**Source Codes**

**Main.java:**

**package** com.admin;

**import** java.io.IOException;

**import** java.util.List;

**import** javax.annotation.Resource;

**import** javax.servlet.RequestDispatcher;

**import** javax.servlet.ServletException;

**import** javax.servlet.annotation.WebServlet;

**import** javax.servlet.http.Cookie;

**import** javax.servlet.http.HttpServlet;

**import** javax.servlet.http.HttpServletRequest;

**import** javax.servlet.http.HttpServletResponse;

**import** javax.sql.DataSource;

**import** com.info.\*;

**import** com.info.Class;

@WebServlet("/Main")

**public** **class** Main **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

**private** DbConnection dbconnection;

**public** **void** init() **throws** ServletException {

**super**.init();

**try** {

dbconnection= **new** DbConnection();

} **catch** (Exception e) {

**throw** **new** ServletException(e);

}

}

**public** Main() {

**super**();

}

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

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

**try** {

// read the "command" parameter

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

**switch** (command) {

**case** "STUDENTS":

studentsList(request, response);

**break**;

**case** "TEACHERS":

teachersList(request, response);

**break**;

**case** "SUBJECTS":

subjectList(request, response);

**break**;

**case** "CLASSES":

classestList(request, response);

**break**;

**default**:

classestList(request, response);

}

//}

} **catch** (Exception e) {

**throw** **new** ServletException(e);

}

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

}

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

doGet(request, response);

}

**private** **void** studentsList(HttpServletRequest request, HttpServletResponse response) **throws** Exception {

// get students from db util

List<Student> students = dbconnection.getStudents();

// add students to the request

request.setAttribute("STUDENT\_LIST", students);

// send it to the jsp view page

RequestDispatcher dispatcher = request.getRequestDispatcher("/studentlist.jsp");

dispatcher.forward(request, response);

}

**private** **void** teachersList(HttpServletRequest request, HttpServletResponse response) **throws** Exception {

// get students from db util

List<Teacher> teachers = dbconnection.getTeachers();

// add students to the request

request.setAttribute("TEACHERS\_LIST", teachers);

// send it to the jSP view page

RequestDispatcher dispatcher = request.getRequestDispatcher("/teacherlis.jsp");

dispatcher.forward(request, response);

}

**private** **void** subjectList(HttpServletRequest request, HttpServletResponse response) **throws** Exception {

// get subjects from db util

List<Subject> subjects = dbconnection.getSubjects();

// add subjects to the request

request.setAttribute("SUBJECTS\_LIST", subjects);

// send it to the jSP view page

RequestDispatcher dispatcher = request.getRequestDispatcher("/subjectlist.jsp");

dispatcher.forward(request, response);

}

**private** **void** classestList(HttpServletRequest request, HttpServletResponse response) **throws** Exception {

// get subjects from db util

List<Class> classes = dbconnection.getClasses();

// add subjects to the request

request.setAttribute("CLASSES\_LIST", classes);

// send it to the jSP view page

RequestDispatcher dispatcher = request.getRequestDispatcher("/classreport.jsp");

dispatcher.forward(request, response);

}

}

**DB.java:**

**package** com.admin;

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.SQLException;

**public** **class** DB {

**static** Connection *con*=**null**;

**public** **static** Connection getMyConnection() {

**try**{

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

*con*=DriverManager.*getConnection*("jdbc:mysql://localhost:3306/academy","root","88888888");

}

**catch**(Exception e) {

e.printStackTrace();

}

**return** *con*;

}

}

**DbConnection.java:**

**package** com.admin;

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.PreparedStatement;

**import** java.sql.ResultSet;

**import** java.sql.SQLException;

**import** java.sql.Statement;

**import** java.util.ArrayList;

**import** java.util.List;

**import** java.util.Scanner;

**import** javax.sql.DataSource;

**import** com.info.Class;

**import** com.info.Student;

**import** com.info.Subject;

**import** com.info.Teacher;

**public** **class** DbConnection {

**public** List<Student> getStudents() **throws** SQLException {

List<Student> students = **new** ArrayList<>();

**try** {

Connection con=DB.*getMyConnection*();

Statement myStmt = **null**;

ResultSet myRs = **null**;

// create sql stmt

String sql = "SELECT \* FROM students";

myStmt = con.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

**while** (myRs.next()) {

// retrieve data from result set row

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

String name = myRs.getString("name");

**int** class\_read = myRs.getInt("class\_read");

// create new student object

Student tempStudent = **new** Student(id, name, class\_read);

// add it to the list of students

students.add(tempStudent);

}

con.close();

myStmt.close();

myRs.close();

} **catch** (Exception e) {

e.getStackTrace();

