020

Report Approval

The project work **"Software Development of E-Banking System Using Java"** is hereby approved as a creditable study of an engineering subject carried out and presented in a manner satisfactory to warrant its acceptance as prerequisite for the Degree for which it has been submitted.

It is to be understood that by this approval the undersigned do not endorse or approved any statement made, opinion expressed, or conclusion drawn there in; but approve the "Project Report" only for the purpose for which it has been submitted.

Project Guide

Ms. Divya Chouhan

Electronics Engineering

Medi-Caps University

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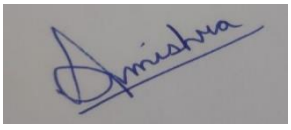
Declaration

I hereby declare that the project entitled **"Software Development of E-Banking System Using Java"** submitted in partial fulfilment for the award of the degree of Bachelor of Technology in 'Electronics & Communication Engineering' completed under the supervision of **"Ms. Divya Chouhan, Assistant Professor, Electronics and Communication Department"** Faculty of Engineering in Medi-Caps University Indore is an authentic work.

Further, I declare that the content of this Project work, in full or in parts, have neither been taken from any other source nor have been submitted to any other Institute or University for the award of any degree or diploma.



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14th November 2020

Certificate

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Certificate

I, Divya Chouhan certify that the project "EC3PC01 Project -1" entitled "Software Development Of E-Banking System Using Java" submitted in partial fulfilment for the award of the degree of Bachelor of Technology by Ashish Mishra is the record carried out by him under my guidance and that the work has not formed the basis of award of any other degree elsewhere.

Ms. Divya Chouhan

Department of Electronics Engineering

Medi-Caps University, Indore

Date: 11/11/2020

Place: Indore

Acknowledgement

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Abstract

Development of Technology is a continuous process in this modern era. Each and every thing are changing according to the need of users. Banking has now become a daily need of a person as everyone is dependent on banks for transactions or many more purposes. It also provides a various investment schemes specially it is secure. To ease of customer concept of electronic banking was introduced in market. This project is an implementation of the current banking system which are in use. In this we are trying to open an account online as no bank is providing this feature at present which will be beneficial for everyone and it will be time saving also. Any user can login with valid id and password if they had created their account with proper details. Id will be account number and password can choose by customer. User will get random generated account number which will be unique for every customer. After proceeding with valid credentials user can use the following feature like credit, withdraw, money transfer and here is also feature of delete account user can delete their account and it will be deleted from software database. This software basically contains main screen which is mainly divided by using three buttons login to account, create new account and delete existing account.

As, it is banking software I have used Java for backend programming as it is an object oriented, portable, high performance and dynamic language. For frontend I have used AWT and SWING and MySQL for database to store the information of user.

Keywords: JAVA, AWT, SWING, MYSQL

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Sr. No.	Short forms	Full forms
1.	JDK	Java Development Kit
2.	JRE	Java Runtime Environment
3.	JVM	Java Virtual Machine
4.	JDBC	Java Data Base Connectivity
5.	OS	Operating System
6.	AWT	Abstract Window Toolkit
7.	DBMS	Data Base Management System

Chapter 1- Introduction

1.1 Introduction:

In India first ICICI Bank offered internet banking services in 1997, now overall all banks are providing these facilities to their customers as this is the need of all the customers now. There are several benefits of internet banking that is less paperwork that will be environment friendly and it will be easy to handle the transaction online and also reduces the manual work as all work can be done by a machine. The cost of these transactions is also less as it is a cheapest mode. It reduces the error done by human and can store large data safely and easy and for a long time which can be used when it is in need. The most important feature that it is convenient and can be accessible for user 24*7. Bank always plays an important role in the financial and economic conditions of a country. It is must to expand and develop the economic activities for the country. In this project we are trying to develop user friendly interface in which various facilities like create account, delete account and transfer money. User can access and can open account online. A simple, secure and hassle-free banking is definitely going to help in country's growth.

1.2 Literature Review:

The online banking system has so many challenges regarding the security as well as the betterment of system as the continuous increase in hacking and cybercrimes [4]. The technical connectivity of java with MySQL with a proper approach can be done easily but the method should be proper and all the command lines with system names and system password should be written correct [5]. The java is a most popular programming language as it is used everywhere in android and specially it is object-oriented language so the multiple works can be substituted in the small parts by the use of class concept [7].
The installation guide and installation of java can be done through oracle as it is authorised site where you can get all the versions of java that you want to use [6].

1.3 Objectives:

- To allow only authorized user to access various functions and process available in the system
- To provide facilities like withdraw, credit, money transfer by using single click.
- To allow user to see updated balance just after login.

1.4 Significance:

In this era of development, internet banking services are most important services and there must be needful update for security of data and ease of user.

- User can avail Money Transfer Services
- User can see updated balance in Account
- 24*7 convenient
- Environment Friendly
- The software has user friendly interface

Chapter 2 – Problem Description

2.1 Problem Statement:

The usage of internet banking had increased so much and the reason behind this is the convenience and the safe transaction as it has a less chance of error by machine as compared to human. Almost every bank in the world is providing facilities of internet banking to the customers which is very beneficial for both bank and customer.

It is not possible to provide each and every facility provided online although it reduces lots of human efforts and many more benefits are there. As in the wake of COVID-19 it is very dangerous to transact at bank branches but due to online banking it is very helpful for everyone.

