FINAL SEMESTER PROJECT

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COMSATS UNIVERSITY
ISLAMABAD

ADMIN CLASS:

```
package com.project;

import java.io.EOFException;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.ObjectInputStream;
import java.io.ObjectOutputStream;
import java.io.Serializable;
import java.util.ArrayList;

public class Admin extends Person implements Serializable {
    private String position;
    private Student s1;
    private Attendance a1;
    private String password;

    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;
    }

    public Student getS1() {
        return s1;
    }

    public void setS1(Student s1) {
        this.s1 = s1;
    }

    public Attendance getA1() {
```

```
        return a1;
    }

    public void setA1(Attendance a1) {
        this.a1 = a1;
    }

    public Admin() {
        this.position = null;
    }

    public Admin(String position) {
        this.position = position;
    }

    public Admin(String personId, String name, String dateOfBirth, String
contactInfo, String address, String email,
            String position, String password) {
        super(personId, name, dateOfBirth, contactInfo, address, email);
        this.position = position;
        this.password = password;
    }

    public String getPosition() {
        return position;
    }

    public void setPosition(String position) {
        this.position = position;
    }

    @Override
    public String toString() {
        return super.toString() + " Position: " + position;
    }

    public void addStudent(Student s2) {
        s1 = new Student();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if
(list.get(i).getRegistration_number().equalsIgnoreCase(s2.getRegistration_number(
))) {
                return;
            }
```

```
        }
        s1.saveDataToFile(s2);
    }

    public void removeStudent(String reg_num) {
        s1 = new Student();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getRegistration_number().equalsIgnoreCase(reg_num)) {
                list.remove(i);
                break;
            }
        }
        try {
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Students.ser");
            try (ObjectOutputStream oos = new ObjectOutputStream(new
FileOutputStream(f))) {
                for (int i = 0; i < list.size(); i++) {
                    oos.writeObject(list.get(i));
                }
            }
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
    }

    public boolean searchFromFile(String reg_num) {
        s1 = new Student();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getRegistration_number().equals(reg_num)) {
                return true; // Found a match, no need to continue searching
            }
        }
        return false; // No match found in the entire list
    }

    // public void addAttendance(Attendance a2, String reg_num) {
    // ArrayList<Attendance> list = a1.loadDataFromFile();
    // for (Attendance existingAttendance : list) {
    // if (existingAttendance.getS1().getRegistration_number().equals(reg_num)) {
    // existingAttendance.saveDataToFile(a2);
```

```
    // break;
    // }
    // }
    // }

    public void addAttendance(String reg_num, String attStatus, String cID) {
        s1 = new Student();
        a1 = new Attendance();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
                if
(list.get(i).getRegistration_number().equalsIgnoreCase(reg_num)) {
                    a1.saveDataToFile(new Attendance(attStatus, reg_num, cID));
                    break;
                }

            }
        }
    }

    public void addGrade(String reg_num, String marks, String cID) {
        s1 = new Student();
        Grade g1 = new Grade();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
                if
(list.get(i).getRegistration_number().equalsIgnoreCase(reg_num)) {
                    g1.saveDataToFile(new Grade(marks, reg_num, cID));
                    break;
                }

            }
        }
    }

    public boolean login(String a, String b) {
        ArrayList<Admin> list = loadDataFromFile();
        boolean flag = false;

        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
                if (a.equalsIgnoreCase(list.get(i).getEmail()) &&
b.equals(list.get(i).getPassword())) {
```

```
                    flag = true;
                    break;
                }
            }
        }

        return flag;
    }

    public void saveDataToFile(Admin a1) {
        try {
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Admins.ser");
            ObjectOutputStream oos;
            if (f.exists()) {
                oos = new MyObjectOutputStream(new FileOutputStream(f, true));
            } else {
                oos = new ObjectOutputStream(new FileOutputStream(f));
            }
            oos.writeObject(a1);
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
    }

    public ArrayList<Admin> loadDataFromFile() {
        ArrayList<Admin> list = new ArrayList<Admin>();
        try {
            try (ObjectInputStream ois = new ObjectInputStream(new
FileInputStream(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Admins.ser"))) {
                while (true) {
                    Admin s1 = (Admin) ois.readObject();
                    list.add(s1);
                    System.out.println(s1.toString());
                }
            }
        } catch (ClassNotFoundException e) {
            System.out.println(e.getMessage());
        } catch (EOFException e) {
            return list;
```

```
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
        return null;

    }

    public void addFeesUpdate(Fees f1, String reg_num) {
        s1 = new Student();
        f1 = new Fees();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
                if (list.get(i).getRegistration_number().equals(reg_num)) {