}

**return** students;

}

**public** List<Teacher> getTeachers() {

List<Teacher> teachers = **new** ArrayList<>();

Connection myConn = **null**;

Statement myStmt = **null**;

ResultSet myRs = **null**;

Connection con=DB.*getMyConnection*();

**try** {

// create sql stmt

String sql = "SELECT \* FROM teachers";

myStmt = con.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

**while** (myRs.next()) {

// retrieve data from result set row

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

String name = myRs.getString("name");

**int** age = myRs.getInt("age");

// create new student object

Teacher temp = **new** Teacher(id, name, age);

// add it to the list of students

teachers.add(temp);

}

con.close();

} **catch** (Exception e) {

e.getStackTrace();

} **finally** {

// close JDBC objects

close(con, myStmt, myRs);

}

**return** teachers;

}

**public** List<Subject> getSubjects() {

List<Subject> subjects = **new** ArrayList<>();

Connection myConn = **null**;

Statement myStmt = **null**;

ResultSet myRs = **null**;

**try** {

Connection con=DB.*getMyConnection*();

// create sql stmt

String sql = "SELECT \* FROM subjects";

myStmt = con.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

**while** (myRs.next()) {

// retrieve data from result set row

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

String name = myRs.getString("name");

String code = myRs.getString("code");

// create new student object

Subject temp = **new** Subject(id, name,code);

// add it to the list of students

subjects.add(temp);

}

con.close();

} **catch** (Exception e) {

// **TODO**: handle exception

} **finally** {

// close JDBC objects

close(myConn, myStmt, myRs);

}

**return** subjects;

}

**public** List<Class> getClasses() {

List<Class> classes = **new** ArrayList<>();

Connection myConn = **null**;

Statement myStmt = **null**;

ResultSet myRs = **null**;

**try** {

Connection con=DB.*getMyConnection*();

// create sql stmt

String sql = "SELECT \* FROM classtable";

myStmt = con.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

**while** (myRs.next()) {

// retrieve data from result set row

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

String teacher = myRs.getString("teacher");

String subject = myRs.getString("subject");

Class temp = **new** Class(id, teacher, subject);

// add it to the list of students

classes.add(temp);

}

} **catch** (Exception e) {

// **TODO**: handle exception

} **finally** {

// close JDBC objects

close(myConn, myStmt, myRs);

}

**return** classes;

}

**public** List<Student> loadClassStudents(**int** classId) {

List<Student> students = **new** ArrayList<>();

Connection myConn = **null**;

Statement myStmt = **null**;

ResultSet myRs = **null**;

**try** {

Connection con=DB.*getMyConnection*();

// create sql stmt

String sql = "SELECT \* FROM students WHERE class\_read = " + classId;

myStmt = con.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

**while** (myRs.next()) {

// retrieve data from result set row

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

String name = myRs.getString("name");

**int** class\_read = myRs.getInt("class\_read");

// create new student object

Student tempStudent = **new** Student(id, name,class\_read);

students.add(tempStudent);

}

con.close();

} **catch** (Exception e) {

// **TODO**: handle exception

} **finally** {

// close JDBC objects

close(myConn, myStmt, myRs);

}

**return** students;

}

**private** **void** close(Connection myConn, Statement myStmt, ResultSet myRs) {

**try** {

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

myRs.close();

}

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

myStmt.close();

}

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

myConn.close();

}

} **catch** (Exception e) {

e.printStackTrace();

}

}

}

**login.java:**

**package** com.admin;

**import** java.io.IOException;

**import** java.io.PrintWriter;

**import** javax.servlet.RequestDispatcher;

**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;

@WebServlet("/login")

**public** **class** login **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

**public** login() {

**super**();

// **TODO** Auto-generated constructor stub

}

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

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

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

PrintWriter out=response.getWriter();

RequestDispatcher rd;

//username= "admin" password="123456"

**if**(uname.equalsIgnoreCase("admin") && pword.equals("123456")){

rd=request.getRequestDispatcher("Report.jsp");

rd.forward(request, response);

}

**else** {

out.println("Invalid Username or Password Try Again");

rd=request.getRequestDispatcher("login.jsp");

rd.include(request, response);

}

}

}

**Logout.java:**

**package** com.admin;

**import** java.io.IOException;

**import** java.io.PrintWriter;

**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;

@WebServlet("/logout")

**public** **class** logout **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

**public** logout() {**super**();}

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

HttpSession session=request.getSession();

session.invalidate();

PrintWriter out=response.getWriter();

out.println("You are logged out");

