ASSIGNMENT 10:

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import java.io.File;

import java.io.PrintWriter;

import java.sql.\*; //this package is imported for sql connection

import java.util.\*; //this package is imported to use scanner

//this package is imported to perform file operations

public class ExampleOFBank //declaration of jdbcex class

{ //curly bracket start

//JDBC driver name and database URL

static final String JDBC\_DRIVER = "com.mysql.jdbc.Driver"; //declaration of static variable JDBC\_DRIVER and value initialized to it

static final String DB\_URL = "jdbc:mysql://localhost:3306/db\_bank"; //declaration of static variable DB\_URL,databse path initialized to it

//Database Credentials

static final String USER = "root"; //declaration of static variable USER and value initialized to it

static final String PASS = "";

static Connection connection;

static Scanner s;

static java.sql.Date date;

static {

try {

Class.forName(JDBC\_DRIVER);

System.out.println(" done ");

if (connection == null || connection.isClosed()) {

connection = DriverManager.getConnection(DB\_URL, USER, PASS);

System.out.println(" connected ");

s = new Scanner(System.in);

Calendar calendar = Calendar.getInstance();

date = new java.sql.Date(calendar.getTime().getTime());

System.out.println("date: " + date);

}

} catch (Exception e) {

System.out.println(e);

}

}//declaration of static variale PASS and blankvalue assigned to it

public static void main(String[] args) //declaration of main method,execution starts from here

{

//In this program two tables are created tbl\_transaction and tbl\_account

//tbl\_transaction(acc\_no,transaction\_date,ammount,transaction\_type,balance)

//tbl\_account(acc\_no,name,age,address,opening\_balance\_ammount)

try {

String s1=null;

do

{

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*BANK MANAGEMENT SYSTEM\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("1.create account.");

System.out.println("2.Transaction.");

System.out.println("3.printData");

System.out.println("4.Delete Account");

//initializing scanner to accept values

System.out.println("Enter your choice");

int choice = s.nextInt();

switch (choice) {

case 1: //scan open\_bal\_amount entered by user and store it in opbalam variable

saveDetails(); //calling saveDetails()function to insert the values in tbl\_account

break;

case 2:

transaction(); //calling transaction() function to insert values and to perform transactions in tbl\_transaction

break;

case 3:

printData();

break;

case 4:

deleteAccount();

break;

default:

//prints the double quoted text on output console screen

System.out.println("Goodbye!");

break;

}

System.out.println("Do you want to Cont...(Y/N)?");

s1 = s.next();

}while(s1.equals("y"));

}catch (Exception e) {

System.out.println(e);

}finally{

System.exit(0);

}

} //end of the main() function

//saveDetails() function defination starts here

public static void saveDetails() throws SQLException {

try {

//scan acc\_no entered by user and strore it in accno variable

System.out.println("Enter your name"); //prints the double quoted text on output console screen

String name = s.next(); //scan name entered by user and store it in name variable

System.out.println("Enter your age"); //prints the double quoted text on output console screen

int age = s.nextInt(); //scan age entered by user and store it in age variable

System.out.println("Enter your address"); //prints the double quoted text on output console screen

String address = s.next(); //scan address entered by user and store it in address variable

System.out.println("Enter opening balance amount"); //prints the double quoted text on output console screen

int opbalam = s.nextInt();

Statement stmt = null;

stmt = connection.createStatement();

System.out.println("Inserting records into the table...");

String sql = "INSERT INTO `tbl\_account` (`name`, `age`, `address`) VALUES('" + name + "','"

+ age + "','" + address + "')";

//execute a query

System.out.println("sql " + sql);

stmt.executeUpdate(sql);

System.out.println("Inserted records into the tbl\_account table...");

String sqlaccno = "Select max(accno) from tbl\_account";

ResultSet rs = connection.createStatement().executeQuery(sqlaccno);

while (rs.next()) {

int accno = rs.getInt(1);

System.out.println(name + " your acont number is : " + accno + "please save it for further used");

String sql2 = "INSERT INTO `tbl\_transaction` (`accno1`, `date1`, `trantype`, "

+ "`amount`, `balance1`) "

+ "VALUES ('" + accno + "', '" + date + "', 'deposit', '" + opbalam + "', '" + opbalam + "')";

stmt.executeUpdate(sql2);

System.out.println("Intialization of transaction is also done...");

}

} //if SQLException occurs in the above statements then this catch statement catches it and prints the exception

catch (SQLException se) {

System.out.println(se);

}

System.out.println("Account Successfully creadted");

} //end of saveDetails function

//transactio function defination starts here

public static void transaction() throws Exception {

try {

System.out.println("Enter account no"); //prints the double quoted text on output console screen

int accno2 = s.nextInt(), balance1 = 0;

System.out.println("date : " + date);

System.out.println("Enter amount"); //prints the double quoted text on output console screen

int amount = s.nextInt(); //scan amount entered by user and store it in amount variable

System.out.println("Enter transaction type"); //prints the double quoted text on output console screen

String trantype = s.next();

Statement stmt1 = null;

String sqlbal = "SELECT balance1 FROM `tbl\_transaction` WHERE accno1 ='" + accno2 + "' "