Using this application user can avail services like money transfer withdraw credit can open his account online and can also see updated balance just after login.

2.2 Procedure Adopted:

The project is mainly divided into three phases:

- Frontend Programming using Java Swing and AWT.
- Backend Programming Using Java.
- Data base for storage of details and data base connectivity using MYSQL.

Now here are the procedures adopted for all the phases

- At first, I had written a code for frontend in which I had created screens that was main screen, create account screen, login screen and delete existing account screen. In that several buttons and labels for entries are present.
- After that I had done coding at backend coding using JAVA through which the action took place whatever that specific button should perform.
- The final phase and the most complicated phase were to connect database to store the details entered by the user

Chapter 3 Methodology

3.1 Methodology:

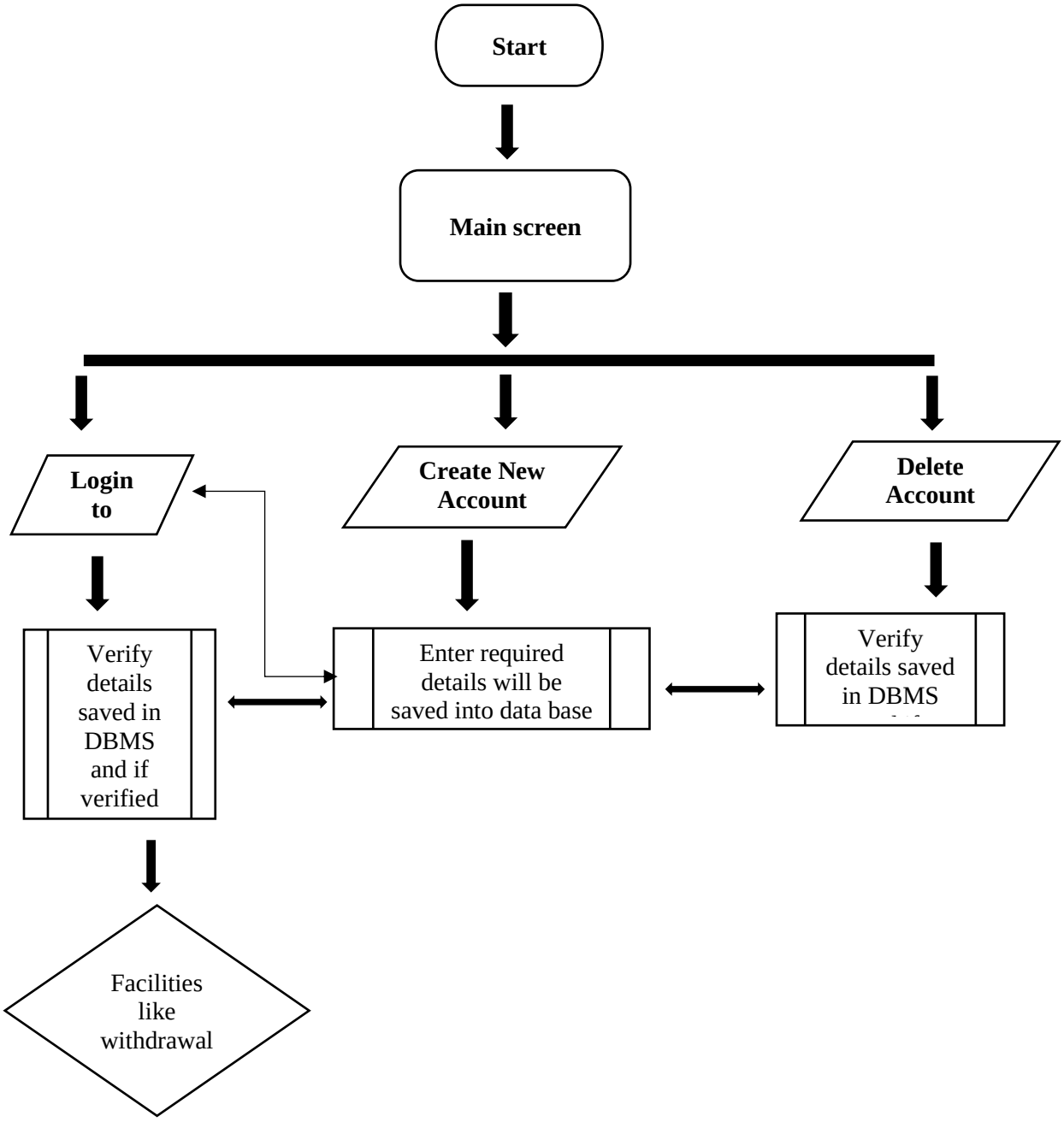

Figure 1: Methodology

3.2 Software's Required:

a) JAVA:

- **JVM:** It is the abbreviation of java virtual machine which is basically responsible for the run time environment in which the execution of byte code takes place. Through JVM it is possible to convert byte code into machine code so that machine can understand command.

  JVM = Runtime environment through which Java byte code executes.

- **JRE:** It is run time environment which can be said as an implementation of JVM. The specifications which are defined in JVM have implemented and creates the environment for code execution. JRE also consists techniques deployment and GUI to connect with executable code and util libraries also.