                    f1.saveDataToFile(f1);
                    break;
                }
            }
        }
    }
    // public ArrayList<Course> same(String courseName){
    //     Course c1 = new Course();
    //     ArrayList<Course>list = c1.loadDataFromFile();
    //     ArrayList<Course>alist = new ArrayList<Course>();
    //     for(int i = 0; i<list.size(); i++){
    //         if (!list.get(i).getCourseName().equals(null)) {
    //             if (list.get(i).getCourseName().equals(courseName)) {
    //                 return list.get(i).getReg_num();
    //             }
    //         }
    //     }
    //     return alist;
    // }

}

package com.project;

import java.io.EOFException;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.ObjectInputStream;
import java.io.ObjectOutputStream;
```

```java
import java.io.Serializable;
import java.util.ArrayList;

public class Admin extends Person implements Serializable {
    private String position;
    private Student s1;
    private Attendance a1;
    private String password;

    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;
    }

    public Student getS1() {
        return s1;
    }

    public void setS1(Student s1) {
        this.s1 = s1;
    }

    public Attendance getA1() {
        return a1;
    }

    public void setA1(Attendance a1) {
        this.a1 = a1;
    }

    public Admin() {
        this.position = null;
    }
```

```
    public Admin(String position) {
        this.position = position;
    }

    public Admin(String personId, String name, String dateOfBirth, String
contactInfo, String address, String email,
            String position, String password) {
        super(personId, name, dateOfBirth, contactInfo, address, email);
        this.position = position;
        this.password = password;
    }

    public String getPosition() {
        return position;
    }

    public void setPosition(String position) {
        this.position = position;
    }

    @Override
    public String toString() {
        return super.toString() + " Position: " + position;
    }

    public void addStudent(Student s2) {
        s1 = new Student();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if
(list.get(i).getRegistration_number().equalsIgnoreCase(s2.getRegistration_number(
))) {
                return;
            }
        }
        s1.saveDataToFile(s2);
    }

    public void removeStudent(String reg_num) {
        s1 = new Student();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getRegistration_number().equalsIgnoreCase(reg_num)) {
                list.remove(i);
                break;
```

```
            }
        }
        try {
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Students.ser");
            try (ObjectOutputStream oos = new ObjectOutputStream(new
FileOutputStream(f))) {
                for (int i = 0; i < list.size(); i++) {
                    oos.writeObject(list.get(i));
                }
            }
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
    }

    public boolean searchFromFile(String reg_num) {
        s1 = new Student();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getRegistration_number().equals(reg_num)) {
                return true; // Found a match, no need to continue searching
            }
        }
        return false; // No match found in the entire list
    }

    // public void addAttendance(Attendance a2, String reg_num) {
    // ArrayList<Attendance> list = a1.loadDataFromFile();
    // for (Attendance existingAttendance : list) {
    // if (existingAttendance.getS1().getRegistration_number().equals(reg_num)) {
    // existingAttendance.saveDataToFile(a2);
    // break;
    // }
    // }
    // }

    public void addAttendance(String reg_num, String attStatus, String cID) {
        s1 = new Student();
        a1 = new Attendance();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
```

```
                if
(list.get(i).getRegistration_number().equalsIgnoreCase(reg_num)) {
                    a1.saveDataToFile(new Attendance(attStatus, reg_num, cID));
                    break;
                }

            }
        }
    }

    public void addGrade(String reg_num, String marks, String cID) {
        s1 = new Student();
        Grade g1 = new Grade();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
                if
(list.get(i).getRegistration_number().equalsIgnoreCase(reg_num)) {
                    g1.saveDataToFile(new Grade(marks, reg_num, cID));
                    break;
                }

            }
        }
    }

    public boolean login(String a, String b) {
        ArrayList<Admin> list = loadDataFromFile();
        boolean flag = false;

        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
                if (a.equalsIgnoreCase(list.get(i).getEmail()) &&
b.equals(list.get(i).getPassword())) {
                    flag = true;
                    break;
                }
            }
        }

        return flag;
    }

    public void saveDataToFile(Admin a1) {
        try {
```

```
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Admins.ser");
            ObjectOutputStream oos;
            if (f.exists()) {
                oos = new MyObjectOutputStream(new FileOutputStream(f, true));
            } else {
                oos = new ObjectOutputStream(new FileOutputStream(f));
            }
            oos.writeObject(a1);
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
    }

    public ArrayList<Admin> loadDataFromFile() {
        ArrayList<Admin> list = new ArrayList<Admin>();
        try {
            try (ObjectInputStream ois = new ObjectInputStream(new
FileInputStream(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Admins.ser"))) {
                while (true) {
                    Admin s1 = (Admin) ois.readObject();
                    list.add(s1);
