**ASSIGNMENT – 3**

**AVTAR SINGH**

**(AVTAR 20CSU241)**

Createa Java Servletapplication“E-Library”that performs all thebasic CRUD (Create, Read, Update & Delete) operations.

Sequence of Events a.A client can start the web app by issuing URL <http://hostname:port/ElibraryProject/Login.htmlb>.

The Login page will present two options :i. Register the user or Sign In [which maps to a servlet class that will query the database accordingly]

ii.You can take any number of parameters for user registration

c.After successful authentication, the user can perform any of the following operations into the library database

i.Insert a book record

ii.Searcha book record

iii.Update an existing book record

iv. Deletea book record

Definition of Done i.Create a table in MySQL(Any Relational)database

ii.Design the web page and create a class that connects to the MySQLdatabase iii.Perform allCRUD operationsiv.Display the results on the desired web page

**Complete Code is Uploaded on My GitHub Repository Check Out Here**

**:** [TheAvtarSingh/WebapplicationElibrary: Assignmet to make a Verified E Library Application with Authentication (github.com)](https://github.com/TheAvtarSingh/WebapplicationElibrary)

**Program :**

**Index.jsp (Main Page)**

<html>

<body>

<hr style="height:*1px*;border-top:*1px solid #c78*" />

<div align = *"center"*>

<font size=*"10"*

face=*"verdana"*

color=*"green"*>

<b>Welcome To E Library WebApp !</b>

</font>

<marquee direction=*"right"*

behavior=*"alternate"*

style="border:*Orange 2px SOLID*"

>

Designed By Avtar Singh with &hearts;

</marquee>

<form method=*"post"* action=*"login"*>

<br>

<label for=*"fname"*>Click Below To Proceed Further :</label><br><br>

<button style="font-size:*24px*">Button <i class=*"fa fa-hand-paper-o"*></i></button>

<!-- <input type = "hidden" value = "This is hidden Content and can be seen after submit button" name = "hiddenform">-->

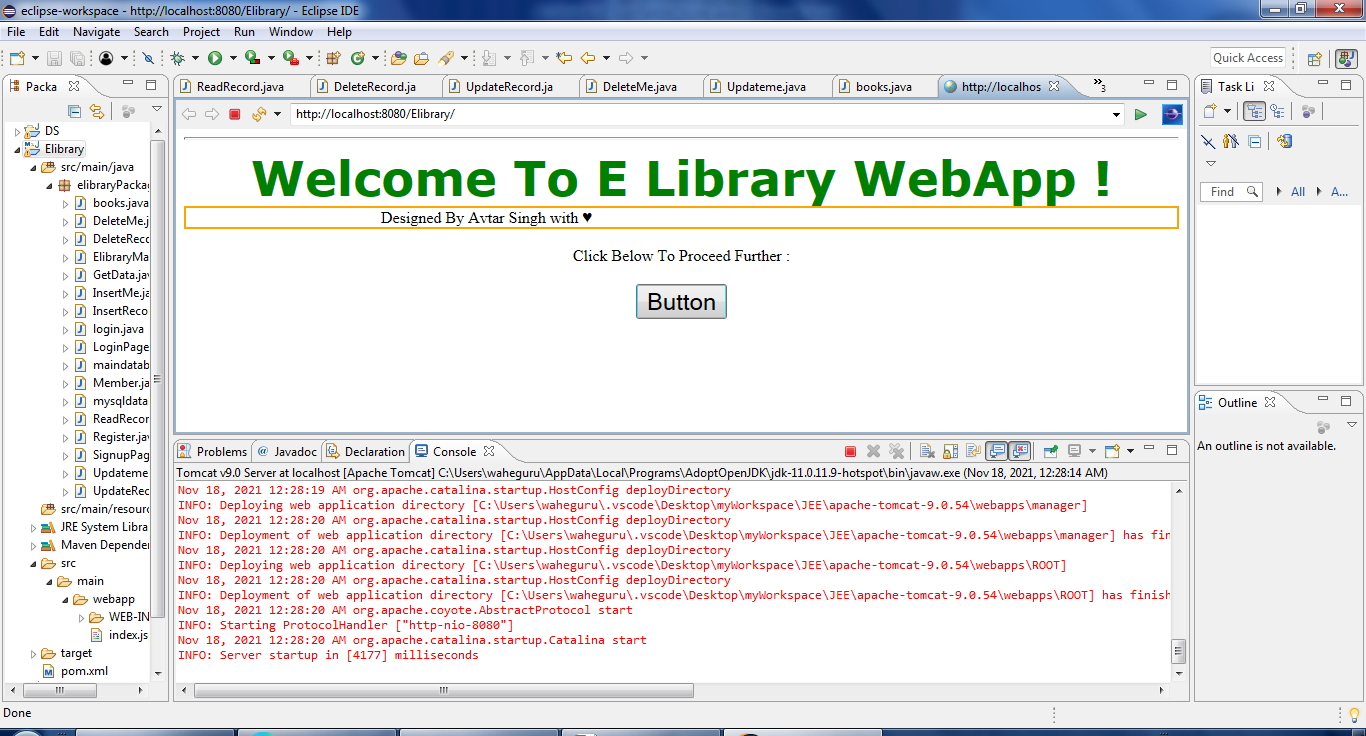
</form>

</div>

</body>

</html>

**Client View**



**login.java (Go to Login or Signup)**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.Cookie;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class VisitorCount

\*/

public class login extends HttpServlet {

private static final long serialVersionUID = 1L;

Integer count = 0;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public login() {

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

//response.getWriter().append("Served at: ").append(request.getContextPath());

// flag to check a user is a newbie or repeater

Boolean newVisitor = true;

//count++;

String greet= "";

// to identify the user status

Cookie[] cookies = request.getCookies();

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

if(cookies[i].getName().equals("repeatedVisitor") && cookies[i].getValue().equals("yes")) {

newVisitor = false;

break;

}

}

if(newVisitor == true) {

Cookie visitorCookie = new Cookie("repeatedVisitor", "yes");

// creating a persistent cookie

// visitorCookie.setMaxAge(5);

response.addCookie(visitorCookie);

greet = "Welcome Buddy - We hope you have a Great Day";

}

else {

greet = " Good To See You Again - Have a Nice Day ";

}

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+"<marquee direction=\"right\" "

+"scrollamount=\"10\""

+"height=\"60\""

+"behavior=\"alternate\""

+"style=\"border:Orange 2px SOLID\""

+">"

+"<font size=\"9\""

+"face=\"verdana"

+" color=\"DodgerBlue\">"

+"<b><i>"+greet+"</i></b>"

+"</font>"

+"</marquee>"

+"<br><br>"

+"<h3>Choose any Option</h3>"

+"<br>"

+"<h2>&#128071;</h2>"

+"<h2 style=\"border:green; border-width:4px; border-style:dashed\"><br>"

+"<a href='LoginPage'>Click here to Go to Login Page </a><br><br>"

+"<a href='SignupPage'>Click here to Go to Signup Page </a><br><br>"

+"</h2>"

+"</div>"

+ "</body>"

+ "</html>");

out.close();

}

/\*\*

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

\*/

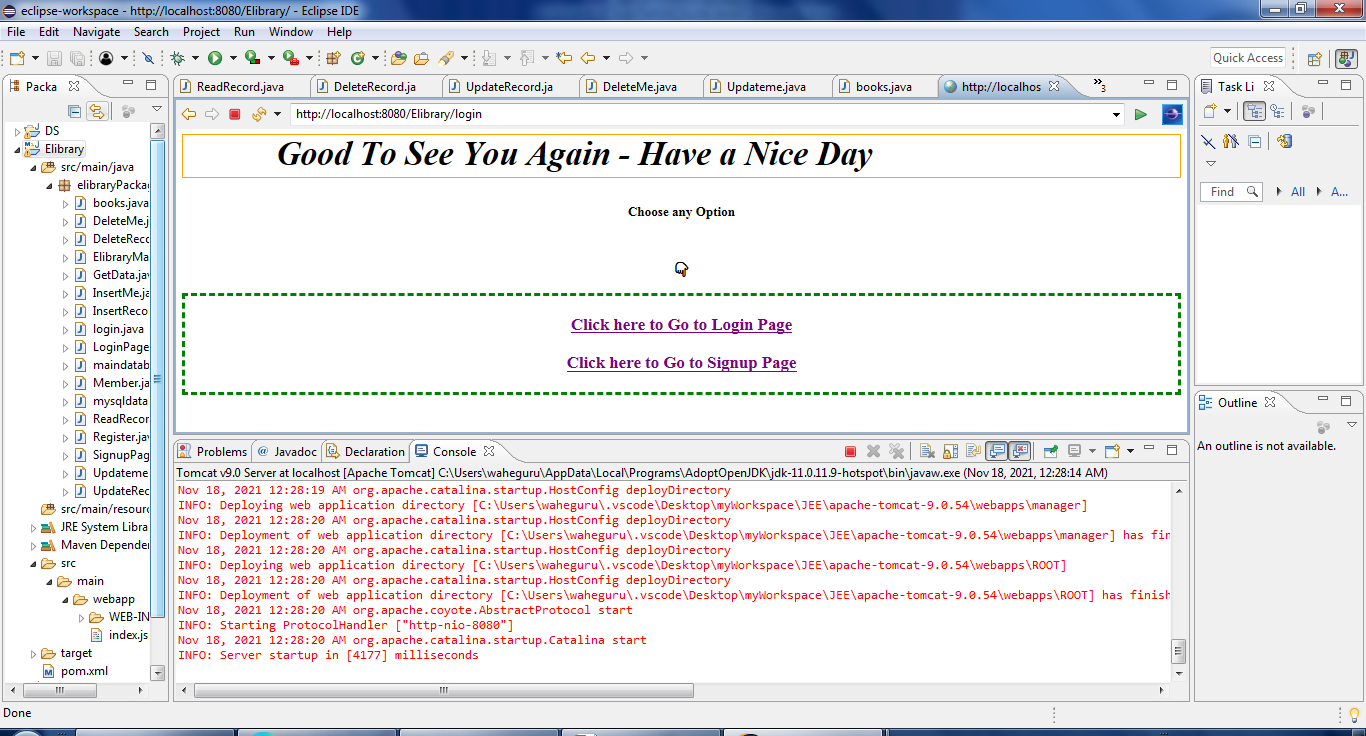
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// TODO Auto-generated method stub

doGet(request, response);

}

}



**LoginPage.java (Login of Registered user)**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class LoginPage

\*/

public class LoginPage extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public LoginPage() {

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

// response.getWriter().append("Served at: ").append(request.getContextPath());

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+ "<h1>Welcome to Login Page</h1>"

+ "<h1> -- Enter Your Details -- </h1>"

+"<form method=\"post\" action=\"GetData\">"

+"<label for=\"fname\">User name:</label><br>"

+"<input type=\"text\" id=\"fname\" name=\"uname\" ><br>"

+"<label for=\"lname\">Password:</label><br>"

+"<input type=\"password\" id=\"lname\" name=\"password\"><br><br>"

+"<input type=\"submit\" value=\"Submit\">"

+"</div>"