}

}

**Class.java:**

**package** com.info;

**public** **class** Class {

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

**private** String teacher;

**private** String subject;

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

**return** id;

}

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

**this**.id = id;

}

**public** String getTeacher() {

**return** teacher;

}

**public** **void** setTeacher(String teacher) {

**this**.teacher = teacher;

}

**public** String getSubject() {

**return** subject;

}

**public** **void** setSubject(String subject) {

**this**.subject = subject;

}

**public** Class(**int** id, String teacher, String subject) {

**super**();

**this**.id = id;

**this**.teacher = teacher;

**this**.subject = subject;

}

**public** Class() {

**super**();

}

}

**Student.java:**

**package** com.info;

**public** **class** Student {

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

**private** String name;

**private** **int** class\_read;

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

**return** id;

}

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

**this**.id = id;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

**public** **int** getClass\_read() {

**return** class\_read;

}

**public** **void** setClass\_read(**int** class\_read) {

**this**.class\_read = class\_read;

}

**public** Student(**int** id, String name, **int** class\_read) {

**super**();

**this**.id = id;

**this**.name = name;

**this**.class\_read = class\_read;

}

**public** Student(String name) {

**this**.name=name;

}

**public** Student() {

**super**();

}

}

**Subject.java:**

**package** com.info;

**public** **class** Subject {

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

**private** String name;

**private** String code;

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

**return** id;

}

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

**this**.id = id;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

**public** String getCode() {

**return** code;

}

**public** **void** setCode(String code) {

**this**.code = code;

}

**public** Subject(**int** id, String name, String code) {

**super**();

**this**.id = id;

**this**.name = name;

**this**.code = code;

}

**public** Subject() {

**super**();

}

}

**Teacher.java:**

**package** com.info;

**public** **class** Teacher {

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

**private** String name;

**private** **int** age;

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

**return** id;

}

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

**this**.id = id;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

**public** **int** getAge() {

**return** age;

}

**public** **void** setAge(**int** age) {

**this**.age = age;

}

**public** Teacher() {

**super**();

// **TODO** Auto-generated constructor stub

}

**public** Teacher(**int** id, String name, **int** age) {

**super**();

**this**.id = id;

**this**.name = name;

**this**.age = age;

}

}

**login.jsp**:

<%@ page language=*"java"* contentType=*"text/html; charset=UTF-8"*

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"UTF-8"*>

<title>Learner Academy Admin Portal</title>

</head>

<body>

<h3>Welcome</h3>

<form action=*"login"*>

Enter Name<input type=*"text"* name=*"name"* required> <br>

Enter Password <input type=*"password"* name=*"password"* required>

<input type=*"submit"* value=*"login"* >

</form>

</body>

</html>

**logout.jsp:**

<%@ page language=*"java"* contentType=*"text/html; charset=UTF-8"*

pageEncoding=*"UTF-8"*%>

<%@ page import=*"javax.servlet.http.HttpSession"* %>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"UTF-8"*>

<title>Insert title here</title>

</head>

<body>

<h3>You Are Logged Out</h3>

<a href=*"login.jsp"*>Log In</a>

</body>

</html>

**Report.jsp:**

<%@ taglib uri=*"http://java.sun.com/jsp/jstl/core"* prefix=*"c"*%>

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Learner's Academy</title>

</head>

<body>

<h3 >Welcome Admin</h3>

<div class=*"sidenav"* position=*"centre"*>

<c:url var=*"classesLink"* value=*"Main"*>

<c:param name=*"command"* value=*"CLASSES"* />

</c:url>

<c:url var=*"subjectsLink"* value=*"Main"*>

<c:param name=*"command"* value=*"SUBJECTS"* />

</c:url>

<c:url var=*"teachersLink"* value=*"Main"*>

<c:param name=*"command"* value=*"TEACHERS"* />

</c:url>

<c:url var=*"studentsLink"* value=*"Main"*>

<c:param name=*"command"* value=*"STUDENTS"* />

</c:url>

<a class=*"bar-item"* href=*"*${classesLink}*"*>Classes</a> <br>

<a class=*"bar-item"* href=*"*${subjectsLink}*"*>Subjects</a> <br>

<a class=*"bar-item"* href=*"*${teachersLink}*"*>Teachers</a> <br>

<a class=*"bar-item"* href=*"*${studentsLink}*"*>Students</a> <br> <br>

<a class=*"bar-item"* href=*"logout.jsp"*>Log out</a> <br> <br>

</div>

</body>

</html>

**classreport.jsp:**

<%@ taglib uri=*"http://java.sun.com/jsp/jstl/core"* prefix=*"c"*%>

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<%@page import=*"java.util.ArrayList"*%>

<%@page import=*"com.info.Class"*%>

<%@page import=*"com.info.Student"*%>

<%@page import=*"com.admin.DbConnection"*%>

<%@page import=*"java.util.Iterator"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>List of Subjects</title>

