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ABSTRACT

A Normal Library requires 3 fields to be managed……….

1. Billing
2. Managing Details of Books
3. Managing account of Users

A library consists of various categories of books like Reference ,Subjective ,Story books, Magazines , Competition focus etc. It is also important to maintain the record of every category of books. Since new editions of books launch every year, therefore it is necessary to keep the records of books up to date like rate, records of books whose edition is revised, whose content is reprinted etc. It is necessary to provide up to date information about books to the customers. Records of dealers are required to be maintained from which the library purchases goods in stock.

Another important part for proper functioning of library is maintaining records and information about the users and customers who purchase books, register in the library, records of users whose registration is expired, no. of books issued by user, date of issuing and   
essential details of users like Name, Phone no., Address, Email etc.   
In case when time period of book issued is over and the person issuing the book has not returned it, there must be a source of contact with the customer.

And the last segment is Billing. It is important to prepare a proper bill of every single book and maintain it as a proof.

PROBLEM DESCRIPTION

There are many problems faced by the owner while maintaining manual records.  
 Problems, the management face in manual maintenance of records are as follows……………….

* Problems related in maintaining records of books:-

It is not easy to maintain record of every single book and keep it up to date. Since there are large number of books of different categories in a library maintaining records of books in volumes of registers becomes cumbersome. Every year the books get updated with changes in rates, authors and other details. To update these details in registers is not easy and one has to scribble the old entries and details.

* Problems in maintaining record and details of users and customers.

The main essentials needed by the library to know, identify and contact the customer or issuers, the library needs its Name, Phone number, Address, E-mail etc.   
But user can stop using these over time. So, it is necessary to update all the essentials of user. It is very difficult and strenuous to make changes in these things over and over again. Some customers and issuers don’t even inform the library about their

updations. They keep using the old info. The library has to check whether they are using the current info given.

* Problem in billing

It is difficult to handle and perform time consuming calculation for preparing bills of customers who purchase a variety of books. It can be easily prepared to some extent for a number of books. But for those customers who purchase large number of books and of different variety, it is not easy to prepare as the bill will have large number of entries and there is a scope of mistake.  
Another problem is to maintain the bill book. Suppose there is mistake in the entry of bill. Now that bill has to be thrown away and a new bill needs to be prepared. So it is wastage of paper.

Solution Analysis

Problems occurring due to manual maintenance of records discussed earlier can be solved easily by maintaining record on computer. Since computer can store large amount of data efficiently as compared to databases maintained manually. It can be used to handle, access and update or edit the data in hand and also the data which was stored long back ago. One can easily access, extract, edit and conclude through large volumes of data using computer very easily .

* Solution to the problem in maintaining records of books manually

Every single and minute detail of a book of any category can be stored, accessed and edited by the help of electronic databases. Details can be updated easily in electronic database. One can access to the details printed long back ago in no time. There will be no issue of searching details over bulky volumes of register. Updating details manually in register by overwriting makes it unsystematic. But details and records can be saved in a systematic manner in an electronic database.

* Solution to problem in maintain records of users and customers

The essentials given by the user to the library can be stored in an electronic database in a very systematic and efficient manner. It can store information like accounts of customers registered, number of books issued by customer etc in a very orderly way.

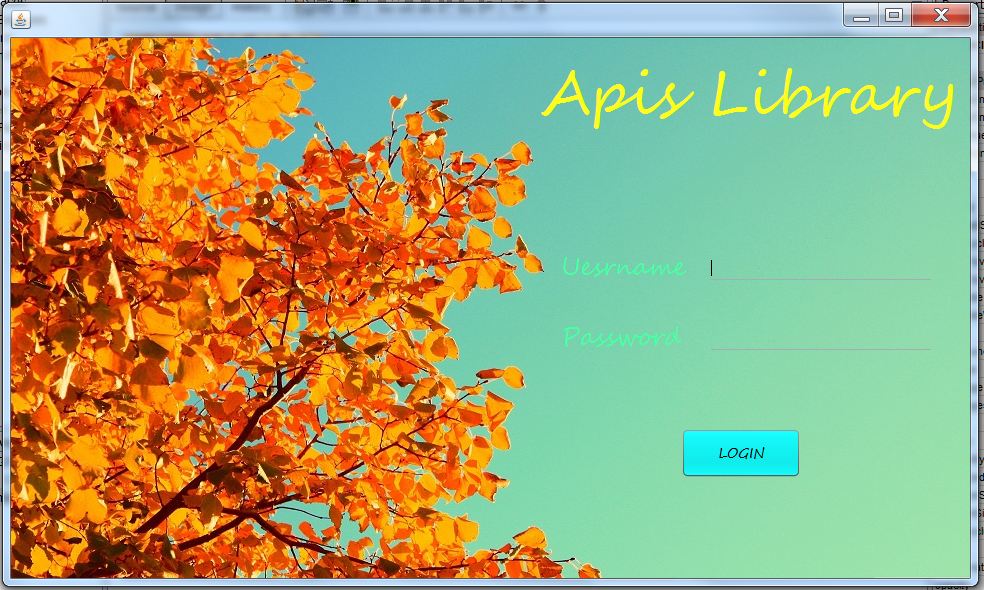
And it can used to access information about user whose last activity was even long back ago.   
If the user updates its details or info about him/her, it can be very easily updated or edited by the help of electronic database.