+ "</body>"

+ "</html>");

out.close();

}

/\*\*

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

\*/

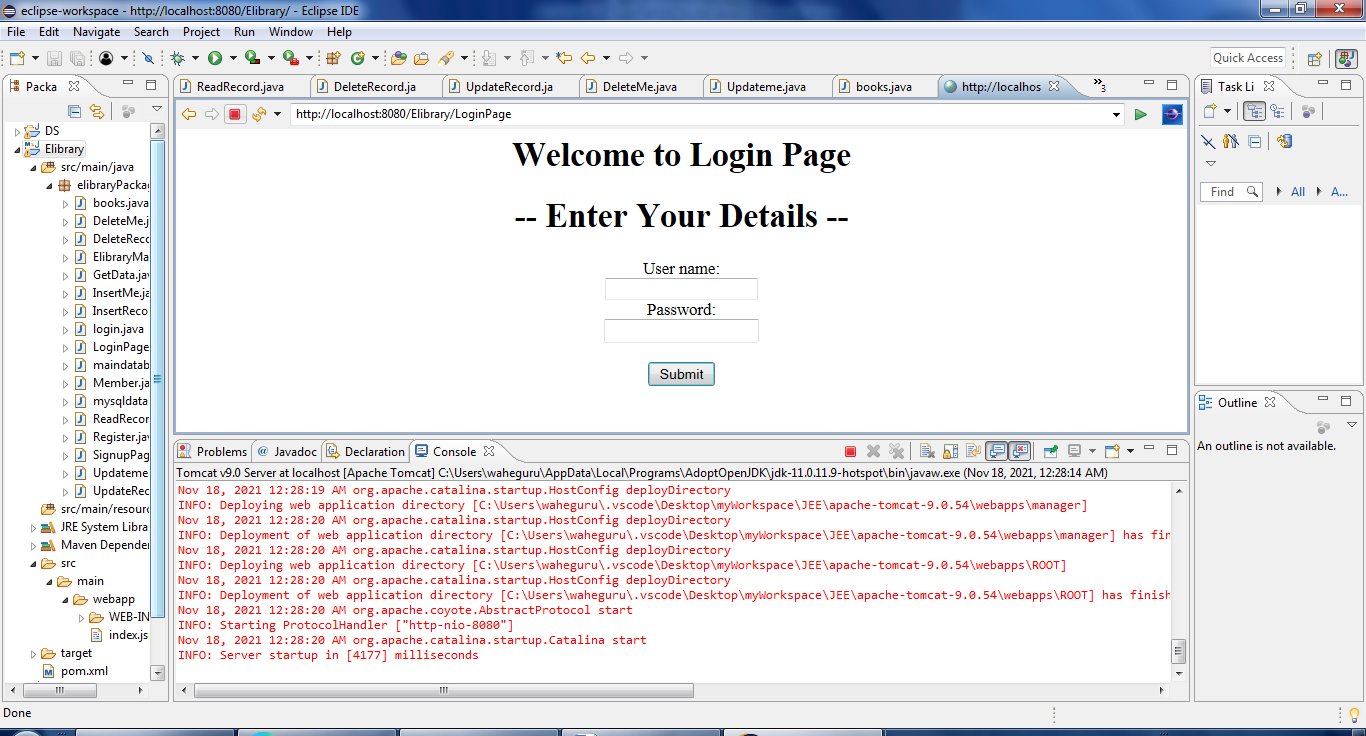
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// TODO Auto-generated method stub

doGet(request, response);

}

}



**SignupPage.java (Signup for Non-Registered user)**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class SignupPage

\*/

public class SignupPage extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public SignupPage() {

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

// response.getWriter().append("Served at: ").append(request.getContextPath());

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+ "<h1>Welcome to Signup Page</h1>"

+"<h2> Please Enter Your Details</h2>"

+"<form method=\"post\" action=\"Register\">"

+"<label for=\"fname\">First name:</label><br>"

+"<input type=\"text\" id=\"fname\" name=\"firstname\" ><br>"

+"<label for=\"lname\">Last name:</label><br>"

+"<input type=\"text\" id=\"lname\" name=\"lastname\" ><br>"

+"<label for=\"Email\">Email ID :</label><br>"

+"<input type=\"email\" id=\"Email\" name=\"emailadd\" ><br>"

+"<label for=\"lname\">Password :</label><br>"

+"<input type=\"password\" id=\"lname\" name=\"password\" ><br><br>"

+"<input type=\"submit\" value=\"Submit\"><br><br>"

+ "<a href='LoginPage'>Already Registered - Login Here </a>"

+"</div>"

+ "</body>"

+ "</html>");

}

/\*\*

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

\*/

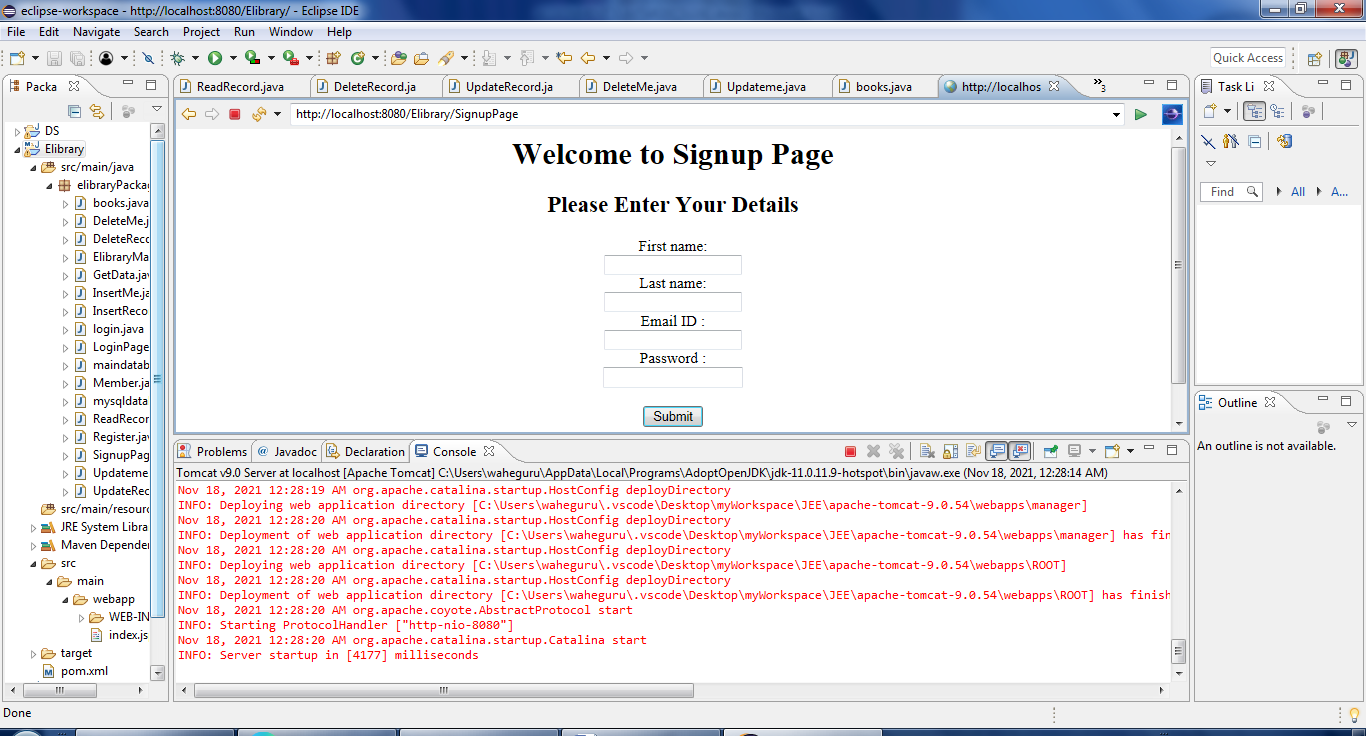
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// TODO Auto-generated method stub

doGet(request, response);

}

}



**Register.java (Accepts from Signup and send to Database)**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class Register

\*/

public class Register extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public Register() {

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

response.getWriter().append("Served at: ").append(request.getContextPath());

}

/\*\*

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

\*/

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

// TODO Auto-generated method stub

String uname = request.getParameter("firstname");

String lname = request.getParameter("lastname");

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

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

Member mem = new Member(uname,lname,email, password);

mysqldatabase res = new mysqldatabase();

res.insert(mem);

String result = res.insert(mem);

response.getWriter().print(result);

response.setContentType("text/html");

PrintWriter out = response.getWriter();

if(result.equals("You Have Registered Sucessfully")) {

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+"<h2> ------- -------- </h2><br>"

+"\"<a href='login'> Click Here To Go to Login Page </a>\""

+"<h2> ------- -------- </h2><br>"

+"</div>"

+ "</body>"

+ "</html>");

out.close();

}else {

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+"<h2> ------- -------- </h2><br>"

+"\"<a href='SignupPage'> Click Here To Signup Again </a>\""

+"\"<a href='login'> Click Here To Go to Home Page </a>\""

+"<h2> ------- -------- </h2><br>"

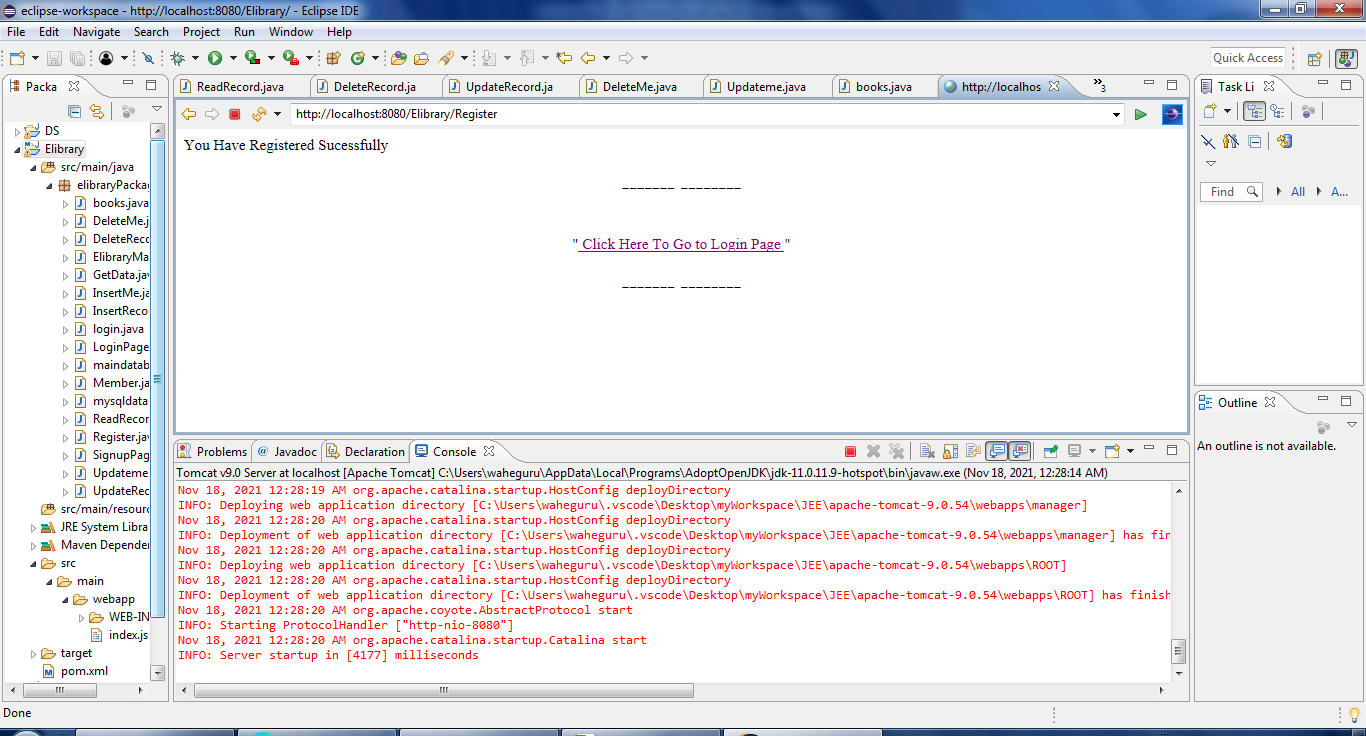
+"</div>"

