JWTD Lab Submission-5

2-Phase commit

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Main code:

**package** \_211047022;

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.ResultSet;

**import** java.sql.SQLException;

**import** java.sql.Statement;

**import** java.util.Scanner;

**public** **class** Twophase **implements** TwofaceInterface{

**public** **void** viewData(){

Connection conn = **null**;

**try** {

String dbURL1 = "jdbc:sqlserver://LAPTOP-R07JHSTN:1433;databaseName=lab5.1;encrypt=true;trustServerCertificate=true;";

String user = "athul";

String pass = "athul";

conn = DriverManager.*getConnection*(dbURL1, user, pass);

**if** (conn != **null**) {

Statement sta = conn.createStatement();

ResultSet rs = sta.executeQuery("select \* from employee");

System.***out***.println("ID" + "\t" + "Names" + "\t\t" + "salary");

**while**(rs.next()) {

**int** id = rs.getInt("id");

String name = rs.getString("Name");

**int** amount = rs.getInt("salary");

System.***out***.println(id + "\t" + name + "\t" + amount);

}

}

} **catch** (SQLException ex) {

ex.printStackTrace();

} **finally** {

**try** {

**if** (conn != **null** && !conn.isClosed()) {

conn.close();

}

} **catch** (SQLException ex) {

ex.printStackTrace();

}

}

}

**public** **void** getinfo() {

**int** Receiverid, Senderid, Amount;

Scanner scan = **new** Scanner(System.***in***);

System.***out***.println("Enter the Receiver");

Receiverid = scan.nextInt();

System.***out***.println("Enter the Sender");

Senderid = scan.nextInt();

System.***out***.println("Enter the Amount");

Amount = scan.nextInt();

updateData(Receiverid,Senderid,Amount);

}

**public** **void** updateData(**int** Receiverid, **int** Senderid, **int** Amount) {

Connection conn = **null**;

Connection conn1 = **null**;

**int** SenderAvailBal = 0;

**int** ReciverAvailBal = 0;

**int** Senid = 0;

**int** Recid = 0;

**try** {

String dbURL1 = "jdbc:sqlserver://LAPTOP-R07JHSTN:1433;databaseName=lab5.1;encrypt=true;trustServerCertificate=true;";

String dbURL2 = "jdbc:sqlserver://LAPTOP-R07JHSTN:1433;databaseName=lab5.2;encrypt=true;trustServerCertificate=true;";

String user = "athul";

String pass = "athul";

conn = DriverManager.*getConnection*(dbURL1, user, pass);

conn1 = DriverManager.*getConnection*(dbURL2, user, pass);

**if** (conn != **null**) {

Statement sta = conn.createStatement();

Statement sta1 = conn1.createStatement();

conn.setAutoCommit(**false**);

ResultSet rs1 = sta.executeQuery("select id,salary from employee where ID="+Receiverid);

**while**(rs1.next()) {

Recid = rs1.getInt("ID");

ReciverAvailBal = rs1.getInt("salary");

}

ResultSet rs2 = sta.executeQuery("select id,salary from employee where id="+Senderid);

**while**(rs2.next()) {

Senid = rs2.getInt("ID");

SenderAvailBal = rs2.getInt("salary");

}

**if**(Amount <= SenderAvailBal) {

**int** diffamount = SenderAvailBal - Amount;

**int** addedamount = ReciverAvailBal + Amount;

sta.executeUpdate("update employee set salary=" + diffamount + "where Id=" +

Senid);

sta.executeUpdate("update employee set salary=" + addedamount + "where Id="

+ Recid);

sta1.executeUpdate("update employee set salary=" + diffamount + "where Id=" +

Senid);

sta1.executeUpdate("update employee set salary=" + addedamount + "where Id="

+ Recid);

conn.commit();

viewData();

}**else** {

System.***out***.println("Insufficient Balance of Senderid " + Senid + " salary = " +

SenderAvailBal);

conn.rollback();

// viewDetails();

}

}

} **catch** (SQLException ex) {

ex.printStackTrace();

} **finally** {

**try** {

**if** (conn != **null** && !conn.isClosed()) {

conn.close();

}

} **catch** (SQLException ex) {

ex.printStackTrace();

}

}

}

**public** **static** **void** main(String[] args) {

Twophase at = **new** Twophase();

at.viewData();

at.getinfo();

}

@Override

**public** **void** viewDetails() {

// **TODO** Auto-generated method stub

}

@Override

**public** **void** updateAmount(**int** Receiverid, **int** Senderid, **int** Amount) {

// **TODO** Auto-generated method stub

}

}

2.Two phase interface code

**package** \_211047022;

**public** **interface** TwofaceInterface {

**public** **void** viewDetails();

**public** **void** getinfo();

**public** **void** updateAmount(**int** Receiverid,**int** Senderid,**int** Amount);

}

Output:

