LearnerAcademy

Source code with output Screenshots

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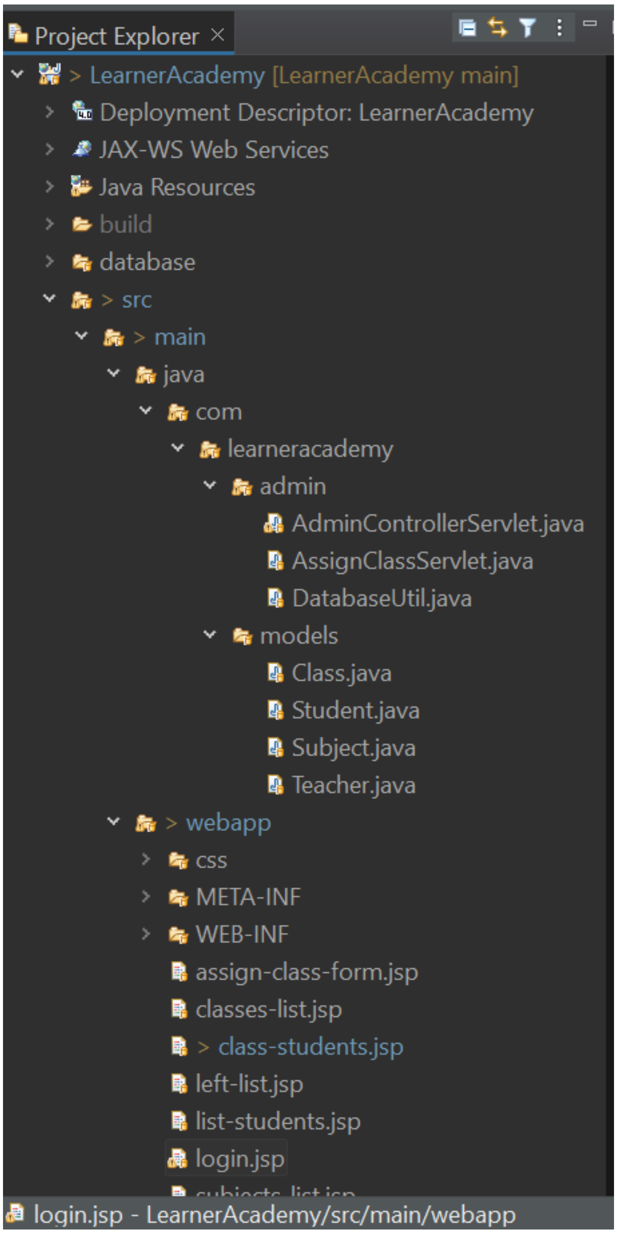
- Project Structure and Packages



Project Explorer

```
LearnerAcademy [LearnerAcademy main]
  Deployment Descriptor: LearnerAcademy
  JAX-WS Web Services
  Java Resources
  build
  database
  src
    main
      java
        com
          learneracademy
            admin
              AdminControllerServlet.java
              AssignClassServlet.java
              DatabaseUtil.java
            models
              Class.java
              Student.java
              Subject.java
              Teacher.java
      webapp
        css
        META-INF
        WEB-INF
        assign-class-form.jsp
        classes-list.jsp
        class-students.jsp
        left-list.jsp
        list-students.jsp
        login.jsp
        subjects-list.jsp
```

login.jsp - LearnerAcademy/src/main/webapp

Database Setup

```
use learnersacademy;

CREATE TABLE `classes` (

`id` int(11) NOT NULL,

`section` int(55) NOT NULL,

`teacher` int(11) NOT NULL,

`subject` int(11) NOT NULL,

`time` varchar(44) NOT NULL

);

INSERT INTO `classes` (`id`, `section`, `teacher`, `subject`, `time`)
VALUES

(1, 1, 1, 1, '9:00'),

(2, 2, 2, 2, '11:00'),

(3, 3, 3, 3, '12:00');

CREATE TABLE `students` (

`id` int(11) NOT NULL,

`fname` varchar(55) NOT NULL,

`lname` varchar(55) NOT NULL,

`age` int(11) DEFAULT NULL,

`class` int(11) NOT NULL

);

INSERT INTO `students` (`id`, `fname`, `lname`, `age`, `class`) VALUES

(1, 'Otis', 'Milburn', 21, 1),

(2, 'Adam', 'Groof', 21, 3),

(3, 'Maeve', 'Wiley', 23, 1),

(4, 'Aimee', 'Woods', 24, 3),

(5, 'Eric', 'Effiong', 23, 1),

(6, 'Ruby', 'Matthews', 22, 2),
(7, 'Lily', 'Igehart', 21, 1),

(8, 'Ola', 'Nyman', 22, 2),

(9, 'Isaac', 'Goodwin', 23, 2),

(10,'Dex','Thompson', 24, 2);

CREATE TABLE `subjects` (

`id` int(11) NOT NULL,

`name` varchar(55) NOT NULL,

`shortcut` varchar(50) NOT NULL

);

INSERT INTO `subjects` (`id`, `name`, `shortcut`) VALUES

(1, 'Java', 'JAVA'),

(2, 'Web development', 'WDEV'),

(3, 'Internet of things', 'IOT');

CREATE TABLE `teachers` (

`id` int(11) NOT NULL,

`fname` varchar(55) NOT NULL,

`lname` varchar(55) NOT NULL,

`age` varchar(11) DEFAULT NULL

);

INSERT INTO `teachers` (`id`, `fname`, `lname`, `age`) VALUES

(1, 'Hope', 'Haddon', '42'),

(2, 'Colin', 'Hendriks', '43'),

(3, 'Michael', 'Groof', '53');

ALTER TABLE `classes`

ADD PRIMARY KEY (`id`),

ADD KEY `subject_id` (`subject`),

ADD KEY `teacher_id` (`teacher`);

ALTER TABLE `students`
```

```
ADD PRIMARY KEY (`id`),

ADD KEY `class_id` (`class`);

ALTER TABLE `subjects`

ADD PRIMARY KEY (`id`);

ALTER TABLE `teachers`

ADD PRIMARY KEY (`id`);

ALTER TABLE `classes`

MODIFY `id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=3;

ALTER TABLE `students`

MODIFY `id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=8;

ALTER TABLE `subjects`

MODIFY `id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=3;

ALTER TABLE `teachers`

MODIFY `id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=3;

ALTER TABLE `classes`

ADD CONSTRAINT `subject_id` FOREIGN KEY (`subject`) REFERENCES `subjects`
(`id`),

ADD CONSTRAINT `teacher_id` FOREIGN KEY (`teacher`) REFERENCES `teachers`
(`id`);
```