+ "</body>"

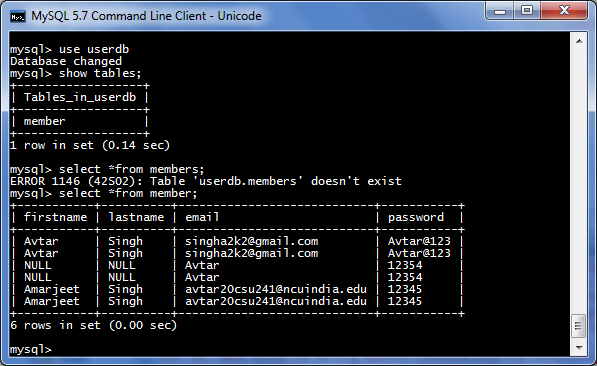
+ "</html>");

} }

}



**Member DataBase :**

****

**Member.java (Constructor Class)**

**package** elibraryPackage;

**public** **class** Member {

**private** String firstname,lastname,email,password;

**public** String getFirstname() {

**return** firstname;

}

**public** Member(String firstname, String lastname, String email, String password) {

**super**();

**this**.firstname = firstname;

**this**.lastname = lastname;

**this**.email = email;

**this**.password = password;

}

**public** **void** setFirstname(String firstname) {

**this**.firstname = firstname;

}

**public** String getLastname() {

**return** lastname;

}

**public** **void** setLastname(String lastname) {

**this**.lastname = lastname;

}

**public** String getEmail() {

**return** email;

}

**public** **void** setEmail(String email) {

**this**.email = email;

}

**public** String getPassword() {

**return** password;

}

**public** **void** setPassword(String password) {

**this**.password = password;

}

}

**mysqldatabase.java (For Authentication)**

package elibraryPackage;

import java.sql.\*;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.SQLException;

public class mysqldatabase {

private String driver = "com.mysql.cj.jdbc.Driver";

private String username = "root";

private String password = "Avtar@123";

private String url = "jdbc:mysql://localhost/userdb";

public void loadDriver(String driver) {

try {

Class.forName(driver);

} catch (ClassNotFoundException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

public Connection getConnection(){

Connection con = null;

try {

con=DriverManager.getConnection(url,username,password);

} catch (Exception e) {

// TODO: handle exception

}

return con;

}

public String insert(Member member) {

loadDriver(driver);

Connection con = getConnection();

String result = "You Have Registered Sucessfully";

String sql = "insert into member values(?,?,?,?)";

try {

PreparedStatement ps = con.prepareStatement(sql);

ps.setString(1, member.getFirstname());

ps.setString(2, member.getLastname());

ps.setString(3, member.getEmail());

ps.setString(4, member.getPassword());

ps.executeUpdate();

} catch (SQLException e) {

// TODO Auto-generated catch block

e.printStackTrace();

result = "You have not Registered !! Try again Later ";

}

return result;

}

public String show(Member member) throws SQLException {

loadDriver(driver);

//

Connection con = getConnection();

Statement stmt = con.createStatement();

String name = member.getEmail();

String pass = member.getPassword();

System.out.println("You have Entered : ");

System.out.println("Username : "+name);

System.out.println("Password : "+pass);

System.out.println("------- Verifying Credentials -------- ");

String readQuery = "select \*from member";

String countQuery = "select count(\*) from member";

ResultSet rs = stmt.executeQuery(countQuery);

rs.next();

int count = rs.getInt("count(\*)");

//Moving the cursor to the last row

ResultSet records1 = stmt.executeQuery(readQuery);

String result = "";

String feedback = "";

while(records1.next()) {

String email = records1.getString(3);

String password = records1.getString(4);

// System.out.println(email+" "+password);

if(name.equals(email) && pass.equals(password)){

result = "User Verified !!";

System.out.println(result);

try {

for(int i=0;i<10;i++) {

System.out.print(" ^ ");

Thread.sleep(500);

System.out.print(" \* ");

if(i==5) {

System.out.println();

}

}

} catch (InterruptedException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

System.out.println();

feedback = "Redirecting To E-Library Main Page";

System.out.println(feedback);

break;

}else {count--;

if (count==0) {

System.out.println("Invalid Credentials !!");

result = "Invalid Credentials !!";

System.out.println("");

break;

}

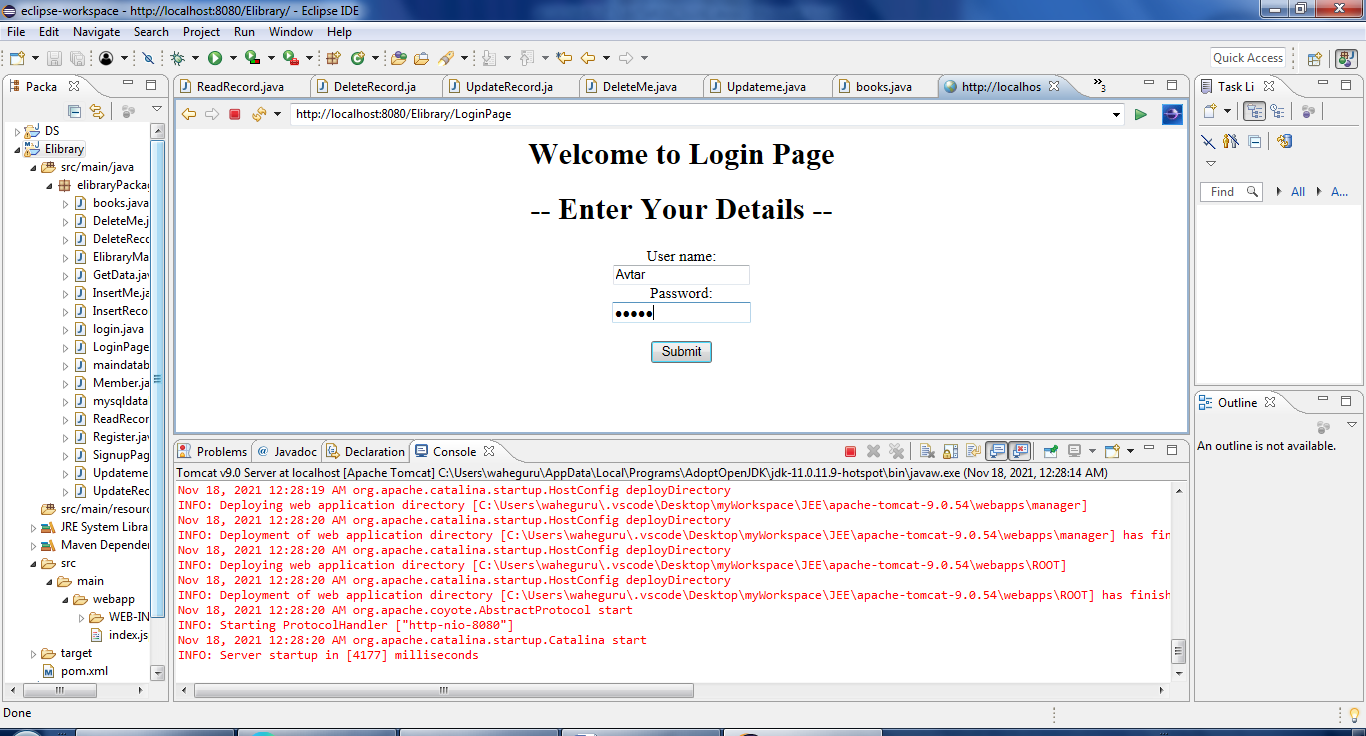
}

}

return result;

}

}



**GetData.java (Verifier Page )**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import java.sql.SQLException;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class GetData

\*/

public class GetData extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public GetData() {

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

response.getWriter().append("Served at: ").append(request.getContextPath());

}

/\*\*

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

\*/

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

// TODO Auto-generated method stub

// doGet(request, response);

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

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

Member mem = new Member(uname,password, uname, password);

mysqldatabase res = new mysqldatabase();

response.setContentType("text/html");

PrintWriter out = response.getWriter();

String result = " ";

try {

result = res.show(mem);

// response.getWriter().print(result);

if (result.equals("User Verified !!")) {

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+"<h2> ------- Verifying Credentials -------- </h2><br>"

+"<h1 style=\"border:2px solid Violet;\">You Have Entered : </h1>"

+"<b> Username = "+uname+"</b>"

+"<b> Password = "+password+"</b>"

+"<h3> User Found In Our DataBase ... </h3>"

+"<p style=\"font-size:30px;\"> User Verified !! </p>"

+"<h2>&#128071;</h2>"

+"\"<a href='ElibraryMain'> Click Here To Move Further </a>\""

+"</div>"

+ "</body>"

+ "</html>");

out.close();

}else {

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+"<h2> ------- Verifying Credentials -------- </h2><br>"

+"<h1 style=\"border:2px solid Violet;\">You Have Entered : </h1>"

+"<b> Username = "+uname+"</b>"

+"<b> Password = "+password+"</b>"

+"<h3> User Not Found In Our DataBase ... </h3>"

+"<p style=\"font-size:30px;\"> User Not Verified !! </p>"

+"<h2>&#128071;</h2>"

+"\"<a href='SignupPage'> Click Here To Go to Signup Page </a>\""

+"\"<a href='login'> Click Here To Go to Home Page </a>\""

+"</div>"

+ "</body>"

+ "</html>");

out.close();