  JRE = Java Virtual Machine + Libraries used to run the application

- **JDK:** Java Development Kit which mainly contains all the requirements to execute, compile and debug the code. It is dependent of platform and requires separate installers for separate platforms. The version of JDK represents java version.

  JDK = Java Runtime Environment + tools to be developed

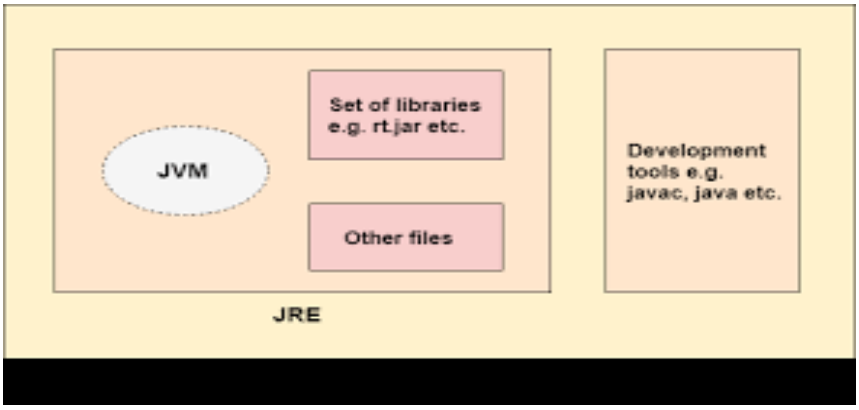

Figure 2: represents JVM, JRE AND JDK

b) Swing: It is a light weighted java graphical user interface mainly used to create desktop applications. It consists the platform independent components. It also contains packages to create scroll bars, buttons and many more tools used in applications.

Figure 3: Layout of JAVA Swing

c) AWT: It is a heavy weighted interface that contains GUI interface components mainly used in window-based application for java. We have used some libraries of AWT in our software also.

Figure 4: Layout of JAVA AWT

d) **MYSQL**: It is responsible to store the data and also provides the connectivity using jdbc driver and has a separate version I have used jdbc 5.0 to connect database with java.

Figure 5: Layout of MYSQL

Chapter 4 - Proposed Method

The method contains the working flow and the method used to complete a work in this semester. Basically, a successful completion of frontend is the primary task after the backend coding is done to perform the task by clicking the button and at last the main task was data base connectivity.