DatabaseUtil.java

```
package com.learneracademy.admin;

import java.sql.Connection;
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 javax.sql.DataSource;

import com.learneracademy.models.Student;
import com.learneracademy.models.Subject;
import com.learneracademy.models.Teacher;
import com.learneracademy.models.Class;

public class DatabaseUtil {
        private DataSource dataSource;

        public DatabaseUtil(DataSource dataSource) {
                this.dataSource = dataSource;
        }

        public List<Student> getStudents(){
                List<Student> students = new ArrayList<>();

                Connection con = null;
                Statement stmt = null;
                ResultSet res = null;

                try {
                        con = dataSource.getConnection();

                        String sql = "select *from students";
                        stmt = con.createStatement();
                        res = stmt.executeQuery(sql);

                        while(res.next()) {
                                int id = res.getInt("id");
                                String firstName = res.getString("fname");
                                String lastName = res.getString("lname");
                                int age = res.getInt("age");
                                int aclass = res.getInt("class");

                                Student student = new
Student(id,firstName,lastName,age,aclass);
                                students.add(student);
                        }
                } catch(Exception e) {
                        e.printStackTrace();
                } finally {
                        close(con,stmt,res);
                }
        return students;
    }

    public List<Teacher> getTeachers(){
        List<Teacher> teachers = new ArrayList<>();

        Connection con = null;
        Statement stmt = null;
        ResultSet res = null;

        try {
            con = dataSource.getConnection();

            String sql = "select *from teachers";
            stmt = con.createStatement();
            res = stmt.executeQuery(sql);

            while(res.next()) {
                int id = res.getInt("id");
                String firstName = res.getString("fname");
                String lastName = res.getString("lname");
                int age = res.getInt("age");

                Teacher teacher = new
Teacher(id,firstName,lastName,age);
                teachers.add(teacher);
            }
        } catch(Exception e) {
            e.printStackTrace();
        } finally {
            close(con,stmt,res);
        }

        return teachers;
    }

    public List<Subject> getSubjects(){
        List<Subject> subjects = new ArrayList<>();

        Connection con = null;
        Statement stmt = null;
        ResultSet res = null;

        try {
            con = dataSource.getConnection();

            String sql = "select *from subjects";
            stmt = con.createStatement();
            res = stmt.executeQuery(sql);

            while(res.next()) {
                int id = res.getInt("id");
                String name = res.getString("name");
                String shortcut = res.getString("shortcut");

                Subject subject = new
Subject(id,name,shortcut);
```

```java
                                subjects.add(subject);
                        }
                } catch(Exception e) {
                        e.printStackTrace();
                } finally {
                        close(con,stmt,res);
                }
                return subjects;
        }

        public Subject loadSubject(int subjectId) {
                Subject theSubject = null;

                Connection con = null;
                Statement stmt = null;
                ResultSet res = null;

                try {
                        con = dataSource.getConnection();
                        String sql = "select *from subjects where id = "+
subjectId;
                        stmt = con.createStatement();
                        res = stmt.executeQuery(sql);

                        while(res.next()) {
                                int id = res.getInt("id");
                                String name = res.getString("name");
                                String shortcut = res.getString("shortcut");

                                theSubject = new Subject(id,name,shortcut);
                        }
                }
                catch(Exception e) {
                        e.printStackTrace();
                }
                finally {
                        close(con,stmt,res);
                }
                return theSubject;

        }

        public List<Class> getClasses(){
                List<Class> classes  = new ArrayList<>();

                Connection con = null;
                Statement stmt = null;
                ResultSet res = null;

                try {
                        con = dataSource.getConnection();

                        String sql = "select *from classes";
                        stmt = con.createStatement();
                        res = stmt.executeQuery(sql);

                        while(res.next()) {
```

```
                int id = res.getInt("id");
                int section = res.getInt("section");
                int subject = res.getInt("subject");
                int teacher = res.getInt("teacher");
                String time = res.getString("time");

                Teacher tempTeacher = loadTeacher(teacher);
                Subject tempSubject = loadSubject(subject);

                String teacher_name =
tempTeacher.getFname()+" "+tempTeacher.getLname();

                Class tempClass = new
Class(id,section,teacher_name,tempSubject.getName(),time);
                classes.add(tempClass);
            }
        } catch(Exception e) {
            e.printStackTrace();
        } finally {
            close(con,stmt,res);
        }

        return classes;
    }


    public Teacher loadTeacher(int teacherId) {
        Teacher theTeacher = null;

        Connection con = null;
        Statement stmt = null;
        ResultSet res = null;

        try {
            con = dataSource.getConnection();

            String sql = "select *from teachers where id = "+
teacherId ;

            stmt = con.createStatement();
            res = stmt.executeQuery(sql);

            while(res.next()) {
                int id = res.getInt("id");
                String fname = res.getString("fname");
                String lname = res.getString("lname");
                int age = res.getInt("age");
                theTeacher = new
Teacher(id,fname,lname,age);

            }
        }
        catch(Exception e) {
            e.printStackTrace();
        } finally {
            close(con,stmt,res);
        }
```

```
                return theTeacher;
        }

        public List<Student> loadClassStudents(int classId){
                List<Student> students = new ArrayList<>();

                Connection con = null;
                Statement stmt = null;
                ResultSet res = null;

                try {
                        con = dataSource.getConnection();

                        String sql = "select *from students where class =
"+classId;
                        stmt = con.createStatement();
                        res = stmt.executeQuery(sql);

                        while(res.next()) {
                                int id = res.getInt("id");
                                String firstName = res.getString("fname");
                                String lastName = res.getString("lname");
                                int age = res.getInt("age");
                                int aclass = res.getInt("class");

                                Student student = new
Student(id,firstName,lastName,age,aclass);
                                students.add(student);
                        }
                } catch(Exception e) {
                        e.printStackTrace();
                } finally {
                        close(con,stmt,res);
                }

                return students;

        }

        public void assignNewClass(int section,int teacher,int
subject,String time) {
                Connection con = null;
                PreparedStatement stmt = null;

                try {
                        con = this.dataSource.getConnection();
                        String sql = "insert into classes
(section,teacher,subject,time) values(?,?,?,?)";

                        stmt = con.prepareStatement(sql);

                        stmt.setInt(1, section);
                        stmt.setInt(2, teacher);
                        stmt.setInt(3, subject);
                        stmt.setString(4, time);

                        stmt.execute();
                }
                catch(SQLException e) {
                        e.printStackTrace();
                }
                finally {
                        close(con,stmt,null);
                }

        }

        private void close(Connection con, Statement stmt, ResultSet res) {
                try {
                        if(res != null) {
                                res.close();
                        }
                        if(stmt != null) {
                                stmt.close();
                        }
                        if(con != null) {
                                con.close();
                        }
                }
                catch(Exception e) {
                        e.printStackTrace();
                }
        }

}
```