}

} catch (SQLException e) {

// TODO Auto-generated catch block

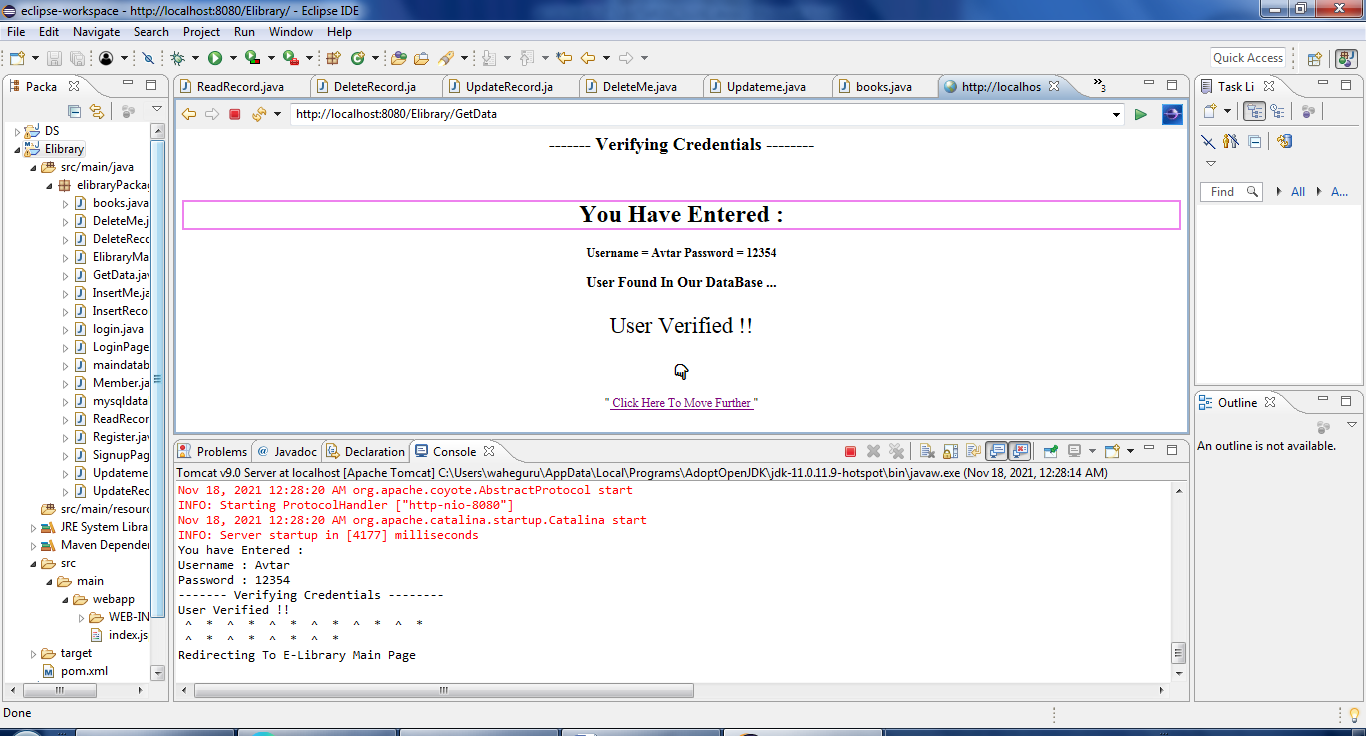
e.printStackTrace();

}

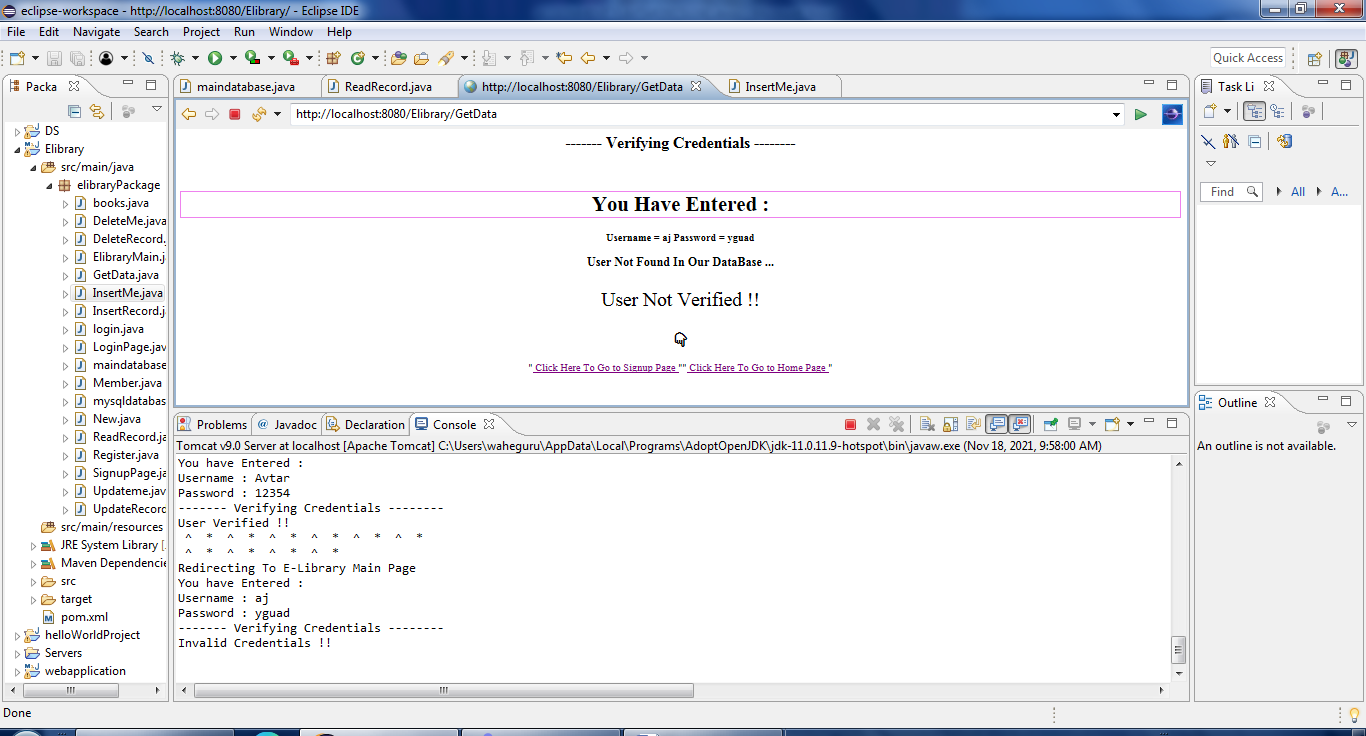
}

}

**( If Verified )**



**(If Not Verified )**



**Authentication Complete Moving to Core Part**

**ElibraryMain.java (Main Library Page )**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class ElibraryMain

\*/

public class ElibraryMain extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public ElibraryMain() {

super();

// TODO Auto-generated constructor stub

}

/\*\*

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

\*/

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

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+ "<h1> E-Library Entry Workspace : </h1><br>"

+"<h3>&#128071;</h3><br>"

+"\"<a href='InsertRecord'> Click Here To Insert New Books </a>\"<br>"

+"\"<a href='UpdateRecord'> Click Here To Update the Existing Books </a>\"<br>"

+"\"<a href='DeleteRecord'> Click Here To Delete the Existing Books </a>\"<br>"

+"\"<a href='ReadRecord'> Click Here To Get List of Present Books Of Library </a>\"<br>"

+"</div>"

+ "</body>"

+ "</html>");

}

/\*\*

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

\*/

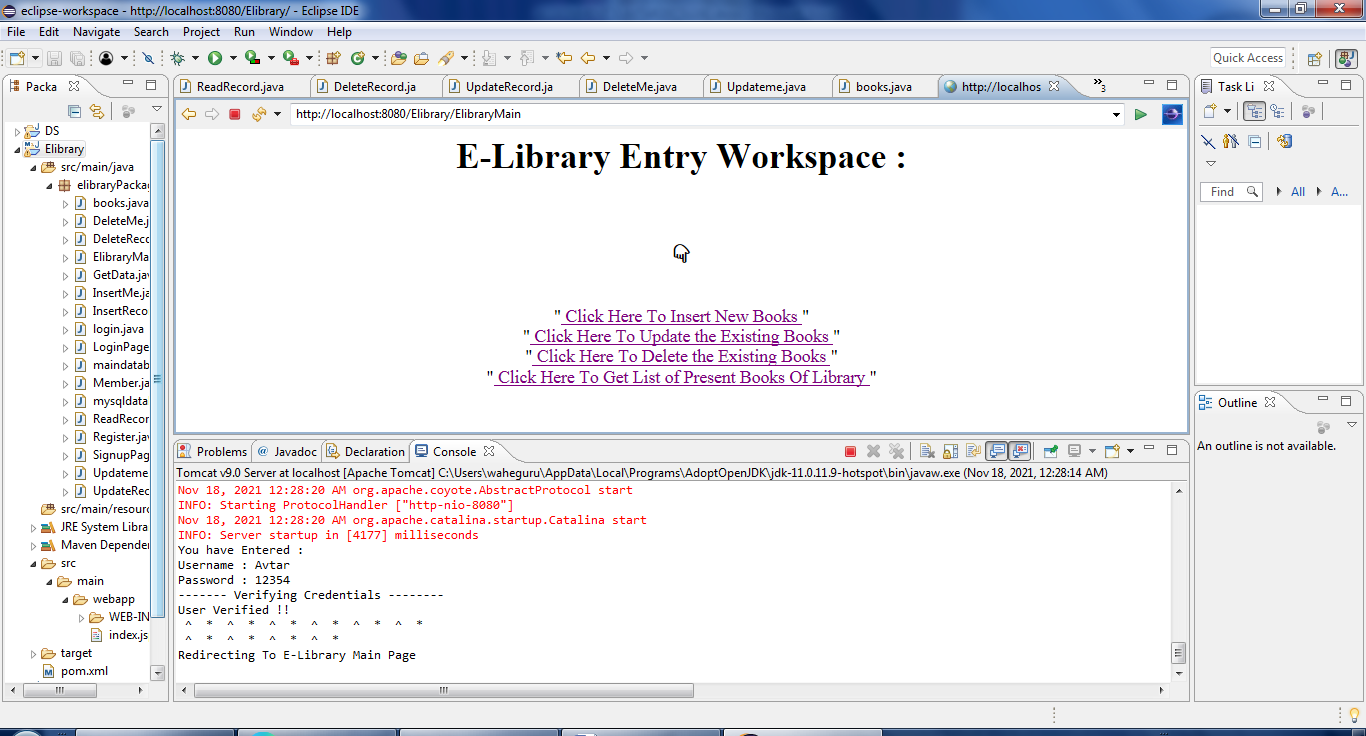
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// TODO Auto-generated method stub

doGet(request, response);

}

}



**maindatabase.java (Library Database Controller Page )**

package elibraryPackage;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.SQLException;

import java.sql.Statement;

public class maindatabase {

private String driver = "com.mysql.cj.jdbc.Driver";

private String username = "root";

private String password = "Avtar@123";

private String url = "jdbc:mysql://localhost/ebookshop";

public void loadDriver(String driver) {

try {

Class.forName(driver);

} catch (ClassNotFoundException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

public Connection getConnection() {

Connection con = null;

try {

con = DriverManager.getConnection(url, username, password);

} catch (Exception e) {

// TODO: handle exception

}

return con;

}

public String insert(books book) {

loadDriver(driver);

Connection con = getConnection();

// FOR DEVELOPER

/\*

\* System.out.println("id : "+book.getId());

