Source code for automated railway signallig sytem

1)package dbcon;

import java.util.Date;

import servlet.StringUtil;

public class Block {

public String hash;

public String previousHash;

private String data; //our data will be a simple message.

private long timeStamp; //as number of milliseconds since 1/1/1970.

public Block(String data,String previousHash ) {

this.data = data;

this.previousHash = previousHash;

this.timeStamp = new Date().getTime();

this.hash = calculateHash(); //Making sure we do this after we set the other values.

}

public String calculateHash() {

String calculatedhash = StringUtil.applySha256(

previousHash +

Long.toString(timeStamp) +

data

);

return calculatedhash;

}

}

package dbcon;

import java.sql.Connection;

import java.sql.DriverManager;

public class dbcon{

static Connection con;

public static Connection create(){

try{

Class.forName("com.mysql.jdbc.Driver");

con=DriverManager.getConnection("jdbc:mysql://localhost:3306/train","root","root");

}catch(Exception ex)

{

ex.printStackTrace();

}

return con;

}

}

**2)EMBEDDED.JAVA**

package embed;

import jssc.SerialPort;

import jssc.SerialPortEvent;

import jssc.SerialPortException;

import jssc.SerialPortList;

public class embedd {

static String s;

embedd as;

public static String r;

public static String j;

public void connect() {

String portlist[] = SerialPortList.getPortNames();

for (int i = 0; i < portlist.length; i++) {

}

SerialPort port = new SerialPort("COM3");

try {

port.openPort();

port.setParams(

SerialPort.BAUDRATE\_9600, SerialPort.DATABITS\_8, SerialPort.STOPBITS\_1, SerialPort.PARITY\_NONE);

r = "";

port.addEventListener((SerialPortEvent event) -> {

if (event.isRXCHAR()) {

try {

s = port.readString();

r = r + s;

System.out.println("embedd" + r);

} catch (SerialPortException e) {

e.printStackTrace();

}

}

});

} catch (SerialPortException e) {

e.printStackTrace();

}

}

public static boolean toclose() {

r = "";

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

return true;

}

public static void sending() {

SerialPort serialPort = new SerialPort("COM3");

try {

serialPort.openPort();

serialPort.setParams(SerialPort.BAUDRATE\_9600, SerialPort.DATABITS\_8, SerialPort.STOPBITS\_1,

SerialPort.PARITY\_NONE);

serialPort.setFlowControlMode(SerialPort.FLOWCONTROL\_RTSCTS\_IN | SerialPort.FLOWCONTROL\_RTSCTS\_OUT);

int i = 0;

while (i == 0) {

i++;

System.out.println("String sent: " + serialPort.writeString("$"));

serialPort.closePort();

}

} catch (SerialPortException ex) {

System.out.println("There is an error on writing string to port: " + ex);

}

}

public static void motoractivation() {

SerialPort serialPort = new SerialPort("COM4");

try {

serialPort.openPort();

serialPort.setParams(SerialPort.BAUDRATE\_9600, SerialPort.DATABITS\_8, SerialPort.STOPBITS\_1,

SerialPort.PARITY\_NONE);

serialPort.setFlowControlMode(SerialPort.FLOWCONTROL\_RTSCTS\_IN | SerialPort.FLOWCONTROL\_RTSCTS\_OUT);

int i = 0;

while (i == 0) {

i++;

System.out.println("String sent: " + serialPort.writeString("@"));

serialPort.closePort();

}

} catch (SerialPortException ex) {

System.out.println("There is an error on writing string to port: " + ex);

}

}

public static void deactivate() {

SerialPort serialPort = new SerialPort("COM4");

try {

serialPort.openPort();

serialPort.setParams(SerialPort.BAUDRATE\_9600, SerialPort.DATABITS\_8, SerialPort.STOPBITS\_1,

SerialPort.PARITY\_NONE);

serialPort.setFlowControlMode(SerialPort.FLOWCONTROL\_RTSCTS\_IN | SerialPort.FLOWCONTROL\_RTSCTS\_OUT);

int i = 0;

while (i == 0) {

i++;

System.out.println("String sent: " + serialPort.writeString("$"));

serialPort.closePort();

}

} catch (SerialPortException ex) {

System.out.println("There is an error on writing string to port: " + ex);