AdminControllerServlet.java

```java
package com.learneracademy.admin;

import java.io.IOException;
import java.sql.Connection;
import java.sql.PreparedStatement;
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.learneracademy.models.Student;
import com.learneracademy.models.Subject;
import com.learneracademy.models.Teacher;
import com.learneracademy.models.Class;

@WebServlet("/AdminControllerServlet")
public class AdminControllerServlet extends HttpServlet {
        private static final long serialVersionUID = 1L;

        private DatabaseUtil dbUtil;

        @Resource(name = "jdbc_database")
        private DataSource dataSource;

        public void init() throws ServletException {
                super.init();

                try {
                        dbUtil = new DatabaseUtil(dataSource);
                } catch (Exception e) {
                        e.printStackTrace();
                }
        }

        public AdminControllerServlet() {
                super();
        }

        protected void doGet(HttpServletRequest request,
HttpServletResponse response)
                        throws ServletException, IOException {
                try {
                        String command = request.getParameter("command");

                        if (command == null) {
                                command = "CLASSES";
                        }
```

```
            if (!getCookies(request, response) &&
(!command.equals("LOGIN"))) {
                response.sendRedirect("/login.jsp");
            } else {
                switch (command) {
                case "STUDENTS":
                    studentsList(request, response);
                    break;
                case "TEACHERS":
                    teachersList(request, response);
                    break;
                case "SUBJECTS":
                    subjectsList(request, response);
                    break;
                case "CLASSES":
                    classesList(request, response);
                    break;
                case "ST_LIST":
                    classStudentsList(request, response);
                    break;
                case "LOGIN":
                    login(request, response);
                    break;

                default:
                    classesList(request, response);

                }
            }

        } catch (Exception e) {
            throw new ServletException(e);
        }
    }

    private void studentsList(HttpServletRequest request,
HttpServletResponse response)
            throws ServletException, IOException {
        List<Student> students = dbUtil.getStudents();

        request.setAttribute("STUDENT_LIST", students);

        RequestDispatcher dispatcher =
request.getRequestDispatcher("/list-students.jsp");
        dispatcher.forward(request, response);
    }

    private void teachersList(HttpServletRequest request,
HttpServletResponse response)
            throws ServletException, IOException {
        List<Teacher> teachers = dbUtil.getTeachers();

        request.setAttribute("TEACHER_LIST", teachers);

        RequestDispatcher dispatcher =
request.getRequestDispatcher("/teachers-list.jsp");
        dispatcher.forward(request, response);
        }

        private void subjectsList(HttpServletRequest request,
HttpServletResponse response)
                        throws ServletException, IOException {
                List<Subject> subjects = dbUtil.getSubjects();

                request.setAttribute("SUBJECTS_LIST", subjects);

                RequestDispatcher dispatcher =
request.getRequestDispatcher("/subjects-list.jsp");
                dispatcher.forward(request, response);
        }

        private void classesList(HttpServletRequest request,
HttpServletResponse response)
                        throws ServletException, IOException {
                List<Class> classes = dbUtil.getClasses();

                request.setAttribute("CLASSES_LIST", classes);

                RequestDispatcher dispatcher =
request.getRequestDispatcher("/classes-list.jsp");
                dispatcher.forward(request, response);
        }

        private void classStudentsList(HttpServletRequest request,
HttpServletResponse response)
                        throws ServletException, IOException {
                int classId =
Integer.parseInt(request.getParameter("classId"));
                String section = request.getParameter("section");
                String subject = request.getParameter("subject");

                List<Student> students = dbUtil.loadClassStudents(classId);

                request.setAttribute("STUDENTS_LIST", students);
                request.setAttribute("SECTION", section);
                request.setAttribute("SUBJECT", subject);

                RequestDispatcher dispatcher =
request.getRequestDispatcher("/class-students.jsp");
                dispatcher.forward(request, response);
        }

        private void login(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {
                String username = request.getParameter("username");
                String password = request.getParameter("password");

                if (username.toLowerCase().equals("admin") &&
password.toLowerCase().equals("admin")) {
                        Cookie cookie = new Cookie(username, password);
                        cookie.setMaxAge(86400);

                        response.addCookie(cookie);
                        classesList(request, response);
                } else {
                        RequestDispatcher dispatcher =
request.getRequestDispatcher("/login.jsp");
                        dispatcher.forward(request, response);
                }
        }

        private boolean getCookies(HttpServletRequest request,
HttpServletResponse response) {
                boolean check = false;
                Cookie[] cookies = request.getCookies();

                for (Cookie cookie : cookies) {
                        if (cookie.getName().equals("admin") &&
cookie.getValue().equals("admin")) {
                                check = true;
                                break;
                        }
                }
                return check;
        }

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

}
```

AssignClassServlet.java

```java
package com.learneracademy.admin;

import java.io.IOException;

import javax.annotation.Resource;
import javax.servlet.RequestDispatcher;
import javax.servlet.ServletConfig;
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.sql.DataSource;

@WebServlet("/AssignClassServlet")
public class AssignClassServlet extends HttpServlet {
        private static final long serialVersionUID = 1L;
        private DatabaseUtil dbUtil;

        @Resource(name = "jdbc_database")
        private DataSource dataSource;

        public AssignClassServlet() {
                super();
        }

        public void init(ServletConfig config) throws ServletException {

                super.init();

                try {
                        dbUtil = new DatabaseUtil(dataSource);
                } catch (Exception e) {
                        e.printStackTrace();
                }
        }

        protected void doGet(HttpServletRequest request,
HttpServletResponse response)
                        throws ServletException, IOException {
                String sectionId = request.getParameter("sectionId");
                String subjectId = request.getParameter("subjectId");
                String teacherId = request.getParameter("teacherId");

                int section = Integer.parseInt(sectionId);
                int subject = Integer.parseInt(subjectId);
                int teacher = Integer.parseInt(teacherId);
                String time = request.getParameter("time");

                dbUtil.assignNewClass(section, teacher, subject, time);
                request.setAttribute("CLASSES_LIST", dbUtil.getClasses());
                RequestDispatcher dispatcher =
request.getRequestDispatcher("/classes-list.jsp");
                dispatcher.forward(request, response);
        }

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

}
```

META-INF > ***context.xml***

```xml
<?xml version="1.0" encoding="UTF-8"?>

<Context>
<Resource name="jdbc_database" auth="Container" type="javax.sql.DataSource"
maxActive="20" maxIdle="5" maxWait="10000" username="root" password="root"
driverClassName="com.mysql.cj.jdbc.Driver"
url="jdbc:mysql://localhost:3306/learnersacademy"/>
</Context>
```

login.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">


<link type="text/css" rel="stylesheet" href="css/login.css">
<link
        href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-
alpha1/dist/css/bootstrap.min.css"
        rel="stylesheet"
        integrity="sha384-
GLhlTQ8iRABdZLl6O3oVMWSktQOp6b7In1Zl3/Jr59b6EGGoI1aFkw7cmDA6j6gD"
        crossorigin="anonymous">
<script
        src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-
alpha1/dist/js/bootstrap.bundle.min.js"
        integrity="sha384-
w76AqPfDkMBDXo30jS1Sgez6pr3x5MlQ1ZAGC+nuZB+EYdgRZgiwxhTBTkF7CXvN"
        crossorigin="anonymous"></script>