\* System.out.println("Title : "+book.getTitle());

\* System.out.println("Author : "+book.getAuthor());

\* System.out.println("Price : "+book.getPrice());

\* System.out.println("Qty : "+book.getQuantity());

\*/

String result = "Data entered Sucessfully";

String sqlquery = "insert into books values(?,?,?,?,?)";

try {

PreparedStatement ps = con.prepareStatement(sqlquery);

ps.setInt(1, book.getId());

ps.setString(2, book.getTitle());

ps.setString(3, book.getAuthor());

ps.setFloat(4, book.getPrice());

ps.setInt(5, book.getQuantity());

ps.executeUpdate();

} catch (SQLException e) {

// TODO Auto-generated catch block

e.printStackTrace();

result = "Data not entered Sucessfully";

}

return result;

}

int bookid = 0;

String booktitle = "";

String bookauthor = "";

float bookprice = 0;

int bookquantity = 0;

public int show() throws SQLException {

loadDriver(driver);

Connection con = getConnection();

Statement stmt = con.createStatement();

String readQuery = "select \*from books";

String countQuery = "select count(\*) from books";

ResultSet rs = stmt.executeQuery(countQuery);

rs.next();

int count = rs.getInt("count(\*)");

ResultSet records1 = stmt.executeQuery(readQuery);

while (records1.next()) {

int id = records1.getInt(1);

System.out.print("Book Id : "+id);

String title = records1.getString(2);

System.out.print("Book Title : "+title);

String author = records1.getString(3);

System.out.print("Book Author : "+author);

float price = records1.getFloat(4);

System.out.print("Book Price : "+price);

int quantity = records1.getInt(5);

System.out.print("Book Quantity : "+quantity);

System.out.println();

bookid = id;

booktitle = title;

bookauthor = author;

bookprice = price;

bookquantity = quantity;

/\*

\* System.out.println(id); System.out.println(title);

\* System.out.println(author); System.out.println(price);

\* System.out.println(quantity);

\*/

}

return count;

}

public String update(books book) {

loadDriver(driver);

Connection con = getConnection();

// FOR DEVELOPER

/\*

\* System.out.println("id : "+book.getId());

\* System.out.println("Title : "+book.getTitle());

\* System.out.println("Author : "+book.getAuthor());

\* System.out.println("Price : "+book.getPrice());

\* System.out.println("Qty : "+book.getQuantity());

\*/

String result = "Data Updated Sucessfully";

String sqlquery = "update books set title=?,author=?,price=?,quantity=? where id=?";

try {

PreparedStatement ps = con.prepareStatement(sqlquery);

ps.setString(1, book.getTitle());

ps.setString(2, book.getAuthor());

ps.setFloat(3, book.getPrice());

ps.setInt(4, book.getQuantity());

ps.setInt(5, book.getId());

ps.executeUpdate();

} catch (SQLException e) {

// TODO Auto-generated catch block

e.printStackTrace();

result = "Data not Updated Sucessfully";

}

return result;

}

public String delete(books book) {

loadDriver(driver);

Connection con = getConnection();

// FOR DEVELOPER

/\*

\* System.out.println("id : "+book.getId());

\* System.out.println("Title : "+book.getTitle());

\* System.out.println("Author : "+book.getAuthor());

\* System.out.println("Price : "+book.getPrice());

\* System.out.println("Qty : "+book.getQuantity());

\*/

String result = "Row Deleted Sucessfully";

String sqlquery = "delete from books where id=?";

try {

PreparedStatement ps = con.prepareStatement(sqlquery);

ps.setInt(1, book.getId());

ps.executeUpdate();

} catch (SQLException e) {

// TODO Auto-generated catch block

e.printStackTrace();

result = "Unable to Delete Row - Check Data";

}

return result;

}

public int getBookid() {

return bookid;

}

public void setBookid(int bookid) {

this.bookid = bookid;

}

public String getBooktitle() {

return booktitle;

}

public void setBooktitle(String booktitle) {

this.booktitle = booktitle;

}

public String getBookauthor() {

return bookauthor;

}

public void setBookauthor(String bookauthor) {

this.bookauthor = bookauthor;

}

public float getBookprice() {

return bookprice;

}

public void setBookprice(float bookprice) {

this.bookprice = bookprice;

}

public int getBookquantity() {

return bookquantity;

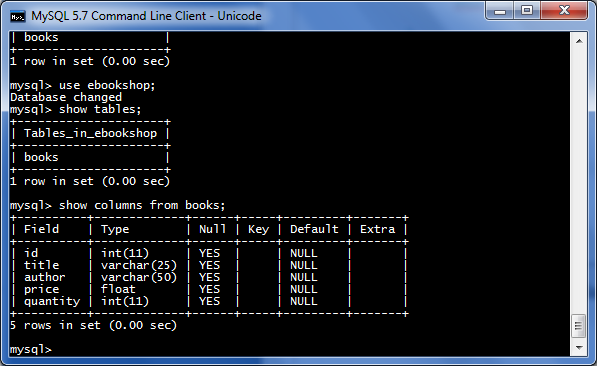
}

public void setBookquantity(int bookquantity) {

this.bookquantity = bookquantity;

}

}



**books.java (Constructor Class )**

**package** elibraryPackage;

**public** **class** books {

**private** **int** id;

**private** String title;

**private** String author;

**private** **float** price;

**public** books(**int** id, String title, String author, **float** price, **int** quantity) {

**super**();

**this**.id = id;

**this**.title = title;

**this**.author = author;

**this**.price = price;

**this**.quantity = quantity;

}

**private** **int** quantity;

**public** **int** getId() {

**return** id;

}

**public** **void** setId(**int** id) {

**this**.id = id;

}

**public** String getTitle() {

**return** title;

}

**public** **void** setTitle(String title) {

**this**.title = title;

}

**public** String getAuthor() {

**return** author;

}

**public** **void** setAuthor(String author) {

**this**.author = author;

}

**public** **float** getPrice() {

**return** price;

}

**public** **void** setPrice(**float** price) {

**this**.price = price;

}

**public** **int** getQuantity() {

**return** quantity;

}

**public** **void** setQuantity(**int** quantity) {

**this**.quantity = quantity;

}

}

**InsertRecord.java (Insertion Page )**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class InsertRecord

\*/

public class InsertRecord extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public InsertRecord() {

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

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+ "<h1> Enter Details : </h1>"

+"<form method=\"post\" action=\"InsertMe\">"

+"<label for=\"idno\">Enter Id of Book : </label><br>"

+"<input type=\"number\" id=\"idno\" name=\"bookid\" ><br>"

+"<label for=\"title\">Enter Title Of Book : </label><br>"

+"<input type=\"text\" id=\"title\" name=\"booktitle\" ><br>"

+"<label for=\"author\">Enter Author of Book : </label><br>"

+"<input type=\"text\" id=\"author\" name=\"bookauthor\" ><br>"

+"<label for=\"price\">Enter Price of Book : </label><br>"

+"<input type=\"text\" id=\"price\" name=\"bookprice\" ><br>"

+"<label for=\"quantity\">Enter Quantity of Book : </label><br>"

+"<input type=\"text\" id=\"quantity\" name=\"bookquantity\" ><br>"

+"<input type=\"submit\" value=\"Submit\">"

+"<input type=\"reset\"><br><br>"

+"\"<a href='ElibraryMain'> Click Here To Go To Main Menu </a>\"<br>"

+"</div>"

+ "</body>"

+ "</html>");

}

// books mem = new books(id, title, author, price, quantity)

// mysqldatabase res = new mysqldatabase();

// res.insert(mem);

// String result = res.insert(mem);

// response.getWriter().print(result);

/\*\*

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

\*/

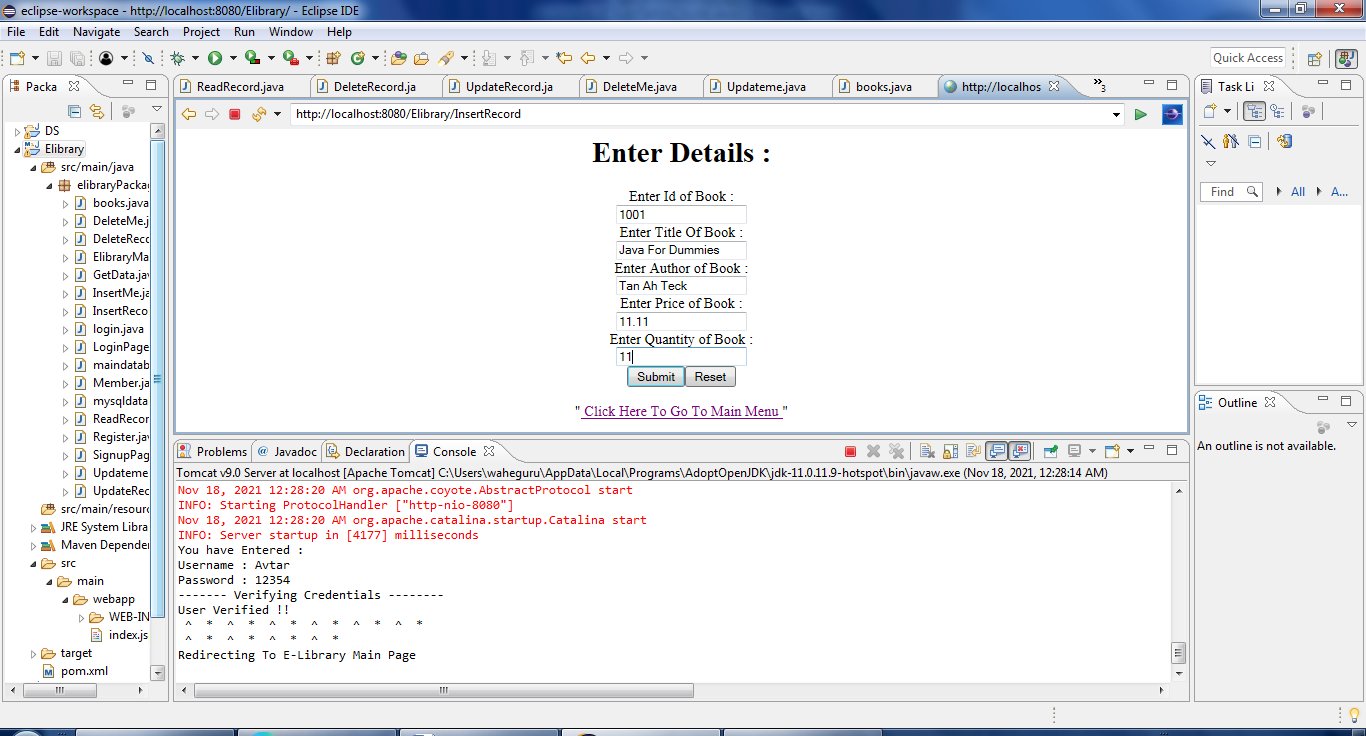
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// TODO Auto-generated method stub