</head>

<body style="background-image: *url('css/background.jpg')*;">

<div id=*"page"* >

<div id=*"wrapper"*>

<div id=*"header"*>

<h3>Class Report</h3>

</div>

</div>

<% ArrayList <Class> sl=(ArrayList) request.getAttribute("CLASSES\_LIST");

DbConnection dbcon=**new** DbConnection();

%>

<div id=*"container"*>

<div id=*"content"*>

<table border=*"1"*>

<tr>

<th>Id</th>

<th>Teacher Name</th>

<th>Subject</th>

<th>Student List</th>

</tr>

<%

**if** (!sl.isEmpty()) {

Iterator<Class> iterator = sl.iterator();

**while** (iterator.hasNext()) {

Class st = iterator.next();

%>

<tr>

<td><%=st.getId()%></td>

<td><%=st.getTeacher()%></td>

<td><%=st.getSubject()%></td>

<td><% ArrayList <Student> ar= (ArrayList)dbcon.loadClassStudents(st.getId());

**for**(**int** i=0;i<ar.size();i++){

out.print(ar.get(i).getName()+", ");

}

%></td>

</tr>

<%

}

}

%>

</table>

</div>

</div>

</div>

</body>

</html>

**studentlist.jsp:**

<%@ taglib uri=*"http://java.sun.com/jsp/jstl/core"* prefix=*"c"*%>

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<%@page import=*"java.util.ArrayList"*%>

<%@page import=*"com.info.Student"*%>

<%@page import=*"java.util.Iterator"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>List of Students</title>

</head>

<div id=*"page"* >

<div id=*"wrapper"*>

<div id=*"header"*>

<h3>Students</h3>

</div>

</div>

<% ArrayList <Student> sl=(ArrayList) request.getAttribute("STUDENT\_LIST"); %>

<div id=*"container"*>

<div id=*"content"*>

<table border=*"1"*>

<tr>

<th>id</th>

<th>Name</th>

<th>class</th>

</tr>

<%

**if** (!sl.isEmpty()) {

Iterator<Student> iterator = sl.iterator();

**while** (iterator.hasNext()) {

Student st = iterator.next();

%>

<tr>

<td><%=st.getId()%></td>

<td><%=st.getName()%></td>

<td><%=st.getClass\_read()%></td>

</tr>

<%

}

}

%>

</table>

</div>

</div>

</div>

</body>

</html>

**subjectlist.jsp:**

<%@ taglib uri=*"http://java.sun.com/jsp/jstl/core"* prefix=*"c"*%>

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<%@page import=*"java.util.ArrayList"*%>

<%@page import=*"com.info.Subject"*%>

<%@page import=*"java.util.Iterator"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>List of Subjects</title>

</head>

<div id=*"page"* >

<div id=*"wrapper"*>

<div id=*"header"*>

<h3>All Subjects</h3>

</div>

</div>

<% ArrayList <Subject> sl=(ArrayList) request.getAttribute("SUBJECTS\_LIST"); %>

<div id=*"container"*>

<div id=*"content"*>

<table border=*"1"*>

<tr>

<th>Id</th>

<th>Subject Name</th>

<th>Code</th>

</tr>

<%

**if** (!sl.isEmpty()) {

Iterator<Subject> iterator = sl.iterator();

**while** (iterator.hasNext()) {

Subject st = iterator.next();

%>

<tr>

<td><%=st.getId()%></td>

<td><%=st.getName()%></td>

<td><%=st.getCode()%></td>

</tr>

<%

}

}

%>

</table>

</div>

</div>

</div>

</body>

</html>

**teacherlist.jsp:**

<%@ taglib uri=*"http://java.sun.com/jsp/jstl/core"* prefix=*"c"*%>

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<%@page import=*"java.util.ArrayList"*%>

<%@page import=*"com.info.Teacher"*%>

<%@page import=*"java.util.Iterator"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>List of Teacher</title>

</head>

<body style="background-image: *url('css/background.jpg')*;">

<div id=*"page"* >

<div id=*"wrapper"*>

<div id=*"header"*>

<h3>Teachers</h3>

</div>

</div>

<% ArrayList <Teacher> sl=(ArrayList) request.getAttribute("TEACHERS\_LIST"); %>

<div id=*"container"*>

<div id=*"content"*>

<table border=*"1"*>

<tr>

<th>Id</th>

<th>Name</th>

<th>Age</th>

</tr>

<%

**if** (!sl.isEmpty()) {

Iterator<Teacher> iterator = sl.iterator();

**while** (iterator.hasNext()) {

Teacher st = iterator.next();

%>

<tr>

<td><%=st.getId()%></td>

<td><%=st.getName()%></td>

<td><%=st.getAge()%></td>

</tr>

<%

}

}

%>

</table>

</div>

</div>

</div>

</body>

</html>