<script
        src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.11.6/dist/umd/po
pper.min.js"
        integrity="sha384-
oBqDVmMz9ATKxIep9tiCxS/Z9fNfEXiDAYTujMAeBAsjFuCZSmKbSSUnQlmh/jp3"
        crossorigin="anonymous"></script>
<script
        src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-
alpha1/dist/js/bootstrap.min.js"
        integrity="sha384-
mQ93GR66B00ZXjt0YO5KlohRA5SY2XofN4zfuZxLkoj1gXtW8ANNCe9d5Y3eG5eD"
        crossorigin="anonymous"></script>

<title>LoginPage | LearnerAcademy</title>
</head>
<body class="text-center">

        <main class="form-signin w-100 m-auto">
                <p class="h1">LearnerAcademy</p>
                <form action=AdminControllerServlet method=POST>
                        <h1 class="h4 mb-3 fw-normal">Please sign in</h1>
                        <input type="hidden" name="command" value="LOGIN">
                        <div class="form-floating">
                                <input type="text" name="username"
class="form-control"
                                        id="floatingInput" placeholder="Enter
Username" required> <label
                                        for="floatingInput">Username</label>
                        </div>
                        <div class="form-floating">
```

```
                               <input type="password" name="password"
class="form-control"
                                      id="floatingPassword"
placeholder="Password" required> <label

        for="floatingPassword">Password</label>
                       </div>


                       <button class="w-100 btn btn-lg btn-primary"
type="submit">Login</button>
               </form>


        </main>
</body>
</html>
```

list-students.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<link type="text/css" rel="stylesheet" href="css/style.css">
<title>Students of Class | LearnerAcademy</title>
</head>
<body>
        <div id="page">
                <jsp:include page="left-list.jsp" />

                <div id="wrapper">
                        <div id="header">
                                <h3>List of Students</h3>
                        </div>
                </div>

                <div id="container">
                        <table>
                                <tr>

                                        <th>First Name</th>
                                        <th>LastName</th>
                                        <th>Age</th>


                                </tr>

                                <c:forEach var="tempStudent"
items="${STUDENT_LIST}">

                                        <tr>
                                                <td>${tempStudent.fname}</td>
                                                <td>${tempStudent.lname}</td>
                                                <td>${tempStudent.age}</td>
                                        </tr>

                                </c:forEach>
                        </table>
                </div>

        </div>
</body>
</html>
```

subjects-list.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
       pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<link type="text/css" rel="stylesheet" href="css/style.css">
<title>Students of Class | LearnerAcademy</title>
</head>
<body>
       <div id="page">
               <jsp:include page="left-list.jsp" />

               <div id="wrapper">
                       <div id="header">
                               <h3>Subjects</h3>
                       </div>
               </div>

               <div id="container">
                       <table>
                               <tr>

                                       <th>Subject</th>
                                       <th>Subject Code</th>

                               </tr>

                               <c:forEach var="tempSubjects"
items="${SUBJECTS_LIST}">

                                       <tr>
                                               <td>${tempSubjects.name}</td>

       <td>${tempSubjects.shortcut}</td>
                                       </tr>

                               </c:forEach>
                       </table>
               </div>

       </div>
</body>
</html>
```

teachers-list.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<link type="text/css" rel="stylesheet" href="css/style.css">
<title>Students of Class | LearnerAcademy</title>
</head>
<body>
        <div id="page">
                <jsp:include page="left-list.jsp" />

                <div id="wrapper">
                        <div id="header">
                                <h3>List of Teachers</h3>
                        </div>
                </div>

                <div id="container">
                        <table>
                                <tr>

                                        <th>FirstName</th>
                                        <th>LastName</th>
                                        <th>Age</th>


                                </tr>

                                <c:forEach var="tempTeachers"
items="${TEACHER_LIST}">

                                        <tr>

        <td>${tempTeachers.fname}</td>

        <td>${tempTeachers.lname}</td>
                                                <td>${tempTeachers.age}</td>
                                        </tr>

                                </c:forEach>
                        </table>
                </div>

        </div>
</body>
</html>
```

classes-list.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<link type="text/css" rel="stylesheet" href="css/style.css">
<title>Students of Class | LearnerAcademy</title>
</head>
<body>
        <div id="page">
                <jsp:include page="left-list.jsp" />

                <div id="wrapper">
                        <div id="header">
                                <h3>List of Teachers</h3>
                        </div>
                </div>

                <div id="container">
                        <table>
                                <tr>

                                        <th>FirstName</th>
                                        <th>LastName</th>
                                        <th>Age</th>


                                </tr>

                                <c:forEach var="tempTeachers"
items="${TEACHER_LIST}">

                                        <tr>

        <td>${tempTeachers.fname}</td>

        <td>${tempTeachers.lname}</td>
                                                <td>${tempTeachers.age}</td>
                                        </tr>

                                </c:forEach>
                        </table>
                </div>

        </div>
</body>
</html>
```

class-students.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<link type="text/css" rel="stylesheet" href="css/style.css">
<title>Students of Class | LearnerAcademy</title>
</head>
<body>
        <div id="page">
                <jsp:include page="left-list.jsp" />

                <div id="wrapper">
                        <div id="header">
                                <h3>Students of ${SUBJECT} class section
${SECTION}</h3>
                        </div>
                </div>

                <div id="container">
                        <table>
                                <tr>

                                        <th>FirstName</th>
                                        <th>LastName</th>
                                        <th>Age</th>


                                </tr>

                                <c:forEach var="tempStudent"
items="${STUDENTS_LIST}">

                                        <tr>
                                                <td>${tempStudent.fname}</td>
                                                <td>${tempStudent.lname}</td>
                                                <td>${tempStudent.age}</td>
                                        </tr>

                                </c:forEach>
                        </table>
                </div>

        </div>
</body>
</html>
```