                    System.out.println(s1.toString());
                }
            }
        } catch (ClassNotFoundException e) {
            System.out.println(e.getMessage());
        } catch (EOFException e) {
            return list;
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
        return null;

    }

    public void addFeesUpdate(Fees f1, String reg_num) {
        s1 = new Student();
        f1 = new Fees();
        ArrayList<Student> list = s1.loadDataFromFile();
```

```
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
                if (list.get(i).getRegistration_number().equals(reg_num)) {
                    f1.saveDataToFile(f1);
                    break;
                }
            }
        }
    }
    // public ArrayList<Course> same(String courseName){
    //     Course c1 = new Course();
    //     ArrayList<Course>list = c1.loadDataFromFile();
    //     ArrayList<Course>alist = new ArrayList<Course>();
    //     for(int i = 0; i<list.size(); i++){
    //         if (!list.get(i).getCourseName().equals(null)) {
    //             if (list.get(i).getCourseName().equals(courseName)) {
    //                 return list.get(i).getReg_num();
    //             }
    //         }
    //     }
    //     return alist;
    // }

}

package com.project;

import java.io.EOFException;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.ObjectInputStream;
import java.io.ObjectOutputStream;
import java.io.Serializable;
import java.util.ArrayList;

public class Admin extends Person implements Serializable {
    private String position;
    private Student s1;
    private Attendance a1;
    private String password;

    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;
    }

    public Student getS1() {
        return s1;
    }

    public void setS1(Student s1) {
        this.s1 = s1;
    }

    public Attendance getA1() {
        return a1;
    }

    public void setA1(Attendance a1) {
        this.a1 = a1;
    }

    public Admin() {
        this.position = null;
    }

    public Admin(String position) {
        this.position = position;
    }

    public Admin(String personId, String name, String dateOfBirth, String
contactInfo, String address, String email,
            String position, String password) {
        super(personId, name, dateOfBirth, contactInfo, address, email);
        this.position = position;
        this.password = password;
    }
```

```
    public String getPosition() {
        return position;
    }

    public void setPosition(String position) {
        this.position = position;
    }

    @Override
    public String toString() {
        return super.toString() + " Position: " + position;
    }

    public void addStudent(Student s2) {
        s1 = new Student();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if
(list.get(i).getRegistration_number().equalsIgnoreCase(s2.getRegistration_number(
))) {
                return;
            }
        }
        s1.saveDataToFile(s2);
    }

    public void removeStudent(String reg_num) {
        s1 = new Student();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getRegistration_number().equalsIgnoreCase(reg_num)) {
                list.remove(i);
                break;
            }
        }
        try {
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Students.ser");
            try (ObjectOutputStream oos = new ObjectOutputStream(new
FileOutputStream(f))) {
                for (int i = 0; i < list.size(); i++) {
                    oos.writeObject(list.get(i));
```

```
                }
            }
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
    }

    public boolean searchFromFile(String reg_num) {
        s1 = new Student();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getRegistration_number().equals(reg_num)) {
                return true; // Found a match, no need to continue searching
            }
        }
        return false; // No match found in the entire list
    }

    // public void addAttendance(Attendance a2, String reg_num) {
    // ArrayList<Attendance> list = a1.loadDataFromFile();
    // for (Attendance existingAttendance : list) {
    // if (existingAttendance.getS1().getRegistration_number().equals(reg_num)) {
    // existingAttendance.saveDataToFile(a2);
    // break;
    // }
    // }
    // }

    public void addAttendance(String reg_num, String attStatus, String cID) {
        s1 = new Student();
        a1 = new Attendance();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
                if
(list.get(i).getRegistration_number().equalsIgnoreCase(reg_num)) {
                    a1.saveDataToFile(new Attendance(attStatus, reg_num, cID));
                    break;
                }

            }
        }
    }

    public void addGrade(String reg_num, String marks, String cID) {
```

```
        s1 = new Student();
        Grade g1 = new Grade();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
                if
(list.get(i).getRegistration_number().equalsIgnoreCase(reg_num)) {
                    g1.saveDataToFile(new Grade(marks, reg_num, cID));
                    break;
                }

            }
        }
    }

    public boolean login(String a, String b) {
        ArrayList<Admin> list = loadDataFromFile();
        boolean flag = false;

        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
                if (a.equalsIgnoreCase(list.get(i).getEmail()) &&
b.equals(list.get(i).getPassword())) {
                    flag = true;
                    break;
                }
            }
        }

        return flag;
    }

    public void saveDataToFile(Admin a1) {
        try {
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Admins.ser");
            ObjectOutputStream oos;
            if (f.exists()) {
                oos = new MyObjectOutputStream(new FileOutputStream(f, true));