* Solution to problem billing

One great advantage of using computer in this case is saving time in lengthy and complex calculations. Computer saves and reduces a lot of time in doing calculation. There is very high scope of mistake in performing these calculations manually. By using computer, we can reduce the scope of mistakes. Mistakes can be corrected easily if wrong entries are done in computer.

Coding and Screen shot

Login page



Coding:-

String s=t1.getText();

String s1=t2.getText();

try

{

class.forName("java.sql.DriverManager");

Connection c=DriverManager.getConnection("jdbc:mysql://localhost/"library","root","apis");

Statement st=c.createStatement();

ResultSet rs=st.executeQuery("select \* from login");

while(rs.next())

{

String username=rs.getString("username");

String password=rs.getString("password");

if(username.equals(s)&&password.equals(s1))

{

Homepage h=new Homepage();

h.setVisible(true);

this.dispose();

}

}

}

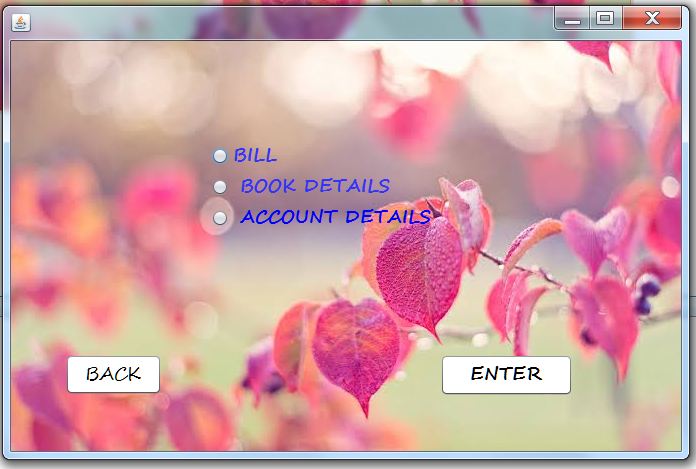
catch(Exception e)

{

JOptionPane.showMessageDialog(null,e.getMessage());

}

Home page



Coding:-

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

this.setVisible(false);

new LOGIN\_PAGE().setVisible(true); }

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

if(r1.isSelected()==true){

this .setVisible(false);

new BILLING().setVisible(true);

}

if(r2.isSelected()==true){

if(r4.isSelected()==true)

{

this .setVisible(false);

new ADD\_DETAILS().setVisible(true);

}else{

this .setVisible(false);

new SHOW\_DETAILS().setVisible(true);

}

}

if(r3.isSelected()==true){

if(r4.isSelected()==true){

this .setVisible(false);

new ADD\_ACCOUNT().setVisible(true);

}else{

this .setVisible(false);

new show\_account().setVisible(true);

}

}

}

private void formWindowOpened(java.awt.event.WindowEvent evt) {

r4.setVisible(false);

r5.setVisible(false);// TODO add your handling code here:

}

private void r2ActionPerformed(java.awt.event.ActionEvent evt) {

r4.setVisible(true);

r5.setVisible(true); // TODO add your handling code here:

}

private void r3ActionPerformed(java.awt.event.ActionEvent evt) {

r4.setVisible(true);

r5.setVisible(true);

}

Billingpage:-

Coding:-

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

int rownumber =table1.getRowCount();

if(table1.getRowCount()==0 && t1.getText()==""&&t2.getText()==""&&t3.getText()==""&&t4.getText()==""&&t5.getText()==""&&t6.getText()=="")