left-list.jsp

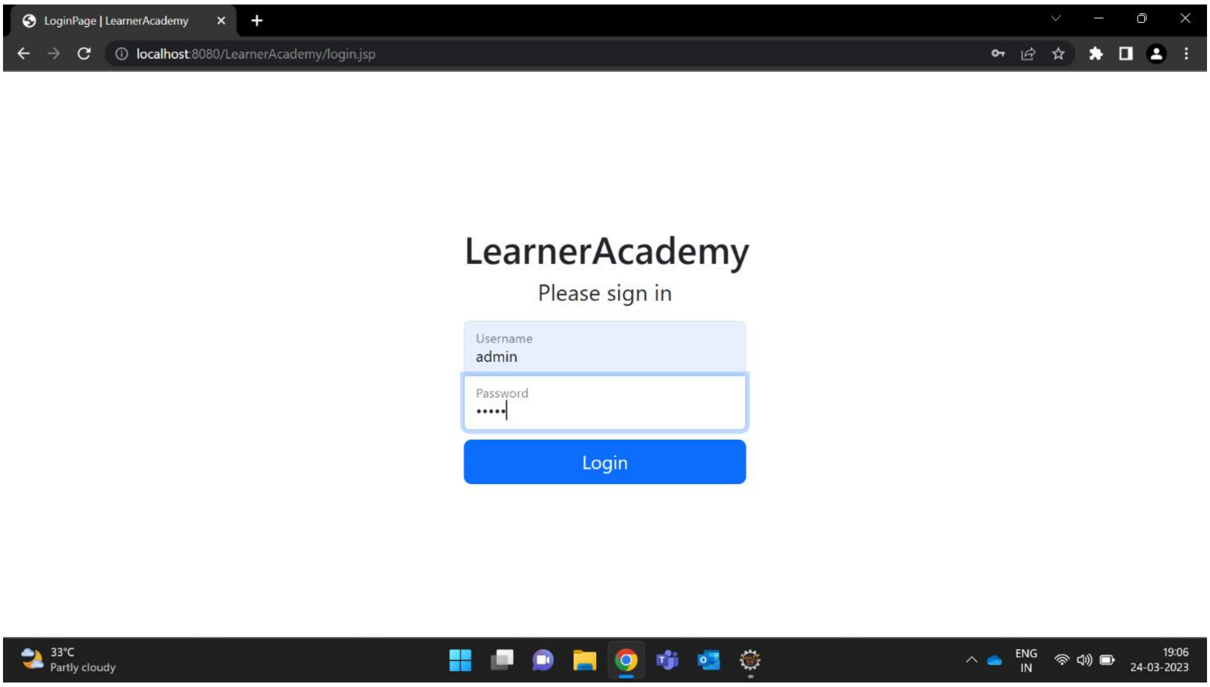
```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>

<div class=sidenav>
        <h3 id="logo">LearnerAcademy Administrative Portal</h3>

        <c:url var="classesLink" value="AdminControllerServlet">
                <c:param name="command" value="CLASSES"></c:param>
        </c:url>

        <c:url var="subjectsLink" value="AdminControllerServlet">
                <c:param name="command" value="SUBJECTS"></c:param>
        </c:url>

        <c:url var="teachersLink" value="AdminControllerServlet">
                <c:param name="command" value="TEACHERS"></c:param>
        </c:url>

        <c:url var="studentsLink" value="AdminControllerServlet">
                <c:param name="command" value="STUDENTS"></c:param>
        </c:url>

        <c:url var="assignLink" value="AdminControllerServlet">
                <c:param name="command" value="ASSIGN"></c:param>
        </c:url>



        <a class="bar-item" href="${classesLink}">Classes</a> <a
                class="bar-item" href="${subjectsLink}">Subjects</a> <a
                class="bar-item" href="${teachersLink}">Teachers</a> <a
                class="bar-item" href="${studentsLink}">Students</a> <a
                class="bar-item" href="assign-class-form.jsp">Assign
Class</a> <a
                class="bar-item" href="login.jsp">Logout</a>

</div>
```

assign-classes-form.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<link type="text/css" rel="stylesheet" href="css/style.css">
<link type="text/css" rel="stylesheet" href="css/login.css">
<title>Assign Class | LearnerAcademy</title>
</head>
<body>
        <div>
                <jsp:include page="left-list.jsp" />

                <div id="page">
                        <h2 id="logo">LearnerAcademy</h2>
                </div>


                <div id="maindiv">
                        <div>
                                <h4 id="logo">Assign Class</h4>
                        </div>
                        <form action="AssignClassServlet" method="POST">
                                <div class="container">
                                        <label>SectionId: </label> <br />
<input type="text"
                                                placeholder="Enter SectionId"
name="sectionId" required> <br />
                                        <label>TeacherId :</label> <br />
<input type="text"
                                                placeholder="Enter TeacherId"
name="teacherId" required> <br />
                                        <label>SubjectId :</label> <br />
<input type="text"
                                                placeholder="Enter SubjectId"
name="subjectId" required> <br />
                                        <label>Time :</label> <br /> <input
type="text"
                                                placeholder="Enter Time"
name="time" required> <br>
                                        <button type="submit">Assign</button>
                                        <br />

                                </div>
                        </form>

                </div>
                <br>
                <br> <a href="classes-list.jsp">Back to list</a>