            } else {
                oos = new ObjectOutputStream(new FileOutputStream(f));
            }
            oos.writeObject(a1);
```

```
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
    }

    public ArrayList<Admin> loadDataFromFile() {
        ArrayList<Admin> list = new ArrayList<Admin>();
        try {
            try (ObjectInputStream ois = new ObjectInputStream(new
FileInputStream(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Admins.ser"))) {
                while (true) {
                    Admin s1 = (Admin) ois.readObject();
                    list.add(s1);
                    System.out.println(s1.toString());
                }
            }
        } catch (ClassNotFoundException e) {
            System.out.println(e.getMessage());
        } catch (EOFException e) {
            return list;
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
        return null;

    }

    public void addFeesUpdate(Fees f1, String reg_num) {
        s1 = new Student();
        f1 = new Fees();
        ArrayList<Student> list = s1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
                if (list.get(i).getRegistration_number().equals(reg_num)) {
                    f1.saveDataToFile(f1);
                    break;
                }
            }
        }
    }
    // public ArrayList<Course> same(String courseName){
    //     Course c1 = new Course();
```

```
    //     ArrayList<Course>list = c1.loadDataFromFile();
    //     ArrayList<Course>alist = new ArrayList<Course>();
    //     for(int i = 0; i<list.size(); i++){
    //         if (!list.get(i).getCourseName().equals(null)) {
    //             if (list.get(i).getCourseName().equals(courseName)) {
    //                 return list.get(i).getReg_num();
    //             }
    //         }
    //     }
    //     return alist;
    // }

}
```

STUDENT CLASS:

```
package com.project;

import java.io.EOFException;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.ObjectInputStream;
import java.io.ObjectOutputStream;
import java.io.Serializable;
import java.util.ArrayList;

public class Student extends Person implements Serializable {
    private String registration_number;
    private Course c1;
    private Grade g1;
    private String password;
    private Fees f1;
    private Attendance a1;

    public Student(String registration_number, Course c1, Grade g1, String
password, Fees f1, Attendance a1) {
        this.registration_number = registration_number;
        this.c1 = c1;
        this.g1 = g1;
        this.password = password;
        this.f1 = f1;
        this.a1 = a1;
    }

    public Student(String personId, String name, String dateOfBirth, String
contactInfo, String address, String email,
            String registration_number, Course c1, Grade g1, String password,
Fees f1, Attendance a1) {
        super(personId, name, dateOfBirth, contactInfo, address, email);
        this.registration_number = registration_number;
        this.c1 = c1;
        this.g1 = g1;
        this.password = password;
        this.f1 = f1;
        this.a1 = a1;
    }
```

```
    public Student() {
        super(null, null, null, null, null, null);
        this.registration_number = null;
        this.c1 = null;
        this.g1 = null;
        this.password = null;
        this.f1 = null;
        this.a1 = null;
    }

    public Student(String registration_number, Course c1, Grade g1, String
password, Fees f1) {
        this.registration_number = registration_number;
        this.c1 = c1;
        this.g1 = g1;
        this.password = password;
        this.f1 = f1;
    }

    public Student(String personId, String name, String dateOfBirth, String
contactInfo, String address, String email,
            String registration_number, Course c1, Grade g1, String password,
Fees f1) {
        super(personId, name, dateOfBirth, contactInfo, address, email);
        this.registration_number = registration_number;
        this.c1 = c1;
        this.g1 = g1;
        this.password = password;
        this.f1 = f1;
    }

    public Student(String registration_number, Course c1, Grade g1, String
password) {
        this.registration_number = registration_number;
        this.c1 = c1;
        this.g1 = g1;
        this.password = password;
    }

    public Student(String personId, String name, String dateOfBirth, String
contactInfo, String address, String email,
            String registration_number, Course c1, Grade g1, String password) {
        super(personId, name, dateOfBirth, contactInfo, address, email);
        this.registration_number = registration_number;
        this.c1 = c1;
```

```
        this.g1 = g1;
        this.password = password;
    }

    public String getPassword() {
        return password;
    }

    public void setPassword(String password) {
        this.password = password;
    }

    public Student(String registration_number, Course c1, Grade g1) {
        this.registration_number = registration_number;
        this.c1 = c1;
        this.g1 = g1;
    }

    public Student(String personId, String name, String dateOfBirth, String
contactInfo, String address, String email,
            String registration_number, Course c1, Grade g1) {
        super(personId, name, dateOfBirth, contactInfo, address, email);
        this.registration_number = registration_number;
        this.c1 = c1;
        this.g1 = g1;
    }

    public Student(String registration_number, Course c1) {
        this.registration_number = registration_number;
        this.c1 = c1;
    }

    public Student(String personId, String name, String dateOfBirth, String
contactInfo, String address, String email,
            String registration_number, Course c1) {
        super(personId, name, dateOfBirth, contactInfo, address, email);
        this.registration_number = registration_number;
        this.c1 = c1;