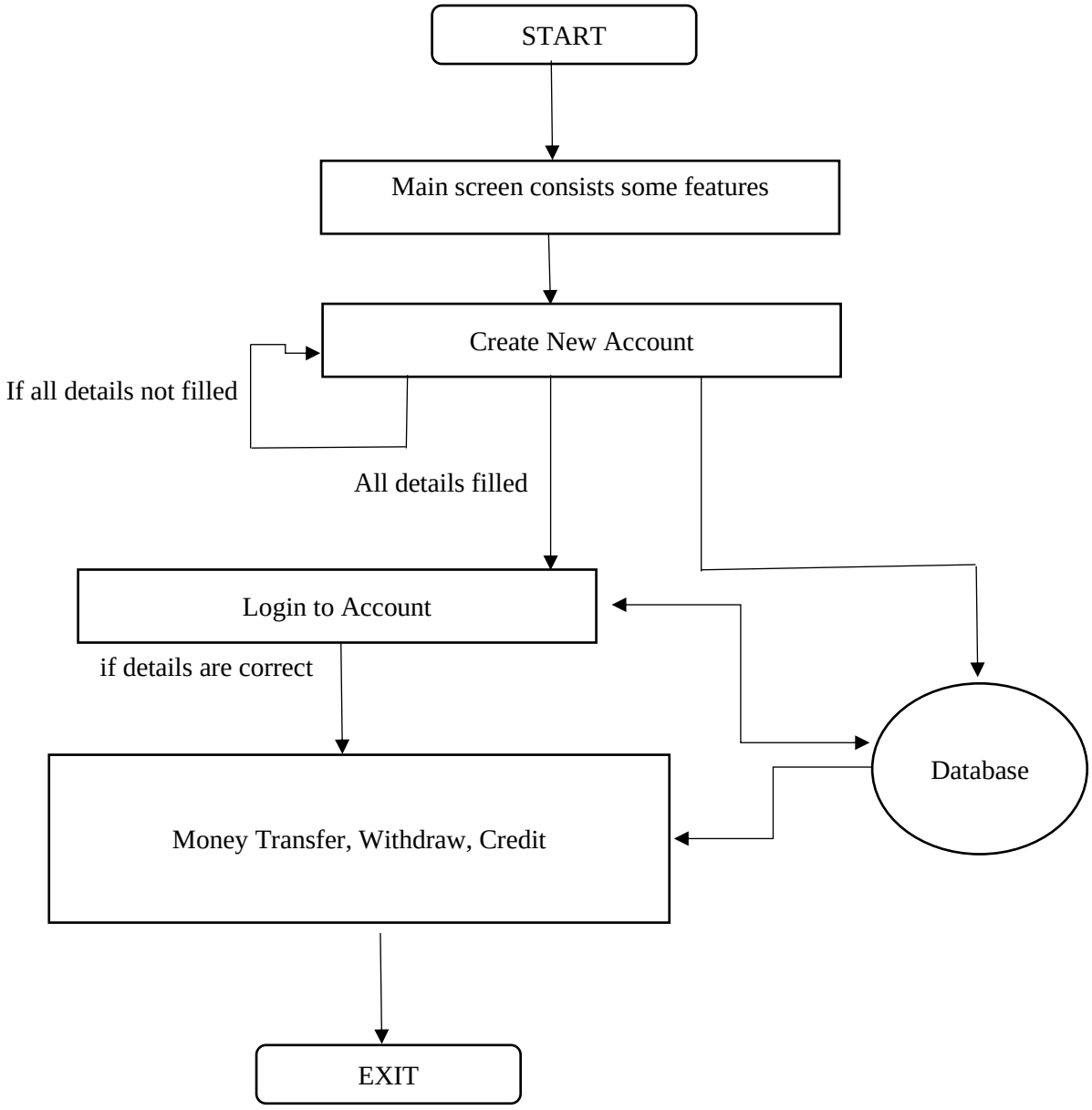

Figure 6: Proposed Method

Codes:

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.sql.*;
public class alreadyaccount implements ActionListener
{  JFrame f1;
   JButton b1,b4,b5,b6;
   JLabel l0,l1,l2,l3,l4,l5,l6,l7,l8,l9,l10;
   JTextField name,acno,pin,bal,t5,t6,t7,t8;
   JPanel p1;
   int add,remove,bala,result,trans;

   public alreadyaccount()
   {  f1=new JFrame("Screen2");
      b1=new JButton("Login");

       b4=new JButton("Add Money");
      b5=new JButton("Withdrawl Money");
      b6=new JButton("Transfer");
      l0=new JLabel("Welcome To Login Screen");
      l1=new JLabel("Enter Your Account Number");
      l2=new JLabel("Enter Your PIN");
      l3=new JLabel("Name Of The Customer");
      l4=new JLabel("Balance");
     l5=new JLabel("For Deposit Money");
      l6=new JLabel("For Withdrawl Money");
      l7=new JLabel("Enter Amount");
      l8=new JLabel("Enter Amount");
      l9=new JLabel("Enter Account No To Transfer ");
      l10=new JLabel("Enter Amount To Transfer");
      name=new JTextField();
      acno=new JTextField();
      pin=new JTextField();
      bal=new JTextField();
      t5=new JTextField();
      t6=new JTextField();
      t7=new JTextField();
      t8=new JTextField();
      p1=new JPanel();

      name.setEditable(false);
      bal.setEditable(false);

      l0.setBounds(170,20,200,20);
      l1.setBounds(20,60,200,20);
      acno.setBounds(200,60,200,20);
      l2.setBounds(20,100,200,20);
      pin.setBounds(200,100,60,20);
```

```
b1.setBounds(180,140,100,20);
l3.setBounds(20,185,150,20);
name.setBounds(200,185,200,20);
l4.setBounds(20,225,150,20);
bal.setBounds(200,225,110,20);
 l5.setBounds(40,280,110,20);
l6.setBounds(320,280,200,20);
l7.setBounds(40,305,200,20);
l8.setBounds(320,305,200,20);
t5.setBounds(120,305,70,20);
t6.setBounds(400,305,70,20);
b4.setBounds(40,330,150,20);
b5.setBounds(320,330,150,20);

l9.setBounds(40,360,180,20);
t7.setBounds(220,360,160,20);
l10.setBounds(40,390,180,20);
t8.setBounds(220,390,160,20);
b6.setBounds(180,420,100,20);


  p1.add(l0);
  p1.add(l1);
  p1.add(acno);
  p1.add(l2);
  p1.add(pin);
  p1.add(b1);
  p1.add(l3);
  p1.add(name);
  p1.add(l4);
  p1.add(bal);
  p1.add(l5);
  p1.add(l6);
  p1.add(l7);
  p1.add(l8);
  p1.add(t5);
  p1.add(t6);
  p1.add(b4);
  p1.add(b5);
  p1.add(l9);
  p1.add(l10);
  p1.add(t7);
  p1.add(t8);
  p1.add(b6);
  f1.add(p1);
  f1.add(p1);
p1.setBackground(Color.green);
 b1.setBackground(Color.yellow);
  b4.setBackground(Color.yellow);
   b5.setBackground(Color.yellow);
   t5.setBackground(Color.white);
```

```
        t6.setBackground(Color.white);
       name.setBackground(Color.pink);
       bal.setBackground(Color.pink);

      p1.setLayout(null);
      f1.setSize(500,500);
      f1.setVisible(true);
      b1.addActionListener(this);
       b4.addActionListener(this);
        b5.addActionListener(this);
        b6.addActionListener(this);
  }
  public void actionPerformed(ActionEvent e)
  {  String s=e.getActionCommand();
      if(s.equals("Login"))
    {
       if(acno.getText().isEmpty()||pin.getText().isEmpty())
         {  JOptionPane.showMessageDialog(f1,"Please Fill Account No And PIN");
          }
       else {
      try
       {
       String w=(String)pin.getText();