        </div>
</body>
</html>
```

Output Screenshots

1. Login Page


LoginPage | LearnerAcademy
localhost:8080/LearnerAcademy/login.jsp
33°C
Partly cloudy
ENG
IN
19:06
24-03-2023

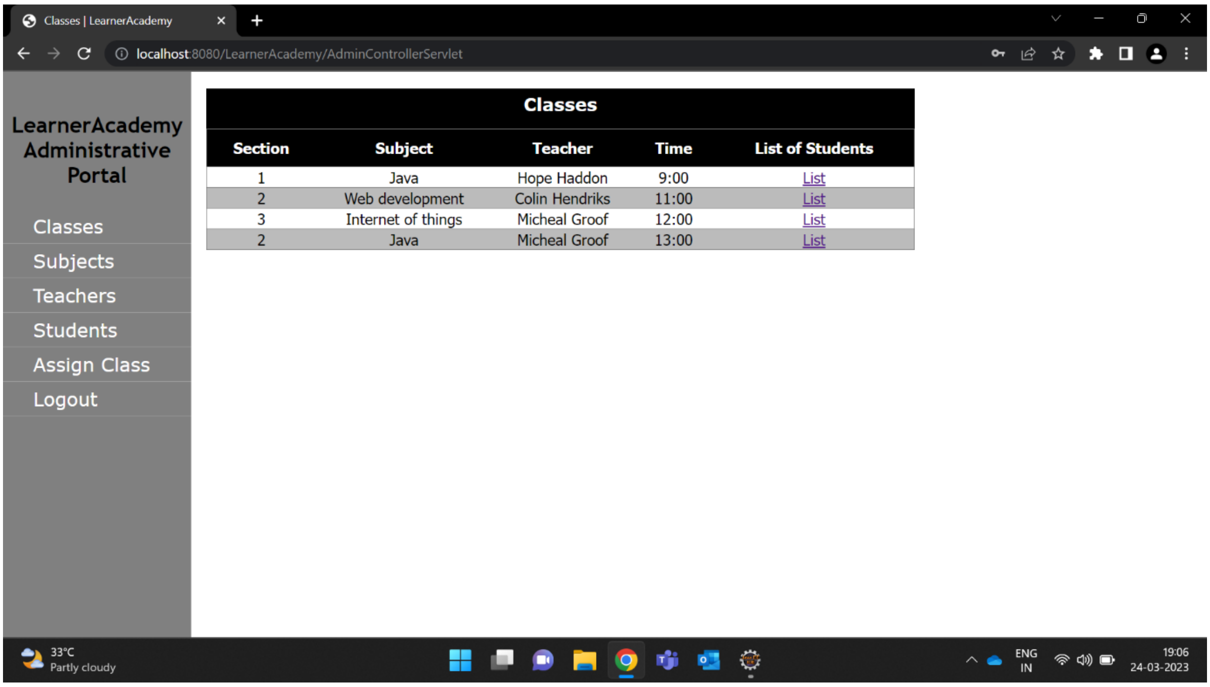
LearnerAcademy

Please sign in

Username
admin

Password
•••••

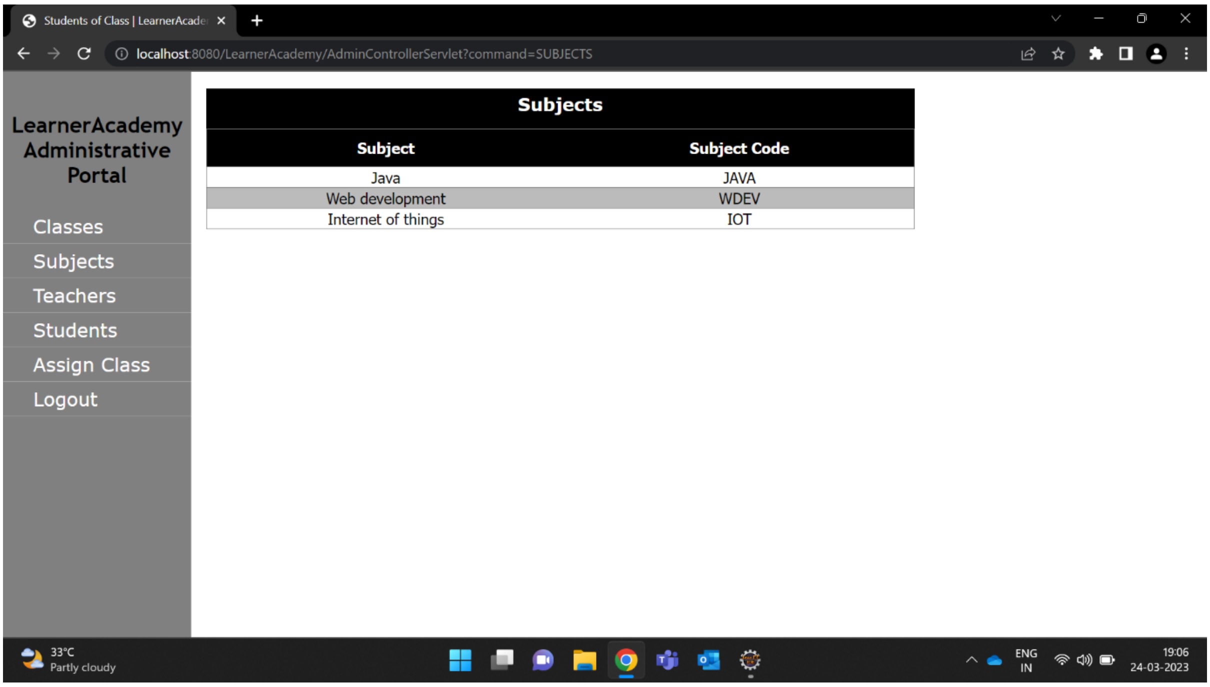
2. Classes List Report



Classes

Section	Subject	Teacher	Time	List of Students
1	Java	Hope Haddon	9:00	List
2	Web development	Colin Hendriks	11:00	List
3	Internet of things	Micheal Groof	12:00	List
2	Java	Micheal Groof	13:00	List

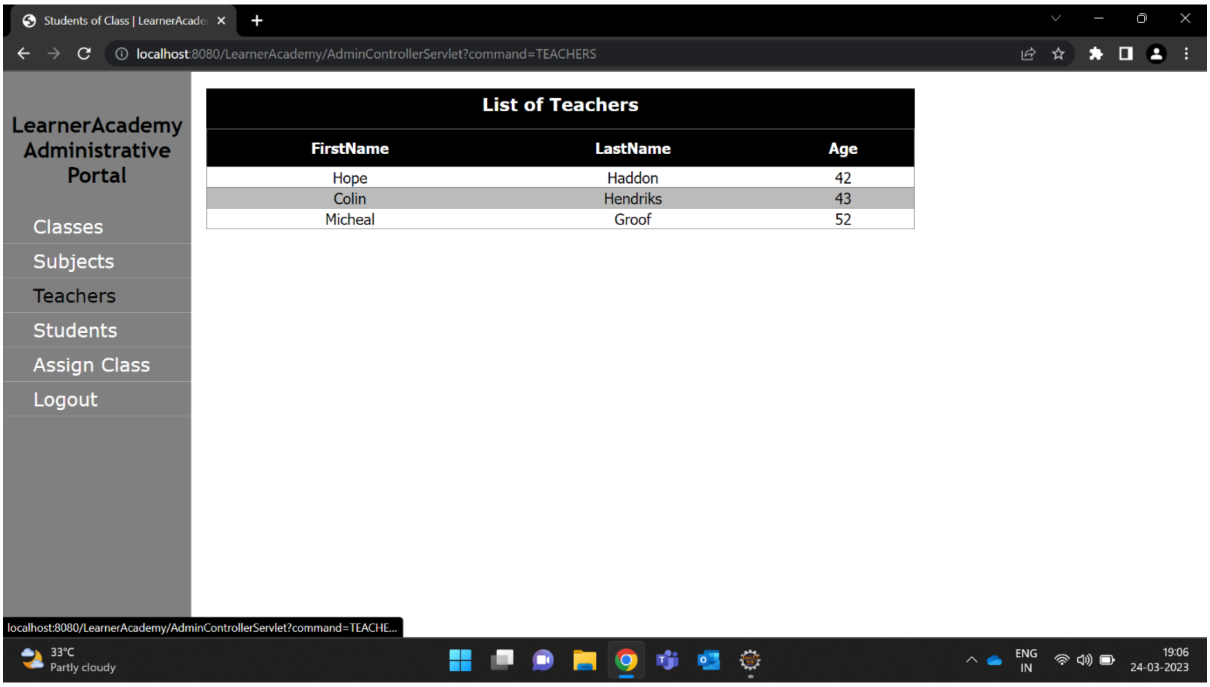
3. Subjects


Students of Class | LearnerAcade
localhost:8080/LearnerAcademy/AdminControllerServlet?command=SUBJECTS
LearnerAcademy Administrative Portal
Classes
Subjects
Teachers
Students
Assign Class
Logout
33°C Partly cloudy
ENG IN
19:06 24-03-2023

Subjects

Subject	Subject Code
Java	JAVA
Web development	WDEV
Internet of things	IOT