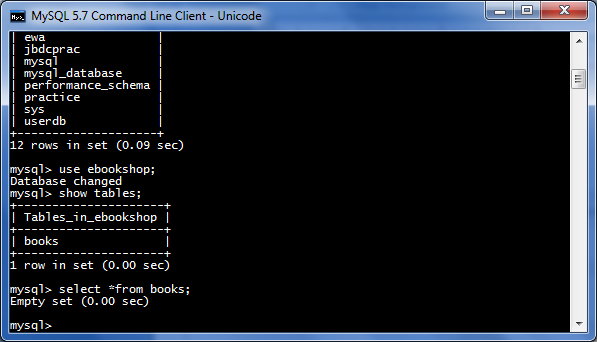
doGet(request, response);

}

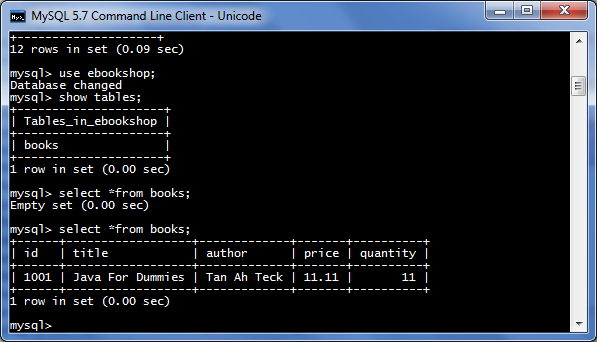
}



**Old Database :**

****

**New Database :**

****

**InsertMe.java (Insertion Data Sender Page )**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class InsertMe

\*/

public class InsertMe extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public InsertMe() {

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

response.getWriter().append("Served at: ").append(request.getContextPath());

}

/\*\*

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

\*/

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

// TODO Auto-generated method stub

// doGet(request, response);

int id = Integer.parseInt(request.getParameter("bookid"));

String title = request.getParameter("booktitle");

String author = request.getParameter("bookauthor");

Float price = Float.parseFloat(request.getParameter("bookprice"));

int quantity = Integer.parseInt(request.getParameter("bookquantity"));

books book = new books(id, title, author, price, quantity);

maindatabase res = new maindatabase();

String result = res.insert(book);

response.getWriter().print(result);

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+"\"<a href='InsertRecord'> Click Here To Insert One More BooK </a>\"<br>"

+ "<h1> Choose Options : &#128071;</h1>"

+"\"<a href='ReadRecord'> Click Here To View Library Books </a>\"<br>"

+"\"<a href='UpdateRecord'> Click Here To Update the Existing Books </a>\"<br>"

+"\"<a href='DeleteRecord'> Click Here To Delete the Existing Books </a>\"<br>"

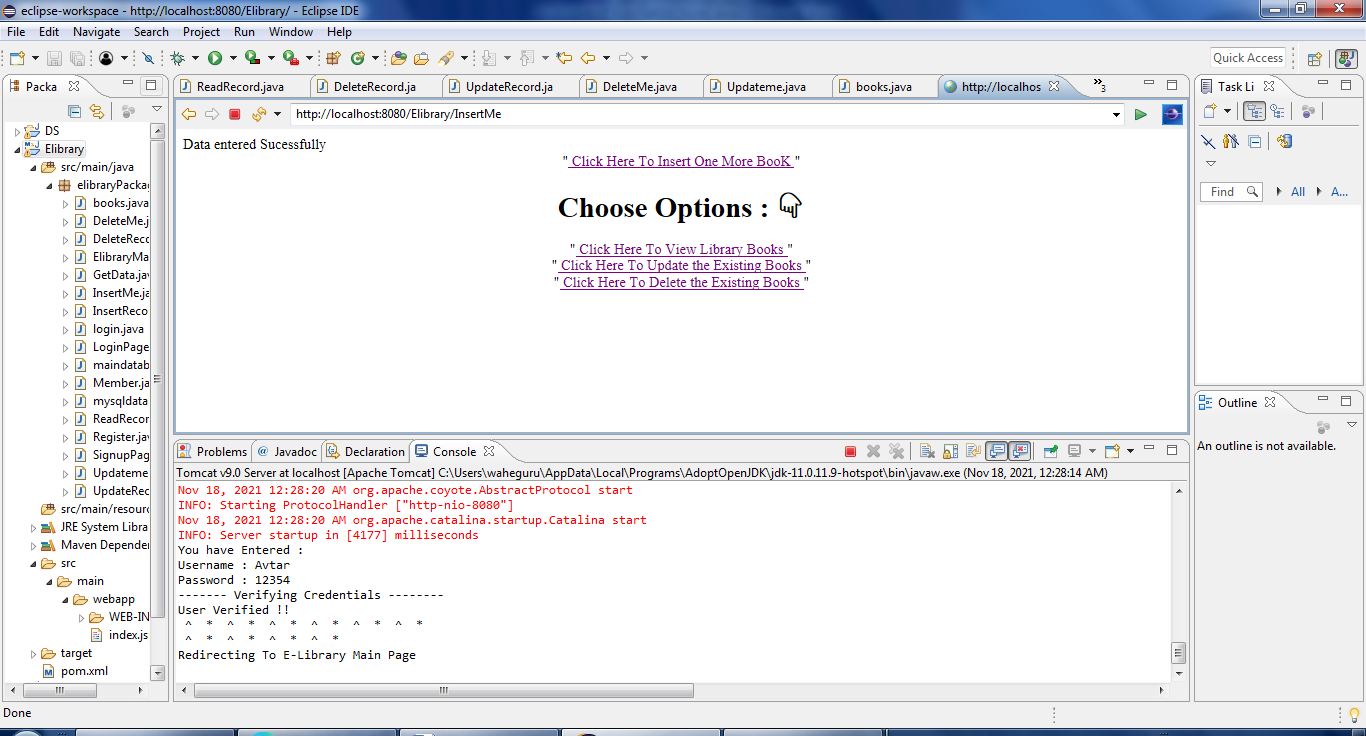
+"</div>"

+ "</body>"

+ "</html>");

}

}



**DeleteRecord.java (Deletion Page )**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class DeleteRecord

\*/

public class DeleteRecord extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public DeleteRecord() {

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

// response.getWriter().append("Served at: ").append(request.getContextPath());

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+ "<h1> Enter Details : </h1>"

+"<form method=\"post\" action=\"DeleteMe\">"

+"<label for=\"delidno\">Enter Id of Book You want to Delete : </label><br>"

+"<input type=\"number\" id=\"delidno\" name=\"delbookid\" ><br>"

+"<input type=\"submit\" value=\"Submit\">"

+"<input type=\"reset\"><br><br>"

+"\"<a href='ElibraryMain'> Click Here To Go To Main Menu </a>\"<br>"

+"</div>"

+ "</body>"

+ "</html>");

}

/\*\*

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

\*/

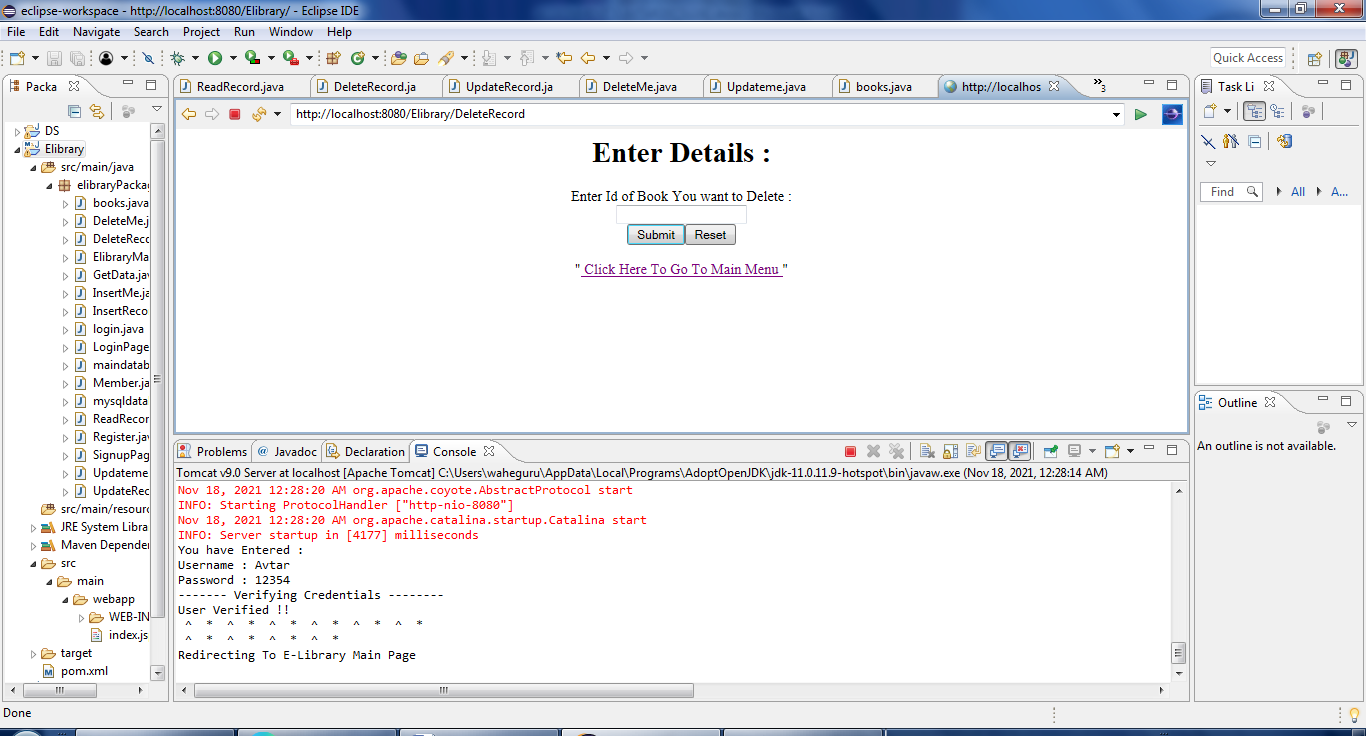
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// TODO Auto-generated method stub

doGet(request, response);

}

}



**DeleteRecord.java (Delete Data Sender Page )**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class DeleteMe

\*/

public class DeleteMe extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public DeleteMe() {

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

response.getWriter().append("Served at: ").append(request.getContextPath());

}

/\*\*

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

\*/

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

// TODO Auto-generated method stub

// doGet(request, response);

int id = Integer.parseInt(request.getParameter("delbookid"));

String title = "null";

String author = "null";

Float price = 12.5f;

int quantity = 1;

books book = new books(id, title, author, price, quantity);

maindatabase res = new maindatabase();

res.delete(book);

String result = res.delete(book);

response.getWriter().print(result);

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<html>"

+ "<body>"

+"\"<a href='DeleteRecord'> Click Here To Delete One More Book </a>\"<br>"

+"<div align = \"center\">"

+ "<h1> Choose Options : &#128071;</h1>"

+"\"<a href='ReadRecord'> Click Here To View Library Books </a>\"<br>"

+"\"<a href='UpdateRecord'> Click Here To Update the Existing Books </a>\"<br>"

+"\"<a href='InsertRecord'> Click Here To Insert new Book </a>\"<br>"