       Class.forName("com.mysql.jdbc.Driver");
       Connection    c2=DriverManager.getConnection("jdbc:mysql://localhost:3306/worldbank",    "root",
"root");
        Statement s2=c2.createStatement();
       ResultSet r= s2.executeQuery("select * from acc3 where pin="'+w+"' ");
       while(r.next())
        {


          name.setText(r.getString(1));

          bal.setText(r.getString(5));
        }
    }
    catch(Exception ee)
    {
      System.out.println(ee.getMessage());
    }
   }
   }

      else if(s.equals("Add Money"))
    {
if(acno.getText().isEmpty()||pin.getText().isEmpty()||name.getText().isEmpty()||bal.getText().isEmpty()||t
5.getText().isEmpty())
         {  JOptionPane.showMessageDialog(f1,"Please Fill Account No And PIN");
          }
```

```
        else{
        add=Integer.parseInt(t5.getText());
         bala=Integer.parseInt(bal.getText());
         result=add+bala;
         String a=pin.getText();
         try
          {
              String w1=""+result;

              Class.forName("com.mysql.jdbc.Driver");
              Connection          c1=DriverManager.getConnection("jdbc:mysql://localhost:3306/worldbank",
"root", "root");
               Statement s1=c1.createStatement();
              s1.execute("update acc3 set bal='"+w1+"' where pin=('"+a+"') ");

          }
          catch(Exception ee)
          {
            System.out.println(ee.getMessage());
          }
       bal.setText(""+result);
      JOptionPane.showMessageDialog(f1,"Amount Has Been Successfully Added To  Your Account");
        t5.setText("");
        t6.setText("");
     }
   }

        else if(s.equals("Withdrawl Money"))
     {
if(acno.getText().isEmpty()||pin.getText().isEmpty()||name.getText().isEmpty()||bal.getText().isEmpty()||t
6.getText().isEmpty())
          {  JOptionPane.showMessageDialog(f1,"Please Fill Account No And PIN");
           }
        else{
          add=Integer.parseInt(t6.getText());
          bala=Integer.parseInt(bal.getText());
             if(add>bala){  JOptionPane.showMessageDialog(f1,"Sorry  Cant  Withdrwal  Money  Because
Withdrawl Money Is More Than Your Balance"); }
           else{
 result=bala-add;
          String a=pin.getText();
          try
          {
              String w2=""+result;

              Class.forName("com.mysql.jdbc.Driver");
              Connection          c3=DriverManager.getConnection("jdbc:mysql://localhost:3306/worldbank",
"root", "root");
               Statement s3=c3.createStatement();
              s3.execute("update acc3 set bal='"+w2+"' where pin=('"+a+"') ");
```

```
          }
          catch(Exception ee)
          {
            System.out.println(ee.getMessage());
          }
       bal.setText(""+result);
      JOptionPane.showMessageDialog(f1,"Amount Has Been Successfully Withdrawled ");
       t5.setText("");
        t6.setText("");
      }
    }
  }
    else if(s.equals("Transfer"))
   {
if(acno.getText().isEmpty()||pin.getText().isEmpty()||name.getText().isEmpty()||bal.getText().isEmpty()||t
8.getText().isEmpty()||t7.getText().isEmpty())
          {  JOptionPane.showMessageDialog(f1,"Please Fill Account No And PIN");
           }
        else{
         int a1,a2,b1,b2;
         String ww1="",ww2="";
         String am=t7.getText();
         String am2=acno.getText();
         trans=Integer.parseInt(t8.getText());
         bala=Integer.parseInt(bal.getText());
            if(trans>bala){  JOptionPane.showMessageDialog(f1,"Sorry Cannot Transfer Because Transfer
Money Is More Than Your Balance"); }
            else
              {  try
                   {


                       Class.forName("com.mysql.jdbc.Driver");
                       Connection
c3=DriverManager.getConnection("jdbc:mysql://localhost:3306/worldbank", "root", "root");
                       Statement s3=c3.createStatement();
                       ResultSet r2= s3.executeQuery("select * from acc3 where accno='"+am+"'");
                       while(r2.next())
                        { ww2=ww2+r2.getString(5);
                        }
                       bala=bala-trans;
                       b2=Integer.parseInt(ww2);
                       b2=b2+trans;


                       s3.execute("update acc3 set bal='"+bala+"' where accno=('"+am2+"') ");
                       s3.execute("update acc3 set bal='"+b2+"' where accno=('"+am+"') ");
                       bal.setText(""+bala);
                       JOptionPane.showMessageDialog(f1,"Amount Has Been Successfully Transferred ");
                       t8.setText("");
```

```
                    c3.close();

                }
              catch(Exception ee)
                {
                    System.out.println(ee.getMessage());
                }
            }