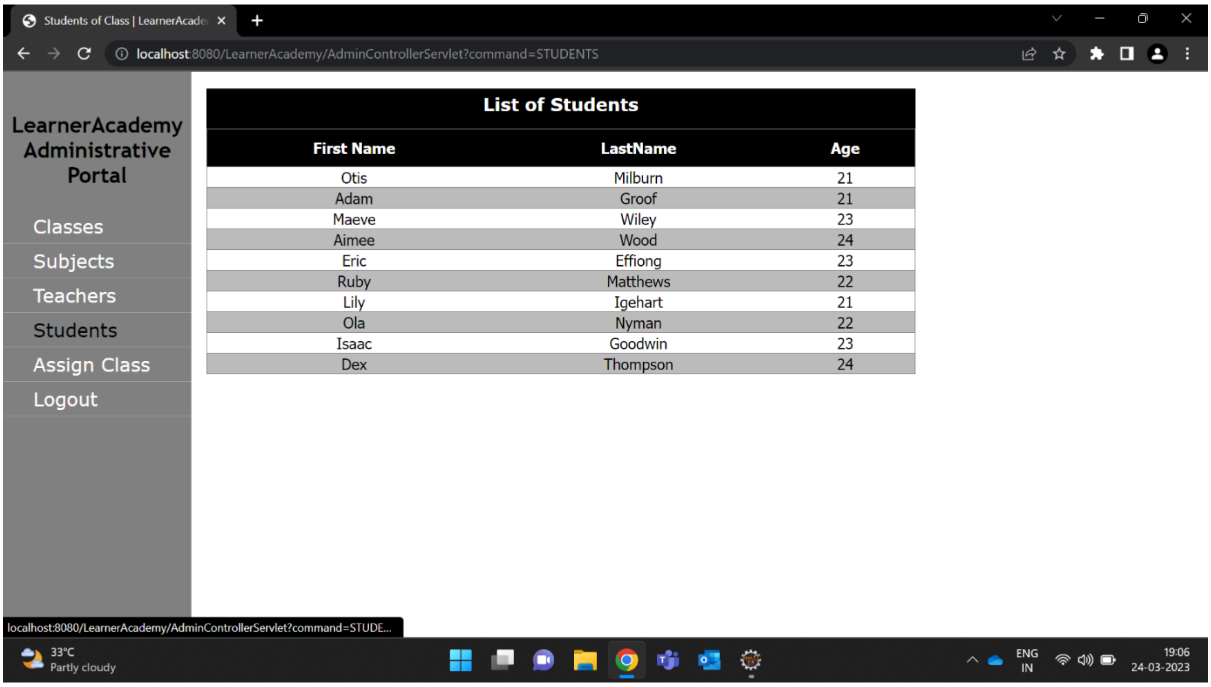
4. Teachers


Students of Class | LearnerAcade
localhost:8080/LearnerAcademy/AdminControllerServlet?command=TEACHERS
LearnerAcademy Administrative Portal
Classes
Subjects
Teachers
Students
Assign Class
Logout
localhost:8080/LearnerAcademy/AdminControllerServlet?command=TEACHE...
33°C Partly cloudy
ENG IN
19:06 24-03-2023

List of Teachers

FirstName	LastName	Age
Hope	Haddon	42
Colin	Hendriks	43
Micheal	Groof	52

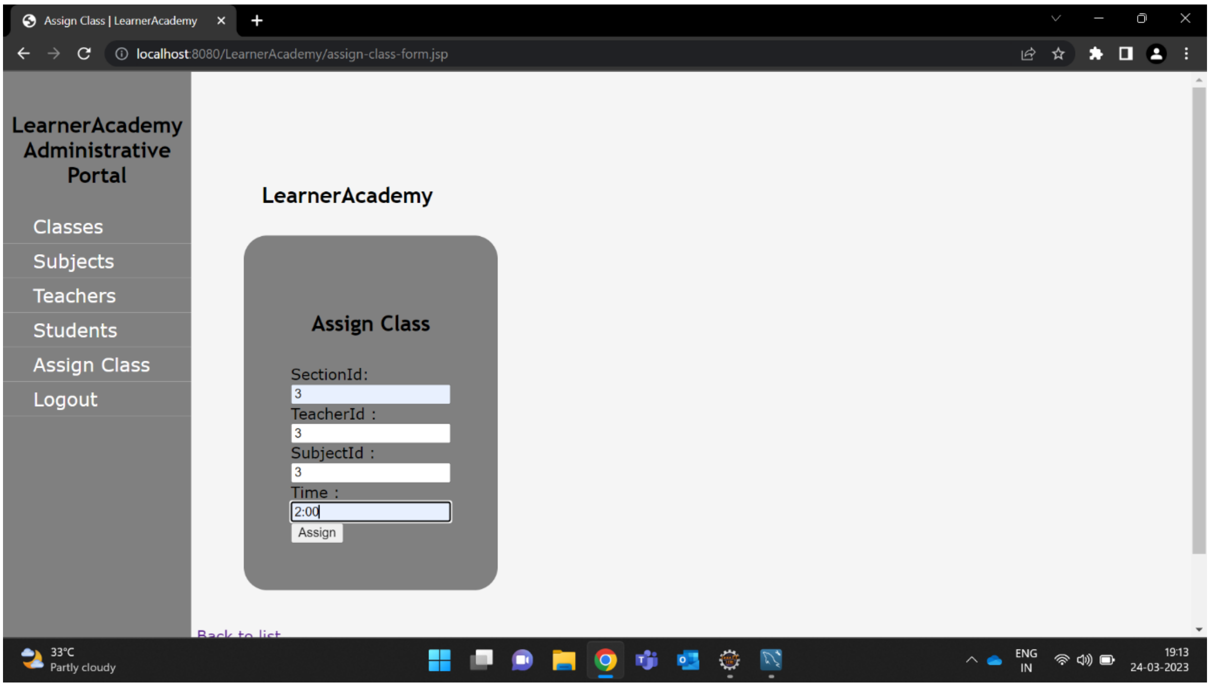
5. Students


Students of Class | LearnerAcade
localhost:8080/LearnerAcademy/AdminControllerServlet?command=STUDENTS
LearnerAcademy Administrative Portal
Classes
Subjects
Teachers
Students
Assign Class
Logout
localhost:8080/LearnerAcademy/AdminControllerServlet?command=STUDE...
33°C Partly cloudy
ENG IN
19:06 24-03-2023

List of Students

First Name	LastName	Age
Otis	Milburn	21
Adam	Groof	21
Maeve	Wiley	23
Aimee	Wood	24
Eric	Effiong	23
Ruby	Matthews	22