}

}

}

**3)MAIL.JAVA**

package mail;

import java.util.Properties;

import javax.mail.\*;

import javax.mail.internet.\*;

public class mail1 {

public static void send(String from,String password,String to,String sub,String msg){

//Get properties object

Properties props = new Properties();

props.put("mail.smtp.host", "smtp.gmail.com");

props.put("mail.smtp.socketFactory.port", "465");

props.put("mail.smtp.socketFactory.class",

"javax.net.ssl.SSLSocketFactory");

props.put("mail.smtp.auth", "true");

props.put("mail.smtp.port", "465");

//get Session

Session session = Session.getDefaultInstance(props,

new javax.mail.Authenticator() {

protected PasswordAuthentication getPasswordAuthentication() {

return new PasswordAuthentication(from,password);

}

});

//compose message

try {

MimeMessage message = new MimeMessage(session);

message.addRecipient(Message.RecipientType.TO,new InternetAddress(to));

message.setSubject(sub);

message.setText(msg);

//send message

Transport.send(message);

System.out.println("message sent successfully");

} catch (MessagingException e) {throw new RuntimeException(e);}

}

public static void main(String[] args) {

//from,password,to,subject,message

/\*send("mailjavasend@gmail.com","vxiheforquruguxf","embeddedspiro2021@gmail.com","One Time Password","How r u?");

\*/ //change from, password and to

main("","");

}

public static void main(String mail, String text) {

//from,password,to,subject,message

send("smtpmailsend0@gmail.com","jkmnwdpbndjxclcy",mail,"One Time Password",text);

//change from, password and to

}

}

**4)Ticketbooking.java**

package servlet;

import java.io.IOException;

import java.sql.Connection;

import java.sql.PreparedStatement;

import java.sql.SQLException;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import javax.servlet.http.HttpSession;

import dbcon.dbcon;

/\*\*

\* Servlet implementation class ticketbookdetails

\*/

@WebServlet("/ticketbookdetails")

public class ticketbookdetails extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public ticketbookdetails() {

super();

// TODO Auto-generated constructor stub

}

/\*\*

\* @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)

\*/

protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// TODO Auto-generated method stub

}

/\*\*

\* @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)

\*/

protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// TODO Auto-generated method stub

String name=request.getParameter("fname");

String ename=request.getParameter("age");

String pname=request.getParameter("email");

String number=request.getParameter("phone");

String from=request.getParameter("from");

String to=request.getParameter("to");

HttpSession train=request.getSession();

train.setAttribute("fromname", from);

train.setAttribute("bookto", to);

String date=request.getParameter("date");

int reg=0;

Connection con=(Connection) dbcon.create();

try {

PreparedStatement ps=con.prepareStatement("INSERT INTO train.trainticket VALUES(id,?,?,?,?,?,?,?)");

ps.setString(1, name);

ps.setString(2, ename);

ps.setString(3, pname);

ps.setString(4, number);

ps.setString(5, from);

ps.setString(6, to);

ps.setString(7, date);

reg=ps.executeUpdate();

} catch (SQLException e) {

//TODO Auto-generated catch block

e.printStackTrace();

}

if(reg==1){

response.sendRedirect("trainnames.jsp");

}

else{

response.sendRedirect("error.jsp");

}

}}

**5)Adminlogin:**

package servlet;

import java.io.IOException;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.SQLException;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import com.mysql.jdbc.Connection;

import dbcon.dbcon;

/\*\*

\* Servlet implementation class Adminloginservlet

\*/

@WebServlet("/Adminloginservlet")

public class Adminloginservlet extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public Adminloginservlet() {

super();

// TODO Auto-generated constructor stub

}

/\*\*

\* @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)

\*/

protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// TODO Auto-generated method stub

}

/\*\*

\* @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)

\*/

protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// TODO Auto-generated method stub

String email=request.getParameter("email");

String pass=request.getParameter("pass");

Connection con=(Connection) dbcon.create();

boolean log = false;

try {

PreparedStatement ps=con.prepareStatement("SELECT \* FROM train.admin where Email=? and password=?");

ps.setString(1, email);

ps.setString(2, pass);

ResultSet rs=ps.executeQuery();

log=rs.next();

}

catch (SQLException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

if(log==true){

response.sendRedirect("adminmainpage.jsp");

}

else{

response.sendRedirect("error.jsp");

}

}

}