        }
  }
}
  public static void main(String s[])
  {  alreadyaccount a1=new alreadyaccount();
  }
}
```

MAIN SCREEN CODE:

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;


public class mainscreen implements ActionListener
{    JButton b1,b2,b3;
     JLabel l1;
     JPanel p1;
     JFrame f1;
    public mainscreen()
    {     f1=new JFrame();
          b1=new JButton("Login To Account");
          b2=new JButton("Create New Account");
          b3=new JButton("Delete Existing Account");
          l1=new JLabel("------Welcome To World Bank------");
          p1=new JPanel();

          l1.setBounds(150,20,200,30);
          b1.setBounds(140,80,200,30);
          b2.setBounds(140,130,200,30);
          b3.setBounds(140,180,200,30);

         p1.add(l1);
         p1.add(b1);
         p1.add(b2);
         p1.add(b3);
         f1.add(p1);

        p1.setBackground(Color.green);
        b1.setBackground(Color.yellow);
```

```
        f1.setResizable(false);
        f1.setTitle("Mainscreen");
        p1.setLayout(null);
        f1.setSize(500,300);
        f1.setVisible(true);

        b1.addActionListener(this);
        b2.addActionListener(this);
         b3.addActionListener(this);
    }



    public void actionPerformed(ActionEvent e)
    {
      String s=e.getActionCommand();
       if(s.equals("Login To Account"))
         {  new alreadyaccount();
         }
       if(s.equals("Create New Account"))
         {  createaccount c2=new createaccount();
         }
       if(s.equals("Delete Existing Account"))
         {  new deleteaccount();
         }

    }

    public static void main(String s[])
    {  mainscreen m1=new mainscreen();
    }
}
```

Chapter 5 - Result

- First of all, after compiling and executing the code the main screen will be shown in which three buttons and a label with the name of bank will be displayed

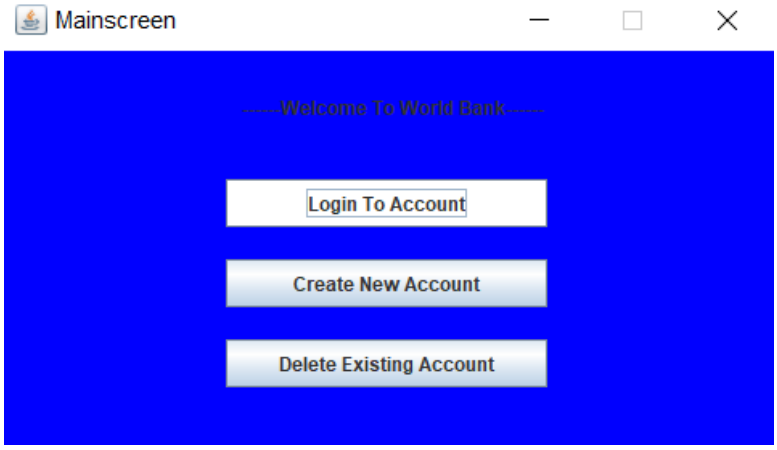

Figure 7: Main screen of Software

- After clicking in create new account the New Account Screen will be visible asking the command of entering the valid credentials required to open an account such as name, date of birth, Aadhar number, PAN number and pin after registering valid details a random unique account number will be generated.

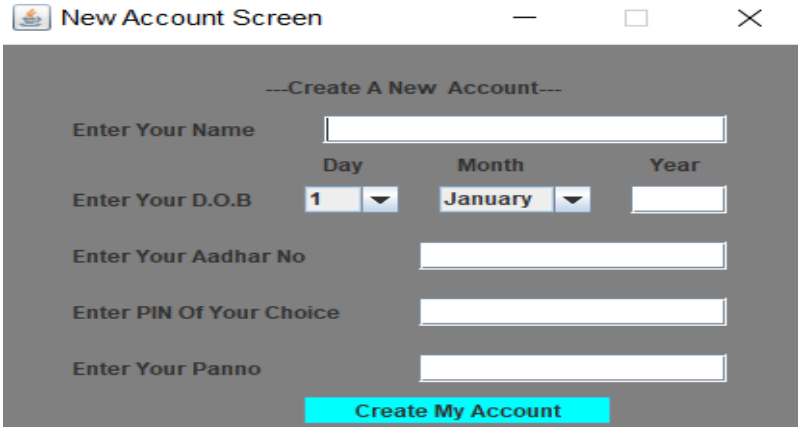

Figure 8: New Account Screen of Software

- After Successfully creating account you can login to your account where functions of banking like money transfer, withdraw, credit can be used by entering the valid details and details will be verified by the entries present in database.

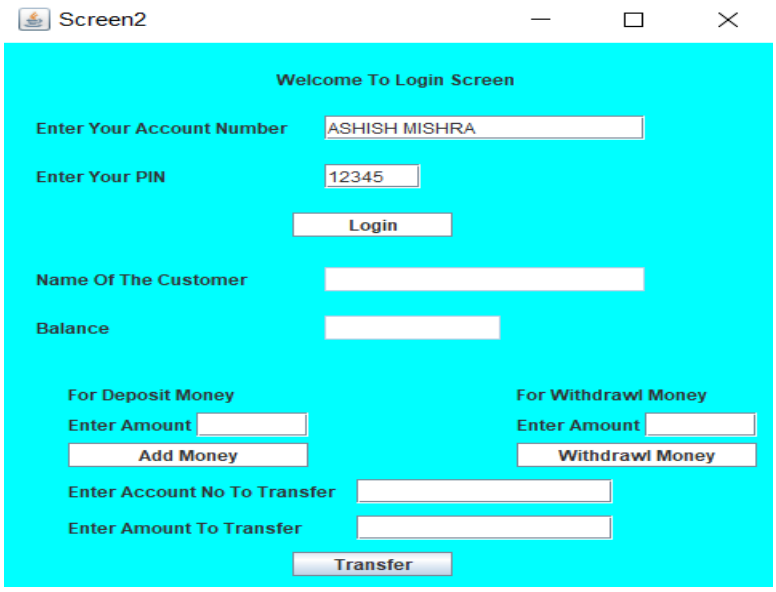

Figure 9: Login Screen of Software

- The details will be verified by data present in it. I have created some dummy data to check the program and we can add according to the need and that data can only be seen by developer or authentic person.

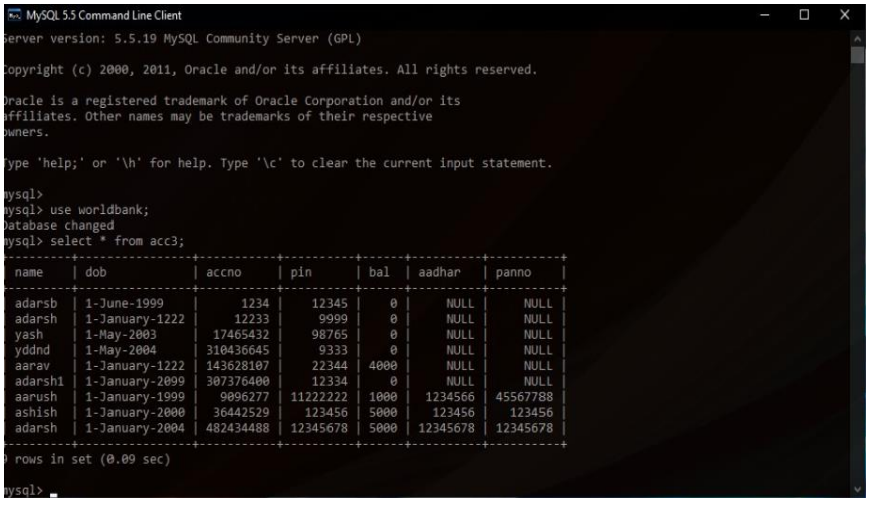

Figure 10: Dummy Database of Software

Chapter 6 – Conclusion

Following conclusion can be drawn from the project:

1) With this project, we are able to open an account online with proper details.

2) We are able to successfully done a transaction like money transfer, credit, withdraw.

3) We are able to delete our existing account.

Conclusion as a developer of a project:

1) To generate a random account number is a task that I have to concatenate multiple string in a single one.

2) Student must ensure a perfect data base connectivity that is a crucial task.

Chapter 7 – Future Scope of the Project

I have not created all the features that are currently in use of banking system but I have successfully implemented some of them. In future to open an account online the ways that I have used can be implemented.

- It is very beneficial to digitalize the whole banking system as in this pandemic digital banking helps a lot.
- Through the government scheme every person is able to get government subsidiaries direct at home.

Chapter 8 – References

8.1 References:

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Abstract Plagiarism Report

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PLAGIARISM SCAN REPORT

Words	265	Date	November 16,2020
Characters	1638	Exclude URL	

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Development of Technology is a continuous process in this modern era. Each and every thing are changing according to the need of users. Banking has now become a daily need of a person as everyone is dependent on banks for transactions or many more purposes. It also provides a various investment schemes specially it is secure. To ease of customer concept of electronic banking was introduced in market. This project is an implementation of the current banking system which are in use. In this we are trying to open an account online as no bank is providing this feature at present which will be beneficial for everyone and it will be time saving also. Any user can login with valid id and password if they had created their account with proper details. Id will be account number and password can choose by customer. User will get random generated account number which will be unique for every customer. After proceeding with valid credentials user can use the following feature like credit, withdraw, money transfer and here is also feature of delete account user can delete their account and it will be deleted from software database. This software basically contains main screen which is mainly divided by using three buttons login to account, create new account and delete existing account.
As, it is banking software I have used Java for backend programming as it is an object oriented, portable, high performance and dynamic language. For frontend I have used AWT and SWING and MySQL for database to store the information of user.
Keywords: JAVA, AWT, SWING, MYSQL

Sources	Similarity

Chapter- 1 Plagiarism Report

Words	440	Date	November 16,2020
Characters	2664	Exclude URL	

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In India first ICICI Bank offered internet banking services in 1997, now overall all banks are providing these facilities to their customers as this is the need of all the customers now. There are several benefits of internet banking that is less paperwork that will be environment friendly and it will be easy to handle the transaction online and also reduces the manual work as all work can be done by a machine. The cost of these transactions is also less as it is a cheapest mode. It reduces the error done by human and can store large data safely and easy and for a long time which can be used when it is in need. The most important feature that it is convenient and can be accessible for user 24*7. Bank always plays an important role in the financial and economic conditions of a country. It is must to expand and develop the economic activities for the country. In this project we are trying to develop user friendly interface in which various facilities like create account, delete account and transfer money. User can access and can open account online. A simple, secure and hassle-free banking is definitely going to help in country's growth.

1.2 Literature Review:

The online banking system has so many challenges regarding the security as well as the betterment of system as the continuous increase in hacking and cybercrimes [4]. The technical connectivity of java with MySQL with a proper approach can be done easily but the method should be proper and all the command lines with system names and system password should be written correct [5]. The java is a most popular programming language as it is used everywhere in android and specially it is object-oriented language so the multiple works can be substituted in the small parts by the use of class concept [7].

The installation guide and installation of java can be done through oracle as it is authorised site where you can get all the versions of java that you want to use [6].