JOptionPane.showMessageDialog(null,"enter details");

}

else{

if(table1.getRowCount()==0&&t1.getText()!=""&&t2.getText()!=""&&t3.getText()!=""&&t4.getText()!=""&&t5.getText()!="") {

DefaultTableModel model=(DefaultTableModel) table1.getModel();

int rate1=Integer.parseInt(t2.getText());

int discount=Integer.parseInt(t5.getText());

int nos=Integer.parseInt(t4.getText());

int rate=rate1\*nos;

int discount\_value= (rate-discount\*rate/100);

int gst=Integer.parseInt(t6.getText());

int total\_value=(discount\_value+gst\*discount\_value/100);

String total1=total\_value+"";

model.addRow(new Object[]{t1.getText(),t2.getText(),c1.getSelectedItem().toString(),t3.getText(),t4.getText(),t5.getText(),t6.getText(),total\_value});

t1.setText("");

t2.setText("");

t3.setText("");

t4.setText("");

t5.setText("");

t6.setText("");

model.addRow(new Object[]{"YOUR TOTAL BILL IS ","" ,"" ,"" ,"" ,"" , "",total\_value});

}

else if(table1.getRowCount()>1){

DefaultTableModel model=(DefaultTableModel) table1.getModel()

t1.setText("");

t2.setText("");

t3.setText("");

t4.setText("");

t5.setText("");

t6.setText("");

int z=0;

for(int y=0;y<table1.getRowCount();y++)

z+=Integer.parseInt(table1.getValueAt(y,7).toString());

}

int bill\_total=z;

model.addRow(new Object[]{"YOUR TOTAL BILL IS ","" ,"" ,"" ,"" ,"" , "",z});

}

}

}

private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {

DefaultTableModel model=(DefaultTableModel) table1.getModel();

int rate1=Integer.parseInt(t2.getText());

int discount=Integer.parseInt(t5.getText());

int nos=Integer.parseInt(t4.getText());

int rate=rate1\*nos;

int discount\_value= (rate-discount\*rate/100);

int gst=Integer.parseInt(t6.getText());

int total\_value=(discount\_value+gst\*discount\_value/100);

String total1=total\_value+"";

model.addRow(new Object[]{t1.getText(),t2.getText(),c1.getSelectedItem().toString(),t3.getText(),t4.getText(),t5.getText(),t6.getText(),total\_value});

t1.setText("");

t2.setText("");

t3.setText("");

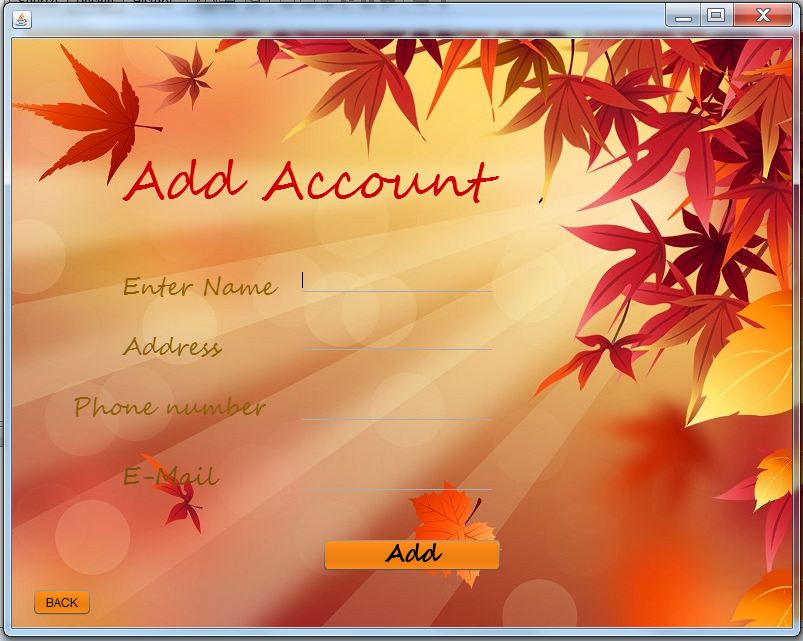
t4.setText("");

t5.setText("");

t6.setText("");

}

Add user account page:-



Coding:-

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

this.setVisible(false);

new HOMEPAGE().setVisible(true);// TODO add your handling code here:

}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

String Name=t1.getText();

String Address=t2.getText();

String Phone=t3.getText();