    }

    // public Student() {
    // this.registration_number = null;
    // this.c1 = null;
    // this.g1 = null;
    // this.password = null;
```

```
    // this.f1 = null;
    // this.a1 = null;

    // }

    public Student(String registration_number) {
        this.registration_number = registration_number;
    }

    public Student(String personId, String name, String dateOfBirth, String
contactInfo, String address, String email,
            String registration_number, String Password) {
        super(personId, name, dateOfBirth, contactInfo, address, email);
        this.registration_number = registration_number;
        this.password = Password;
    }

    public String getRegistration_number() {
        return registration_number;
    }

    public void setRegistration_number(String registration_number) {
        this.registration_number = registration_number;
    }

    @Override
    public String toString() {
        return super.toString() + "Registration Number: " + registration_number +
"\n";
    }

    public void displayFees(Student s1) {
        Fees f1 = new Fees();
        ArrayList<Fees> list = f1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (!list.get(i).getStatus().equals(null)) {
                if (this.registration_number.equals(s1.registration_number)) {
                    System.out.println(list.get(i).toString());
                }

            }
        }
    }

    public String displayCoursesEnrolled(String reg_num) {
```

```
        Course c1 = new Course();
        ArrayList<Course> list = c1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (!list.get(i).getReg_num().equals(null))
                if (list.get(i).getReg_num().equals(reg_num)) {
                    return list.get(i).toString();
                }
        }
        return "No Data to Display";
    }

    public void updateProfileEmail(String reg_num, String email) {
        ArrayList<Student> list = loadDataFromFile();
        boolean studentFound = false;

        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getRegistration_number().equalsIgnoreCase(reg_num)) {
                list.get(i).setEmail(email);
                studentFound = true;
                break;
            }
        }

        if (!studentFound) {
            System.out.println("Student not found!");
            return;
        }

        try {
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Students.ser");
            ObjectOutputStream oos = new ObjectOutputStream(new
FileOutputStream(f));

            for (int i = 0; i < list.size(); i++) {
                oos.writeObject(list.get(i));
            }

            oos.close();
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
    }
```

```
    // public void enrollInCourse(String reg_num, String CourseID) {
    // ArrayList<Course> list = c1.loadDataFromFile();
    // boolean courseFound = false;

    // for (int i = 0; i < list.size(); i++) {
    // if (list.get(i)..equals(reg_num) &&
    // list.get(i).getCourseID().equalsIgnoreCase(CourseID)) {
    // setC1(c1); // Make sure setC1 method is correctly implemented
    // courseFound = true;
    // break;
    // }
    // }

    // if (!courseFound) {
    // System.out.println("Course doesn't Exist!");
    // return;
    // }
    // try {
    // File f = new File(
    // "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab Work\\Final
    // Semester
    //
Project\\studentportalmanagementsystem\\src\\main\\resources\\Students.ser");
    // ObjectOutputStream oos = new ObjectOutputStream(new FileOutputStream(f));

    // for (int i = 0; i < list.size(); i++) {
    // oos.writeObject(list.get(i));
    // }

    // oos.close();
    // } catch (IOException e) {
    // System.out.println(e.getMessage());
    // }
    // }

    public void displayGrade(Student s1) {
        ArrayList<Grade> list = g1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if
(this.registration_number.equalsIgnoreCase(s1.registration_number)) {
                System.out.println(list.get(i).getGradeValue());
            }
        }
    }
```

```
    public void addCourse(Course c2) {
        ArrayList<Course> list = c1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (!list.get(i).getCourseID().equalsIgnoreCase(c2.getCourseID())) {
                c1.saveDataToFile(c2);
            } else {
                System.out.println("Course already exists!");
                return;
            }
        }
    }

    public void removeCourse(String reg_num, String cID) {
        ArrayList<Student> list = loadDataFromFile();
        boolean courseFound = false;

        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getRegistration_number().equals(reg_num)) {

                if (list.get(i).c1.getCourseID().equals(cID)) {
                    courseFound = true;
                    list.remove(i);
                }
            }
        }

        if (!courseFound) {
            System.out.println("Course doesn't Exist!");
            return;
        }
        try {
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Students.ser");
            try (ObjectOutputStream oos = new ObjectOutputStream(new
FileOutputStream(f))) {
                for (int j = 0; j < list.size(); j++) {
                    oos.writeObject(list.get(j));
                }
            }
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
```

```
    }

    public void saveDataToFile(Student s1) {
        try {
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Students.ser");
            ObjectOutputStream oos;
            if (f.exists()) {
                oos = new MyObjectOutputStream(new FileOutputStream(f, true));
            } else {
                oos = new ObjectOutputStream(new FileOutputStream(f));
            }
            oos.writeObject(s1);
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
    }