Lily	Igehart	21
Ola	Nyman	22
Isaac	Goodwin	23
Dex	Thompson	24

6. Assign Class Form



Assign Class

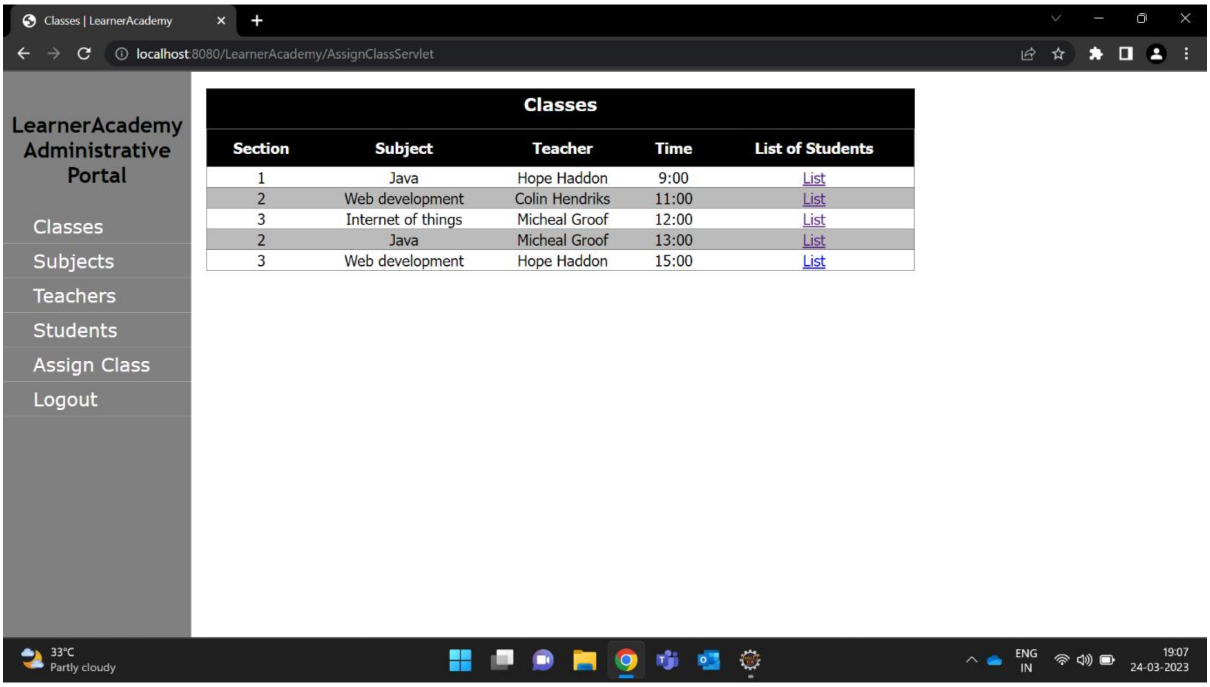
SectionId: 3

TeacherId : 3

SubjectId : 3

Time : 2:00

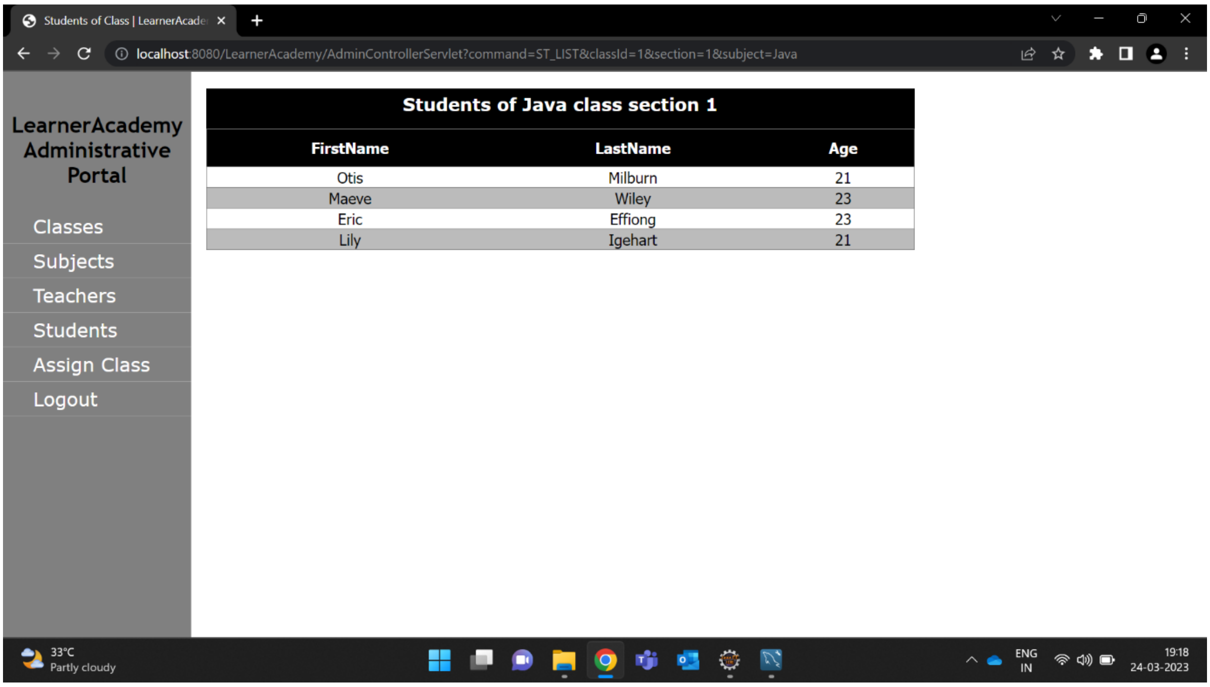
7. Updated Classes Report



Classes

Section	Subject	Teacher	Time	List of Students
1	Java	Hope Haddon	9:00	List
2	Web development	Colin Hendriks	11:00	List
3	Internet of things	Micheal Groof	12:00	List
2	Java	Micheal Groof	13:00	List
3	Web development	Hope Haddon	15:00	List

8. Students of Specific class report


Students of Class | LearnerAcade
localhost:8080/LearnerAcademy/AdminControllerServlet?command=ST_LIST&classId=1&section=1&subject=Java
LearnerAcademy Administrative Portal
Classes
Subjects
Teachers
Students
Assign Class
Logout
33°C
Partly cloudy
ENG
IN
19:18
24-03-2023

Students of Java class section 1

FirstName	LastName	Age
Otis	Milburn	21
Maeve	Wiley	23
Eric	Effiong	23
Lily	Igehart	21