1.3 Objectives:

- To allow only authorized user to access various functions and process available in the system
- To provide facilities like withdraw, credit, money transfer by using single click.
- To allow user to see updated balance just after login.

1.4 Significance:

In this era of development, internet banking services are most important services and there must be needful update for security of data and ease of user.

- User can avail Money Transfer Services
- User can see updated balance in Account
- 24*7 convenient

Chapter- 2 Plagiarism Report

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PLAGIARISM SCAN REPORT

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2.1 Problem Statement:

The usage of internet banking had increased so much and the reason behind this is the convenience and the safe transaction as it has a less chance of error by machine as compared to human. Almost every bank in the world is providing facilities of internet banking to the customers which is very beneficial for both bank and customer.
It is not possible to provide each and every facility provided online although it reduces lots of human efforts and many more benefits are there. As in the wake of COVID-19 it is very dangerous to transact at bank branches but due to online banking it is very helpful for everyone.
Using this application user can avail services like money transfer withdraw credit can open his account online and can also see updated balance just after login.
2.2 Procedure Adopted:
The project is mainly divided into three phases:
• Frontend Programming using Java Swing and AWT.
• Backend Programming Using Java.
• Data base for storage of details and data base connectivity using MYSQL.
Now here are the procedures adopted for all the phases
? At first, I had written a code for frontend in which I had created screens that was main screen, create account screen, login screen and delete existing account screen. In that several buttons and labels for entries are present.
? After that I had done coding at backend coding using JAVA through which the action took place whatever that specific button should perform.
? The final phase and the most complicated phase were to connect database to store the details entered by the user

Sources	Similarity

Chapter- 3 Plagiarism Report

PLAGIARISM SCAN REPORT

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3.2 Software's Required:
a) JAVA:
• JVM: It is the abbreviation of java virtual machine which is basically responsible for the run time environment in which the execution of byte code takes place. Through JVM it is possible to convert byte code into machine code so that machine can understand command.
JVM = Runtime environment through which Java byte code executes.
• JRE: It is run time environment which can be said as an implementation of JVM. The specifications which are defined in JVM have implemented and creates the environment for code execution. JRE also consists techniques deployment and GUI to connect with executable code and util libraries also.
JRE = Java Virtual Machine + Libraries used to run the application
• JDK: Java Development Kit which mainly contains all the requirements to execute, compile and debug the code. It is dependent of platform and requires separate installers for separate platforms. The version of JDK represents java version.
JDK = Java Runtime Environment + tools to be developed
Figure 2: represents JVM, JRE AND JDK
b) Swing: It is a light weighted java graphical user interface mainly used to create desktop applications. It consists the platform independent components. It also contains packages to create scroll bars, buttons and many more tools used in applications.

Figure 3: Layout of JAVA Swing
c) AWT: It is a heavy weighted interface that contains GUI interface components mainly used in window-based application for java. We have used some libraries of AWT in our software also.

Figure 4: Layout of JAVA AWT
d) MYSQL: It is responsible to store the data and also provides the connectivity using jdbc driver and has a separate version I have used jdbc 5.0 to connect database with java.

Figure 5: Layout of MYSQL

Sources	Similarity

Chapter- 4 Plagiarism Report

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The method contains the working flow and the method used to complete a work in this semester. Basically, a successful completion of frontend is the primary task after the backend coding is done to perform the task by clicking the button and at last the main task was data base connectivity.
If all details not filled
All details filled

filled details saved
if wrong details

if details are correct

Figure 6: Proposed Method

Sources	Similarity

Chapter- 5 Plagiarism Report

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? First of all, after compiling and executing the code the main screen will be shown in which three buttons and a label with the name of bank will be displayed
Figure 7: Main screen of Software

? After clicking in create new account the New Account Screen will be visible asking the command of entering the valid credentials required to open an account such as name, date of birth, Aadhar number, PAN number and pin after registering valid details a random unique account number will be generated.
Figure 8: New Account Screen of Software
? After Successfully creating account you can login to your account where functions of banking like money transfer, withdraw, credit can be used by entering the valid details and details will be verified by the entries present in database.

Figure 9: Login Screen of Software
? The details will be verified by data present in it. I have created some dummy data to check the program and we can add according to the need and that data can only be seen by developer or authentic person.

Sources	Similarity

Chapter- 6 Plagiarism Report

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Characters	540	Exclude URL	

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Plagiarism	Unique	Plagiarized Sentences	Unique Sentences

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Following conclusion can be drawn from the project:
1) With this project, we are able to open an account online with proper details.
2) We are able to successfully done a transaction like money transfer, credit, withdraw.
3) We are able to delete our existing account.
Conclusion as a developer of a project:
1) To generate a random account number is a task that I have to concatenate multiple string in a single one.
2) Student must ensure a perfect data base connectivity that is a crucial task.

Sources	Similarity

Chapter- 7 Plagiarism Report

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PLAGIARISM SCAN REPORT

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Characters	446	Exclude URL	

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I have not created all the features that are currently in use of banking system but I have successfully implemented some of them. In future to open an account online the ways that I have used can be implemented.
? It is very beneficial to digitalize the whole banking system as in this pandemic digital banking helps a lot.
? Through the government scheme every person is able to get government subsidiaries direct at home.

Sources	Similarity