    public ArrayList<Student> loadDataFromFile() {
        ArrayList<Student> list = new ArrayList<Student>();
        try {
            try (ObjectInputStream ois = new ObjectInputStream(new
FileInputStream(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Students.ser"))) {
                while (true) {
                    Student s1 = (Student) ois.readObject();
                    list.add(s1);
                    System.out.println(s1.toString());
                }
            }
        } catch (ClassNotFoundException e) {
            System.out.println(e.getMessage());
        } catch (EOFException e) {
            return list;
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
        return null;

    }
```

```
    public Course getC1() {
        return c1;
    }

    public void setC1(Course c1) {
        this.c1 = c1;
    }

    public Grade getG1() {
        return g1;
    }

    public void setG1(Grade g1) {
        this.g1 = g1;
    }

    public Fees getF1() {
        return f1;
    }

    public void setF1(Fees f1) {
        this.f1 = f1;
    }

    public Attendance getA1() {
        return a1;
    }

    public void setA1(Attendance a1) {
        this.a1 = a1;
    }

    public boolean login(String a, String b) {
        ArrayList<Student> list = loadDataFromFile();
        boolean flag = false;

        for (int i = 0; i < list.size(); i++) {
            if (list.get(i) != null) {
                if (a.equalsIgnoreCase(list.get(i).getRegistration_number()) &&
b.equals(list.get(i).getPassword())) {
                    flag = true;
                    break;
                }
            }
        }
```

```
        return flag;
    }

    public boolean displayStudent(String reg_num) {
        ArrayList<Student> list = loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getRegistration_number().equals(reg_num)) {
                return true;
            }

        }
        return false;
    }

    public String DisplayStudent(String reg_num) {
        ArrayList<Student> list = loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getRegistration_number().equals(reg_num)) {
                return list.get(i).toString();
            }

        }
        return "No Data to display";
    }

    public String DisplayFeesStatus(String reg_num) {
        ArrayList<Student> list = loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getRegistration_number().equals(reg_num)) {
                return list.get(i).f1.getStatus();
            }

        }
        return "No Data to display";
    }

    public String DisplayGradeStatus(String reg_num) {
        Grade g1 = new Grade();
        ArrayList<Grade> list = g1.loadDataFromFile();
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getReg_num().equals(reg_num)) {
                if (!list.get(i).getGradeValue().equals(null)) {
                    return list.get(i).getGradeValue();
```

```
                }
            }

        }
        return "No Data to display";
    }

    public void addCourse(String reg_num, String cID) {
        Course c1 = new Course();
        ArrayList<Course> list = c1.loadDataFromFile();
        boolean courseFound = false;
        for (int i = 0; i < list.size(); i++) {
            if (list.get(i).getCourseID() != null &&
list.get(i).getCourseID().equals(cID)) {
                courseFound = true;
                break;
            }
        }

        if (!courseFound) {
            System.out.println("Course doesn't Exist!");
            return;
        } else {
            c1.saveDataToFile(new Course(cID, reg_num));
        }

        try {
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Courses.ser");
            ObjectOutputStream oos = new ObjectOutputStream(new
FileOutputStream(f));

            for (int i = 0; i < list.size(); i++) {
                oos.writeObject(list.get(i));
            }
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
    }

    public String displayAttendance(String reg_num) {
        Attendance a1 = new Attendance();
        ArrayList<Attendance> list = a1.loadDataFromFile();
```

```
        for (int i = 0; i < list.size(); i++) {
            if (!list.get(i).getAttendanceStatus().equals(null))
                if (list.get(i).getReg_num().equals(reg_num)) {
                    return list.get(i).toString();
                }
        }
        return "No Data to Display";
    }

}
```

ATTENDANCE CLASS:

```
package com.project;

import java.io.EOFException;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.ObjectInputStream;
import java.io.ObjectOutputStream;
import java.io.Serializable;
import java.util.ArrayList;

public class Attendance implements Serializable {
    private Course c1;
    private Date d1;
    private String attendanceStatus;
    private String reg_num;
    private String cID;

    public Attendance(String att, String reg, String c) {
        this.attendanceStatus = att;
        this.reg_num = reg;
        this.cID = c;
    }

    public Attendance(Course c1, Date d1, String attendanceStatus, String
reg_num, Student s1) {
        this.c1 = c1;
        this.d1 = d1;
        this.attendanceStatus = attendanceStatus;
        this.reg_num = reg_num;
        this.s1 = s1;
    }

    public String getReg_num() {
        return reg_num;
    }

    public void setReg_num(String reg_num) {
        this.reg_num = reg_num;
    }

    private Student s1;
```

```java
    public Attendance(String cID, String attend) {
        new Course(cID);
        this.attendanceStatus = attend;
    }

    public Attendance() {
        this.attendanceStatus = null;
    }

    public Attendance(Course c1, Date d1, String attendanceStatus, Student s1) {
        this.c1 = c1;
        this.d1 = d1;
        this.attendanceStatus = attendanceStatus;
        this.s1 = s1;
    }

    public Attendance(Course c1, Date d1, String attendanceStatus) {