String Email=t4.getText();

int i=Integer.parseInt(Phone);

try

{

Class.forName("java.sql.DriverManager");

Connection c=DriverManager.getConnection("jdbc:mysql://localhost/library","root","apis");

Statement st=c.createStatement();

st.executeUpdate("insert into account values('"+Name+"','"+Address+"','"+i+"','"+Email+"');");

}

catch(Exception e)

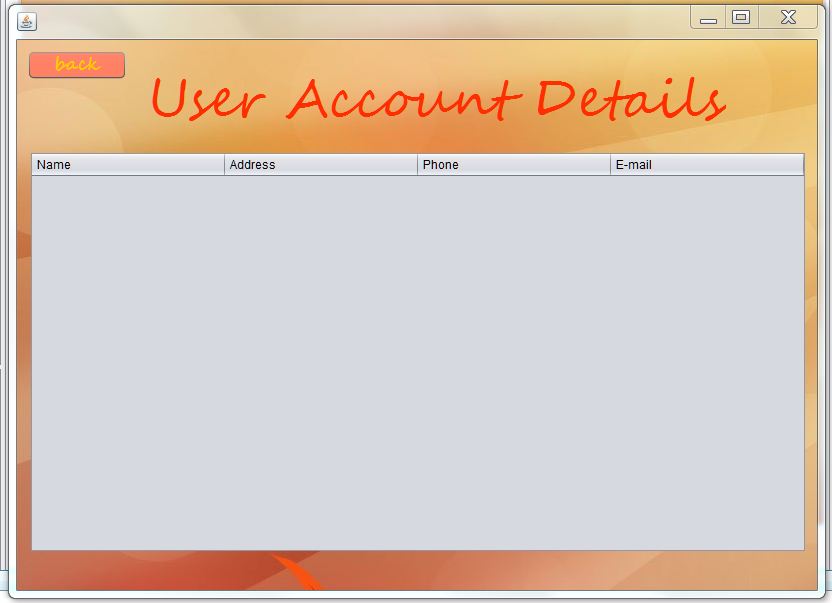
{

JOptionPane.showMessageDialog(null,e.getMessage());

}

}

Show user account details



Coding:-

private void formWindowOpened(java.awt.event.WindowEvent evt) {

DefaultTableModel dtm=(DefaultTableModel)table1.getModel();

int i=dtm.getRowCount();

for(int j=0;j<i;j++)

dtm.removeRow(0);

try{

Class.forName("java.sql.DriverManager");

Connection c=DriverManager.getConnection("jdbc:mysql://localhost/library","root","apis");

java.sql.Statement st=c.createStatement();

ResultSet rs=st.executeQuery("select \* from account");

while(rs.next())

{

dtm.addRow(new Object[]{rs.getString(1),rs.getString(2),rs.getString(3),rs.getString(4)});

}

} catch (Exception e) {

JOptionPane.showMessageDialog(null,e.getMessage());

}

}

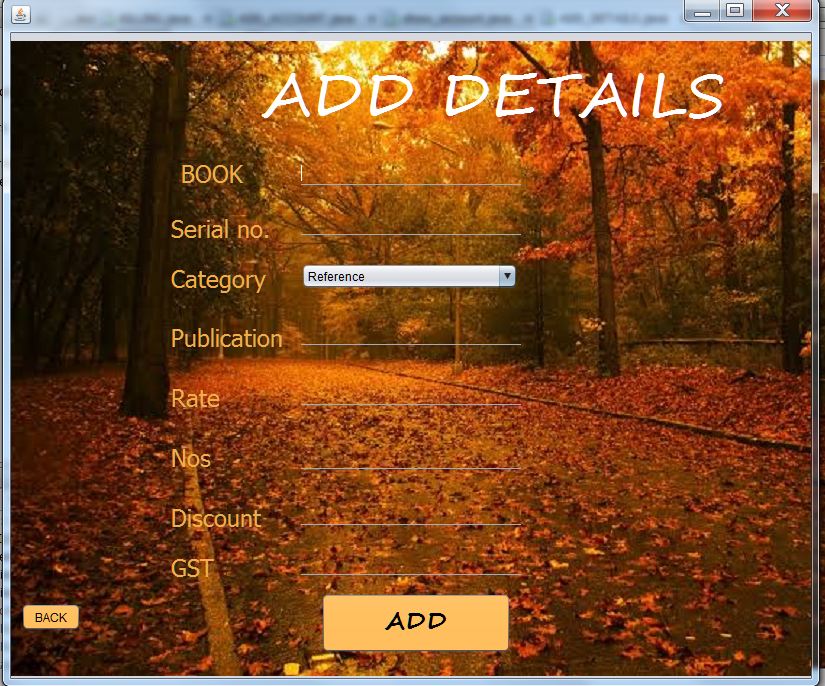
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

this.setVisible(false);

new HOMEPAGE().setVisible(true);