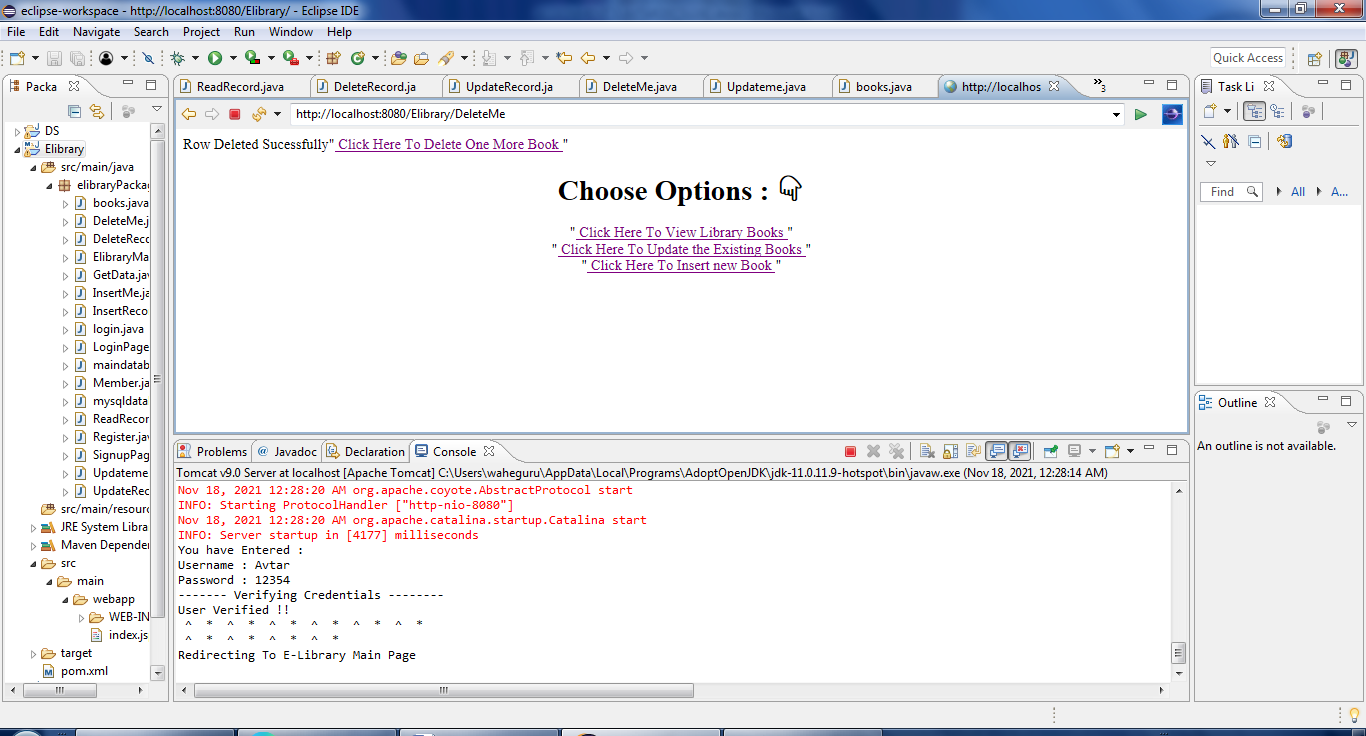
+"</div>"

+ "</body>"

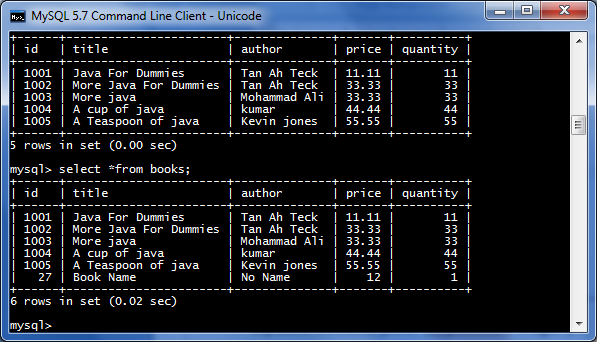
+ "</html>");

}

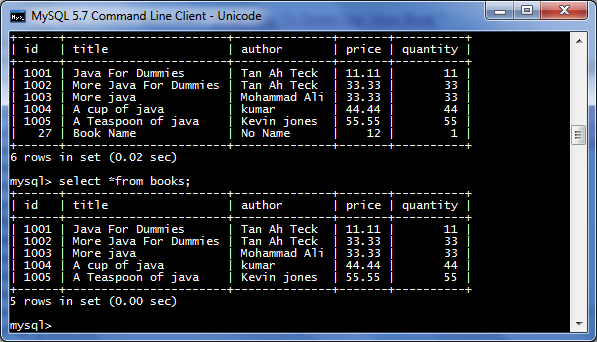
}



**Old Database :**



**New Database :**



**UpdateRecord.java (Updation Page )**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class UpdateRecord

\*/

public class UpdateRecord extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public UpdateRecord() {

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

// response.getWriter().append("Served at: ").append(request.getContextPath());

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+ "<h1> Enter Details : </h1>"

+"<form method=\"post\" action=\"Updateme\">"

+"<label for=\"upidno\">Enter Id of Book that You want to Update : </label><br>"

+"<input type=\"number\" id=\"upidno\" name=\"upbookid\" ><br>"

+"<label for=\"uptitle\">Enter New Title : </label><br>"

+"<input type=\"text\" id=\"uptitle\" name=\"upbooktitle\" ><br>"

+"<label for=\"upauthor\">Enter New Author : : </label><br>"

+"<input type=\"text\" id=\"upauthor\" name=\"upbookauthor\" ><br>"

+"<label for=\"upprice\">Enter New Price : </label><br>"

+"<input type=\"text\" id=\"upprice\" name=\"upbookprice\" ><br>"

+"<label for=\"upquantity\">Enter new Quantity : </label><br>"

+"<input type=\"text\" id=\"upquantity\" name=\"upbookquantity\" ><br>"

+"<input type=\"submit\" value=\"Submit\">"

+"<input type=\"reset\"><br><br>"

+"\"<a href='ElibraryMain'> Click Here To Go To Main Menu </a>\"<br>"

+"</div>"

+ "</body>"

+ "</html>");

}

// books mem = new books(id, title, author, price, quantity)

// mysqldatabase res = new mysqldatabase();

// res.insert(mem);

// String result = res.insert(mem);

// response.getWriter().print(result);

/\*\*

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

\*/

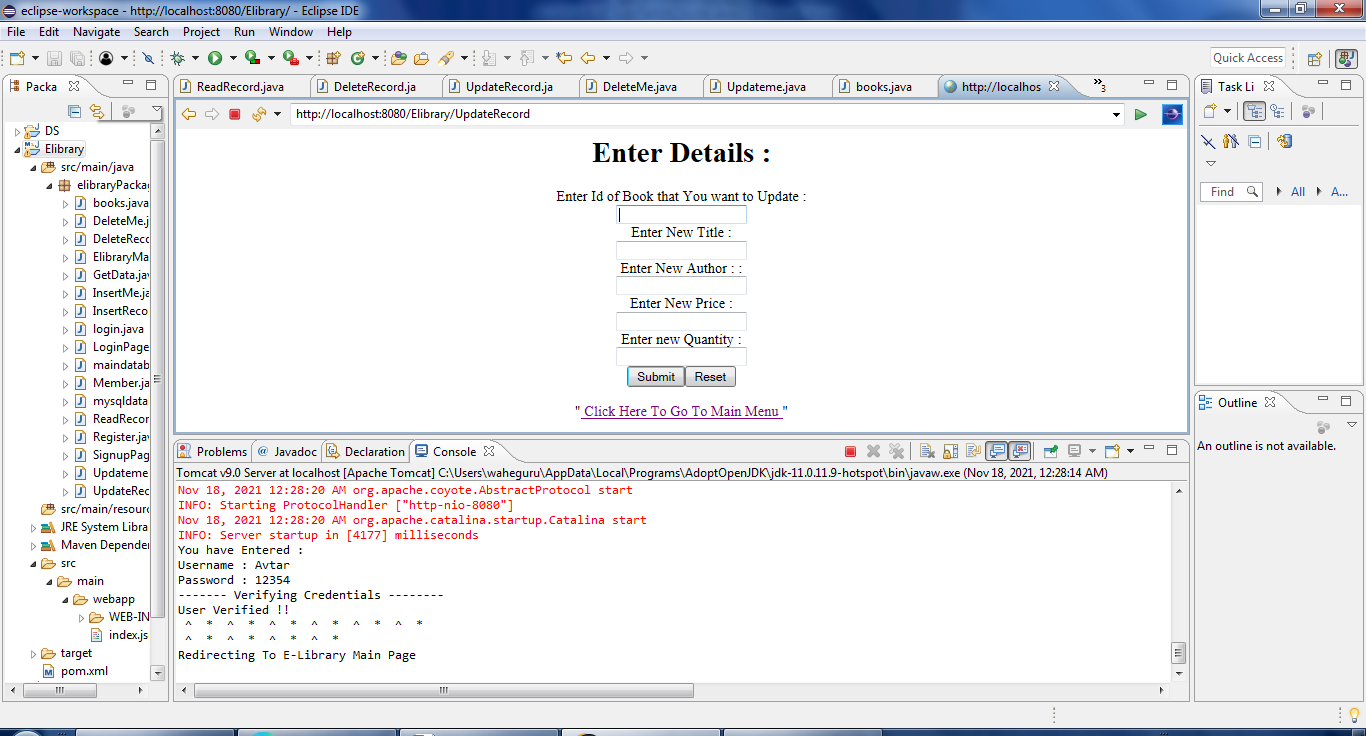
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// TODO Auto-generated method stub

doGet(request, response);

}

}



**UpdateMe.java (Updation Data Sender Page )**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class Updateme

\*/

public class Updateme extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public Updateme() {

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

response.getWriter().append("Served at: ").append(request.getContextPath());

}

/\*\*

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

\*/

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

// TODO Auto-generated method stub

// doGet(request, response);

int id = Integer.parseInt(request.getParameter("upbookid"));

String title = request.getParameter("upbooktitle");

String author = request.getParameter("upbookauthor");

Float price = Float.parseFloat(request.getParameter("upbookprice"));

int quantity = Integer.parseInt(request.getParameter("upbookquantity"));

books book = new books(id, title, author, price, quantity);

maindatabase res = new maindatabase();

res.update(book);

String result = res.update(book);

response.getWriter().print(result);

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+"\"<a href='UpdateRecord'> Click Here To Update one more Book </a>\"<br>"

+ "<h1> Choose Options : &#128071;</h1>"

+"\"<a href='ReadRecord'> Click Here To View Library Books </a>\"<br>"

+"\"<a href='InsertRecord'> Click Here To Insert new Book </a>\"<br>"

+"\"<a href='DeleteRecord'> Click Here To Delete the Existing Books </a>\"<br>"