        this.c1 = c1;
        this.d1 = d1;
        this.attendanceStatus = attendanceStatus;
    }

    public Attendance(Course c1, String attendanceStatus) {
        this.c1 = c1;
        this.attendanceStatus = attendanceStatus;
    }

    public Attendance(Course c1) {
        this.c1 = c1;
    }

    public Course getC1() {
        return c1;
    }

    public void setC1(Course c1) {
        this.c1 = c1;
    }

    @Override
    // public String toString() {
    //     return "Course Info: " + c1.toString() + "\n" + "Date: " +
d1.toString() + "\n" + " Attendance Status: "
    //             + attendanceStatus + "\n";
```

```
    // }
    public String toString() {
        return "Reg Num " + reg_num + "\n" + "Course ID " + cID + "\n" + "
Attendance Status: "
                + attendanceStatus + "\n";
    }

    public void saveDataToFile(Attendance a1) {
        try {
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Attendances.ser");
            ObjectOutputStream oos;
            if (f.exists()) {
                oos = new MyObjectOutputStream(new FileOutputStream(f, true));
            } else {
                oos = new ObjectOutputStream(new FileOutputStream(f));
            }
            oos.writeObject(a1);
            oos.close();
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
    }

    public ArrayList<Attendance> loadDataFromFile() {
        ArrayList<Attendance> list = new ArrayList<Attendance>();
        try {
            try (ObjectInputStream ois = new ObjectInputStream(new
FileInputStream(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Attendances.ser")))
{
                while (true) {
                    Attendance a1 = (Attendance) ois.readObject();
                    list.add(a1);
                    System.out.println(a1.toString());
                }
            }
        } catch (ClassNotFoundException e) {
            System.out.println(e.getMessage());
        } catch (EOFException e) {
            return list;
```

```
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
        return null;

    }

    public String getAttendanceStatus() {
        return attendanceStatus;
    }

    public void setAttendanceStatus(String attendanceStatus) {
        this.attendanceStatus = attendanceStatus;
    }

    public Date getD1() {
        return d1;
    }

    public void setD1(Date d1) {
        this.d1 = d1;
    }

    public Student getS1() {
        return s1;
    }

    public void setS1(Student s1) {
        this.s1 = s1;
    }

    public String getcID() {
        return cID;
    }

    public void setcID(String cID) {
        this.cID = cID;
    }

    // public void addAttendance(String CourseID, String reg_num, String
    // attendance_stat) {
    // ArrayList<Attendance> list = loadDataFromFile();
    // Admin a2 = new Admin();
    // for (int i = 0; i < list.size(); i++) {
    // if (list.get(i).s1.getRegistration_number().equalsIgnoreCase(reg_num)) {
```

```
    // Attendance a1 = new Attendance(CourseID, attendance_stat);
    // a2.addAttendance(a1, reg_num);
    // }
    // }
    // }
}
```

DATE CLASS:

```java
package com.project;

import java.io.Serializable;

class Date implements Serializable {
    private int day;
    private int month;
    private int year;

    public Date() {
        this.day = 0;
        this.month = 0;
        this.year = 0;
    }

    public Date(int d, int m, int y) {
        this.day = d;
        this.month = m;
        this.year = y;
    }

    public Date(Date d) {
        this.day = d.day;
        this.month = d.month;
        this.year = d.year;
    }

    public void setDay(int day) {
        this.day = day;
    }

    public void setMonth(int month) {
        this.month = month;
    }

    public void setYear(int year) {
        this.year = year;
    }

    public int getDay() {
        return day;
    }
```

```java
    public int getMonth() {
        return month;
    }

    public int getYear() {
        return year;
    }

    public void Display() {
        System.out.println(day + " - " + month + " - " + year);
    }

    public String toString() {
        return "Date [day=" + day + ", month=" + month + ", year=" + year + "]";
    }



}
```

FEES CLASS:

```
package com.project;

import java.io.EOFException;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.ObjectInputStream;
import java.io.ObjectOutputStream;
import java.io.Serializable;
import java.util.ArrayList;

public class Fees implements Serializable {
    private String status;
    private String total_fees;
    private String reg_num;

    public Fees(String status, String total_fees, String reg_num) {
        this.status = status;
        this.total_fees = total_fees;
        this.reg_num = reg_num;
    }

    public Fees() {
        this.status = null;
        this.total_fees = null;
        new Student();
    }

    public Fees(String status, String total_fees) {
        this.status = status;
        this.total_fees = total_fees;
    }

    public String getStatus() {
        return status;
    }

    public void setStatus(String status) {
        this.status = status;
    }

    public String getTotal_fees() {
```

```
        return total_fees;
    }

    public void setTotal_fees(String total_fees) {
        this.total_fees = total_fees;
    }

    @Override
    public String toString() {
        return " Status: " + status + " Total Fees:" + total_fees + "\n" + "
Registration Number: " + reg_num;
    }

    public void saveDataToFile(Fees f1) {
        try {
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Fees.ser");
            ObjectOutputStream oos;
            if (f.exists()) {
                oos = new MyObjectOutputStream(new FileOutputStream(f, true));
            } else {
                oos = new ObjectOutputStream(new FileOutputStream(f));
            }
            oos.writeObject(f1);
            oos.close();