}

Add book details page



Coding:-

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

this.setVisible(false);

new HOMEPAGE().setVisible(true);

}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

String bookname=t1.getText();

int serial=Integer.parseInt(t2.getText());

String category=c1.getSelectedItem().toString();

String publication=t3.getText();

int rate=Integer.parseInt(t4.getText());

int nos=Integer.parseInt(t5.getText());

int discount=Integer.parseInt(t6.getText());

int GST=Integer.parseInt(t7.getText());

try

{

Class.forName("java.sql.DriverManager");

Connection c=DriverManager.getConnection("jdbc:mysql://localhost/library","root","apis");

Statement st=c.createStatement();

st.executeUpdate("insert into bookdetails values('"+bookname+"','"+serial+"','"+category+"','"+publication+"','"+rate+"','"+nos+"','"+discount+"','"+GST+"');"); //SINGLE QUOTES TO BE REMEMBERED AND A SEMICOLON AFTER THE QUERY AND THE DRIVER ADDED

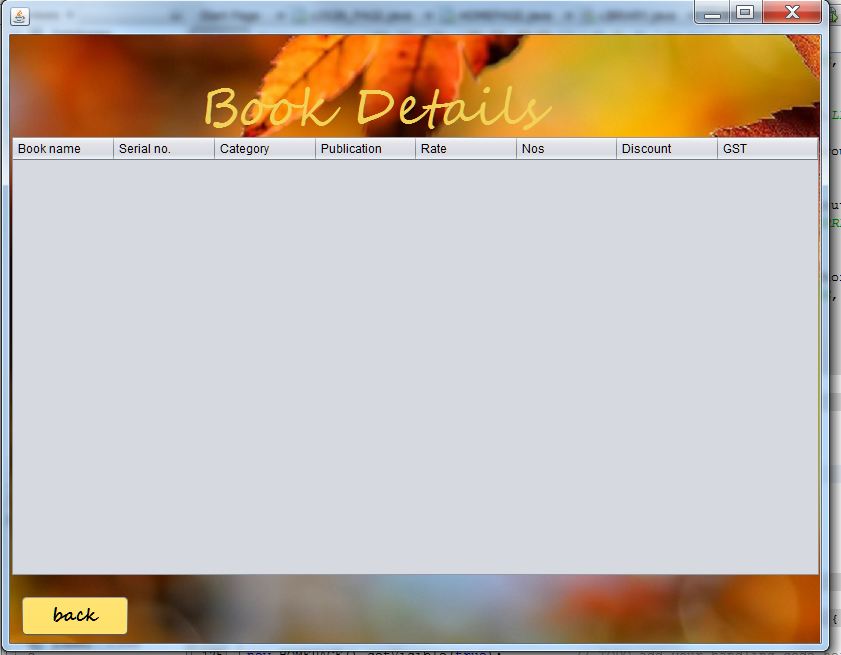
System.out.println("done");

} catch(Exception e)

{ JOptionPane.showMessageDialog(null,e.getMessage());

} }

Show book details page



Coding:-

private void formWindowOpened(java.awt.event.WindowEvent evt) {

DefaultTableModel dtm=(DefaultTableModel)table1.getModel();

int i=dtm.getRowCount();

for(int j=0;j<i;j++)

dtm.removeRow(0);

try

{

Class.forName("java.sql.DriverManager");

Connection c=DriverManager.getConnection("jdbc:mysql://localhost/library","root","apis");

java.sql.Statement st=c.createStatement();

ResultSet rs=st.executeQuery("select \* from bookdetails");

while(rs.next())

{

dtm.addRow(new Object[]{rs.getString(1),rs.getString(2),rs.getString(3),rs.getString(4),rs.getString(5),rs.getString(6),rs.getString(7),rs.getString(8)});

}

}

catch(Exception e){

JOptionPane.showMessageDialog(null,e.getMessage());

}

}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

this.setVisible(false);

new HOMEPAGE().setVisible(true); }