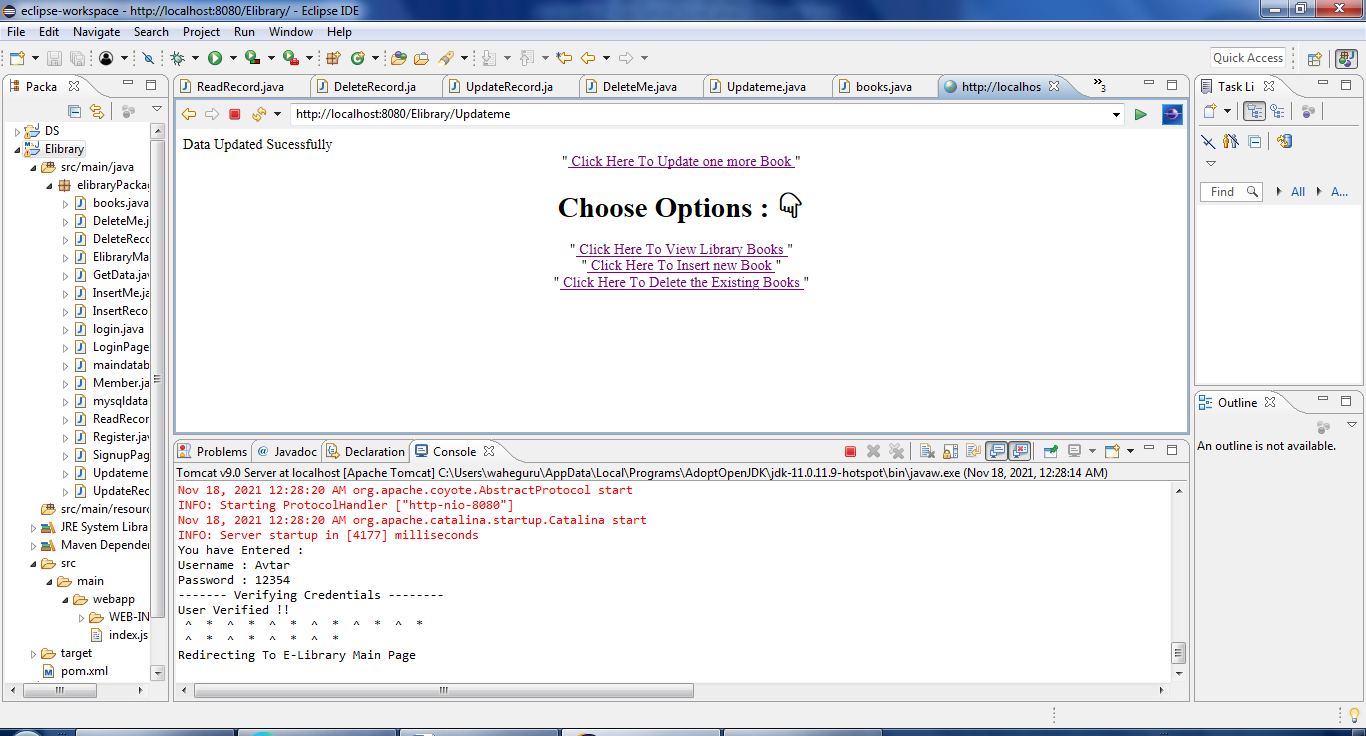
+"</div>"

+ "</body>"

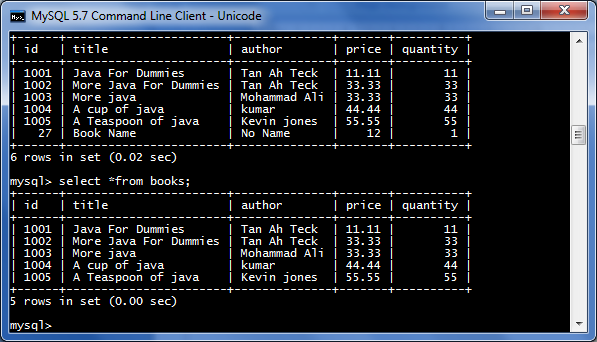
+ "</html>");

}

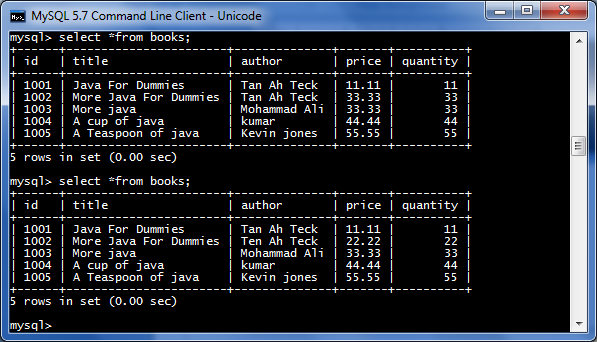
}



**OLD DATABASE : (2nd Record)**

****

**NEW DATABASE :**

****

**ReadRecord.java (Page To Display Records )**

package elibraryPackage;

import java.io.IOException;

import java.io.PrintWriter;

import java.sql.SQLException;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class ReadRecord

\*/

public class ReadRecord extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public ReadRecord() {

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

// response.getWriter().append("Served at: ").append(request.getContextPath());

maindatabase md = new maindatabase();

md.getBookid();

int bookid = 0;

String booktitle = "";

String bookauthor = "";

float bookprice = 0;

int bookquantity = 0;

try {

md.show();

int count = md.show();

response.getWriter().print(count);

for (int i = count; i == 0; i--) {

bookid = md.getBookid();

booktitle = md.getBooktitle();

bookauthor = md.getBookauthor();

bookprice = md.getBookprice();

bookquantity = md.getBookquantity();

System.out.println(bookid);

System.out.println(booktitle);

System.out.println(bookauthor);

System.out.println(bookprice);

System.out.println(bookquantity);

}

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<html>"

+ "<body>"

+"<div align = \"center\">"

+ "<h1> Table &#128071;</h1>"

// +"<table style=\"width:100%\"><tr>"

// +" <th>ID</th>"

// +" <th>Title</th>"

// +" <th>Author</th>"

// +" <th>Price</th>"

// +" <th>Quantity</th>"

// +"</tr>"

// +"<script>"

// +"var i="+count+";"

// +"for(i="+count+";i==0;i--)"

// +"{"

// +"document.write(\"The Result is \""+count+");"

// +"document.write(\"<br>\");"

// +"}"

// +"</script>"

//

+"<tr>"

+"<td>"+bookid+"</td>"

+"<td>"+booktitle+"</td>"

+"<td>"+bookauthor+"</td>"

+"<td>"+bookprice+"</td>"

+"<td>"+bookquantity+"</td>"

+" </tr><br><br>"

+"\"<a href='UpdateRecord'> Click Here To Update Library Books </a>\"<br>"

+"\"<a href='InsertRecord'> Click Here To Insert new Book </a>\"<br>"

+"\"<a href='DeleteRecord'> Click Here To Delete the Existing Books </a>\"<br><br>"

+"\"<a href='ElibraryMain'> Click Here To Go To Main Menu </a>\"<br>"

+"</div>"

+ "</body>"

+ "</html>");

} catch (SQLException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

/\*\*

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

\*/

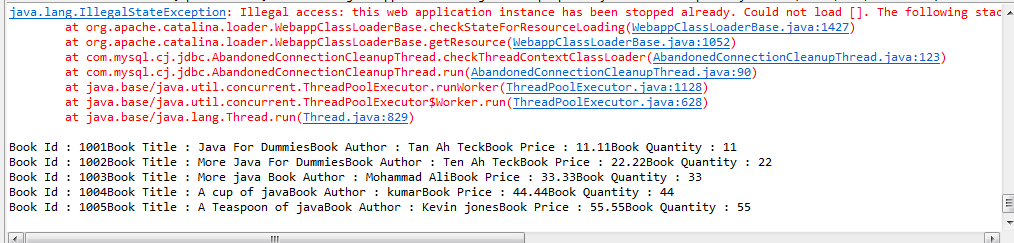
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// TODO Auto-generated method stub

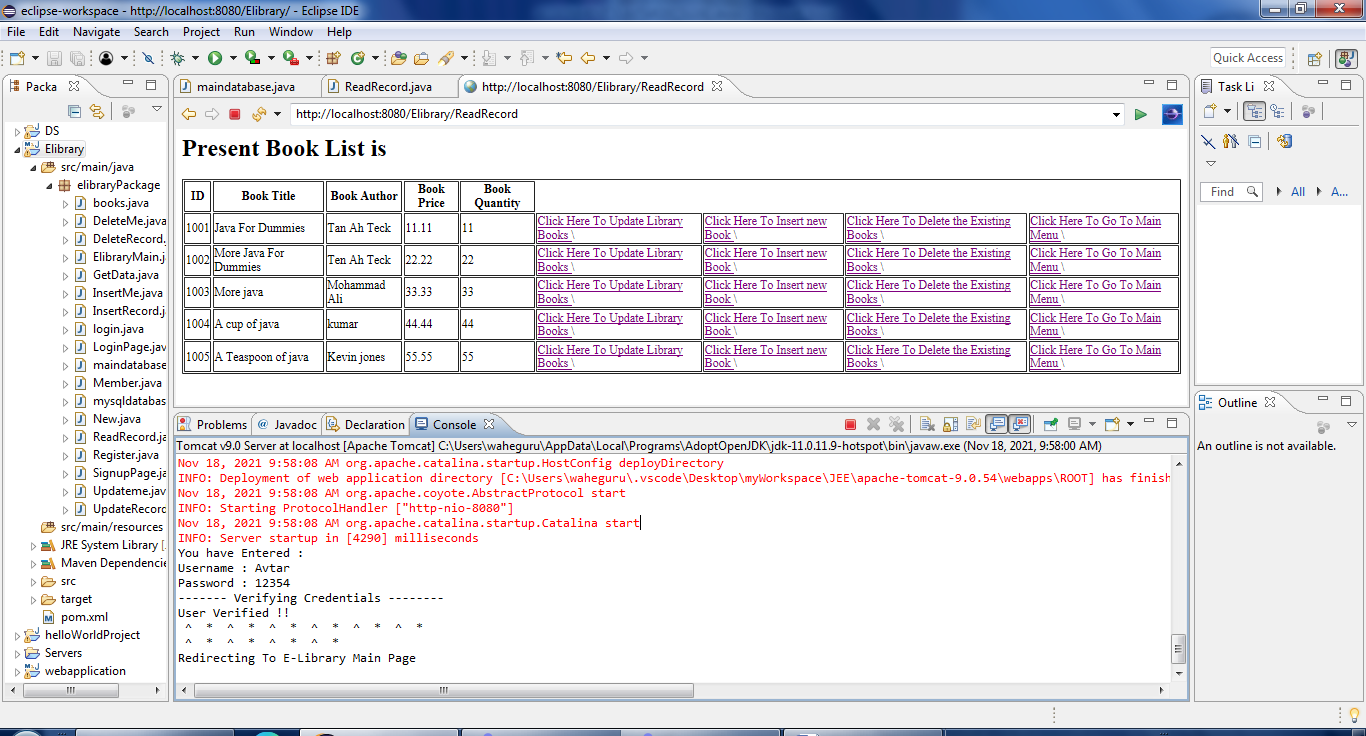
// doGet(request, response);

}

}



**Final Result Page**

****