+ "and transactionid in (SELECT max(transactionid) FROM "

+ "`tbl\_transaction` WHERE accno1 ='" + accno2 + "')";

ResultSet rs = connection.createStatement().executeQuery(sqlbal);

while (rs.next()) {

balance1 = rs.getInt("balance1");

}

if (trantype.equals("deposit")) {

balance1 = balance1 + amount;

stmt1 = connection.createStatement();

System.out.println("Inserting records into the table...");

// String sql2 = "INSERT INTO `tbl\_transaction` VALUES('" + accno2 + "','" + date + "','" + trantype + "','" + amount + "','" + balance1 + "')";

String sql2 = "INSERT INTO `tbl\_transaction` (`accno1`, `date1`, `trantype`, "

+ "`amount`, `balance1`) "

+ "VALUES ('" + accno2 + "', '" + date + "', 'deposit',"

+ " '" + amount + "', '" + balance1 + "')";

stmt1.executeUpdate(sql2);

System.out.println("Inserted records into the table...");

} else if (trantype.equals("withdrawal")) {

if (balance1 > amount) {

balance1 = balance1 - amount;

stmt1 = connection.createStatement();

System.out.println("Inserting records into the table...");

String sql2 = "INSERT INTO `tbl\_transaction` (`accno1`, `date1`, `trantype`, "

+ "`amount`, `balance1`) "

+ "VALUES ('" + accno2 + "', '" + date + "', 'withdrawal',"

+ " '" + amount + "', '" + balance1 + "')";

stmt1.executeUpdate(sql2);

System.out.println("Inserted records into the table...");

} else {

System.out.println("Not sufficient balance ... Please Check your balance first");

}

}

} //handles error for JDBC

catch (SQLException se) {

se.printStackTrace();

}

System.out.println("Transaction Successfully done!");

} //end of the transaction function

//printData() method definition starts here

public static void printData() throws SQLException {

try {

System.out.println("Please enter the account number for which you wann print passbook : \n");

int accnumber = s.nextInt();

String sql5 = "select a.accno,a.name,a.age,a.address,t.date1,"

+ "t.trantype,t.amount,t.balance1 from tbl\_account a, "

+ "tbl\_transaction t where a.accno=t.accno1 and t.accno1='"+accnumber+"'";

System.out.println("sql5 : " + sql5);

try {

String name = "";

PrintWriter outputfile = null;

StringBuffer sbf1 = new StringBuffer();

sbf1.append("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n"

+ "Date \t\t" + "Amount\t"

+ "\tTransactionType \t" + "Balance\n");

ResultSet rs = connection.createStatement().executeQuery(sql5);//here resultset is used fetch data from database

while (rs.next()) {

//create StringBuffer object

StringBuffer sbf = new StringBuffer();

name = rs.getString("a.name");

sbf.append("\nName:" + rs.getString("a.name"));

sbf.append("\nAccount: " + rs.getInt("a.accno"));

sbf.append("\nAddress: " + rs.getString("a.address"));

sbf.append("\nBalance: " + rs.getInt("t.balance1"));

sbf.append("\nTransaction:");

System.out.println("print data : " + sbf);

sbf1.append("\n" + rs.getString("t.date1"));

sbf1.append("\t" + rs.getString("t.amount"));

sbf1.append("\t\t" + rs.getString("t.trantype"));

sbf1.append("\t\t\t" + rs.getInt("t.balance1"));

System.out.println("print data : " + sbf);

String filename = name + ".txt";

outputfile = new PrintWriter(filename);

outputfile.append(sbf.toString());

System.out.println("Successfully wrote to the file.");

}

outputfile.append(sbf1.toString());

outputfile.close();

}//handles file operation errors

catch (Exception e) {

System.out.println("An error occurred.");

e.printStackTrace();

}

} catch (Exception e) {

}

} //end of printdata() function defination

//deleteAccount() function defination starts here

public static void deleteAccount() {

try {

Statement stmt4 = null;

stmt4 = connection.createStatement();

Scanner sn = new Scanner(System.in);

System.out.println("Do you really want to delete account? if yes enter account\_no");

int no = sn.nextInt();

String sqlacc = "SELECT name FROM `tbl\_account` WHERE accno ='" + no + "'";

ResultSet rs = connection.createStatement().executeQuery(sqlacc);

String name = null;

while (rs.next()) {

name = rs.getString("name");

}

String sql4 = "DELETE FROM `tbl\_transaction` WHERE accno1='" + no + "'";

//execute query

stmt4.executeUpdate(sql4);

String sql5 = "DELETE FROM `tbl\_account` WHERE accno='" + no + "'";

//execute query

stmt4.executeUpdate(sql5);

String filename = name + ".txt";

System.out.println("filename " + filename);

File f = new File(filename); //file to be delete

if (f.delete()) //returns Boolean value

{

System.out.println(f.getName() + " deleted"); //getting and printing the file name

} else {

System.out.println("failed");

}

System.out.println("Account is beign deleted ...!");

} //handles jdbc errors

catch (SQLException se) {

se.printStackTrace();

}

}

//end of deleteAccount() function

}//end of class