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
    }

    public ArrayList<Fees> loadDataFromFile() {
        ArrayList<Fees> list = new ArrayList<Fees>();
        try {
            try (ObjectInputStream ois = new ObjectInputStream(new
FileInputStream(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Fees.ser"))) {
                while (true) {
                    Fees f1 = (Fees) ois.readObject();
                    list.add(f1);
                    System.out.println(f1.toString());
                }
```

```
            }
        } catch (ClassNotFoundException e) {
            System.out.println(e.getMessage());
        } catch (EOFException e) {
            return list;
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
        return null;

    }

    public String getreg_num() {
        return reg_num;
    }

    public void setreg_num(String reg_num) {
        this.reg_num = reg_num;
    }

}
```

GRADE CLASS:

```
package com.project;

import java.io.EOFException;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.ObjectInputStream;
import java.io.ObjectOutputStream;
import java.io.Serializable;
import java.util.ArrayList;

public class Fees implements Serializable {
    private String status;
    private String total_fees;
    private String reg_num;

    public Fees(String status, String total_fees, String reg_num) {
        this.status = status;
        this.total_fees = total_fees;
        this.reg_num = reg_num;
    }

    public Fees() {
        this.status = null;
        this.total_fees = null;
        new Student();
    }

    public Fees(String status, String total_fees) {
        this.status = status;
        this.total_fees = total_fees;
    }

    public String getStatus() {
        return status;
    }

    public void setStatus(String status) {
        this.status = status;
    }

    public String getTotal_fees() {
```

```
        return total_fees;
    }

    public void setTotal_fees(String total_fees) {
        this.total_fees = total_fees;
    }

    @Override
    public String toString() {
        return " Status: " + status + " Total Fees:" + total_fees + "\n" + "
Registration Number: " + reg_num;
    }

    public void saveDataToFile(Fees f1) {
        try {
            File f = new File(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Fees.ser");
            ObjectOutputStream oos;
            if (f.exists()) {
                oos = new MyObjectOutputStream(new FileOutputStream(f, true));
            } else {
                oos = new ObjectOutputStream(new FileOutputStream(f));
            }
            oos.writeObject(f1);
            oos.close();
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
    }

    public ArrayList<Fees> loadDataFromFile() {
        ArrayList<Fees> list = new ArrayList<Fees>();
        try {
            try (ObjectInputStream ois = new ObjectInputStream(new
FileInputStream(
                    "D:\\University Stuff\\Abdullah University-3\\OOP\\Lab\\Lab
Work\\Final Semester
Project\\studentportalmanagementsystem\\src\\main\\resources\\Fees.ser"))) {
                while (true) {
                    Fees f1 = (Fees) ois.readObject();
                    list.add(f1);
                    System.out.println(f1.toString());
                }
```

```
            }
        } catch (ClassNotFoundException e) {
            System.out.println(e.getMessage());
        } catch (EOFException e) {
            return list;
        } catch (IOException e) {
            System.out.println(e.getMessage());
        }
        return null;

    }

    public String getreg_num() {
        return reg_num;
    }

    public void setreg_num(String reg_num) {
        this.reg_num = reg_num;
    }

}
```

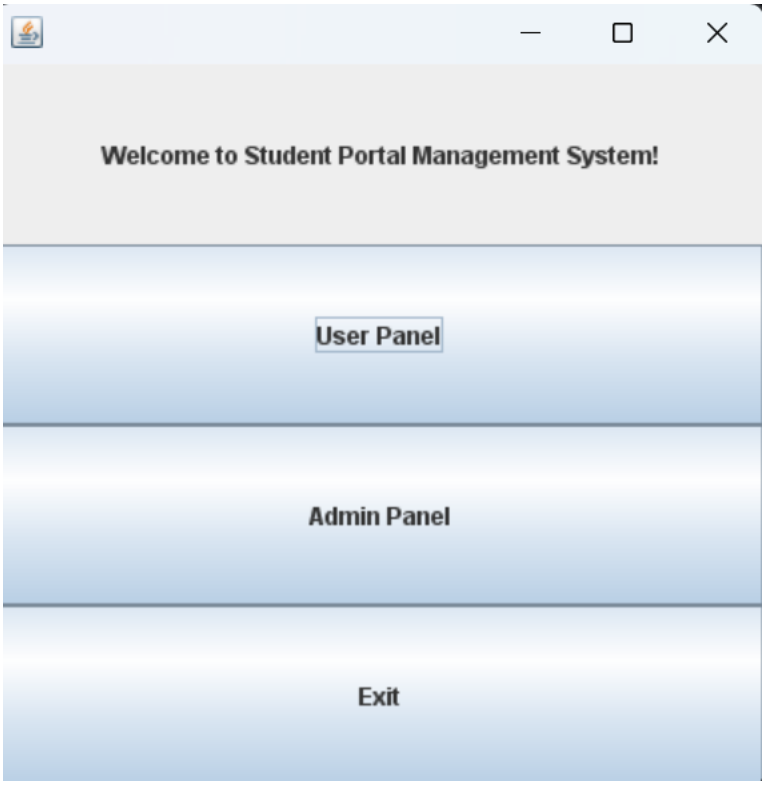
PERSON CLASS:

```
package com.project;

import java.io.Serializable;

public class Person implements Serializable {
    protected String personId;
    protected String name;
    protected String dateOfBirth;
    protected String contactInfo;
    protected String address;
    protected String email;

    public Person() {
        this.personId = null;
        this.name = null;
        this.dateOfBirth = null;
        this.contactInfo = null;
        this.address = null;
        this.email = null;
    }

    public Person(String personId, String name, String dateOfBirth, String
contactInfo, String address, String email) {
        this.personId = personId;
        this.name = name;
        this.dateOfBirth = dateOfBirth;
        this.contactInfo = contactInfo;
        this.address = address;
        this.email = email;
    }

    public String getPersonId() {
        return personId;
    }

    public void setPersonId(String personId) {
        this.personId = personId;
    }

    public String getName() {
        return name;
    }
```

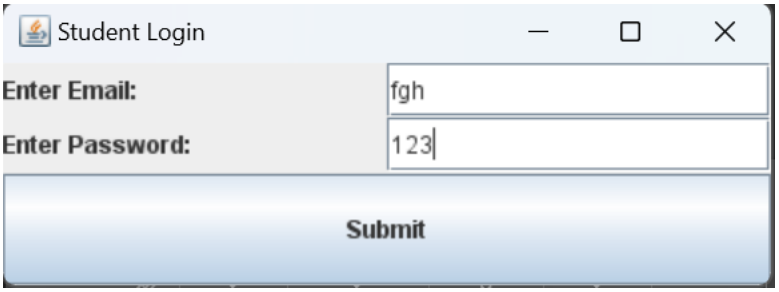
```java
    public void setName(String name) {
        this.name = name;
    }

    public String getDateOfBirth() {
        return dateOfBirth;
    }

    public void setDateOfBirth(String dateOfBirth) {
        this.dateOfBirth = dateOfBirth;
    }

    public String getContactInfo() {
        return contactInfo;
    }

    public void setContactInfo(String contactInfo) {
        this.contactInfo = contactInfo;
    }

    public String getAddress() {
        return address;
    }

    public void setAddress(String address) {
        this.address = address;
    }

    public String getEmail() {
        return email;
    }

    public void setEmail(String email) {
        this.email = email;
    }

    @Override
    public String toString() {
        return "IDUni: " + personId + "\n" + "Name: " + name + "\n" + "Date of
Birth: " + dateOfBirth + "\n"
                + " Contact Info: "
                + contactInfo + "\n" + "Address: " + address + "\n" + "Email: " +
email + "\n";
    }
```

```
}
```

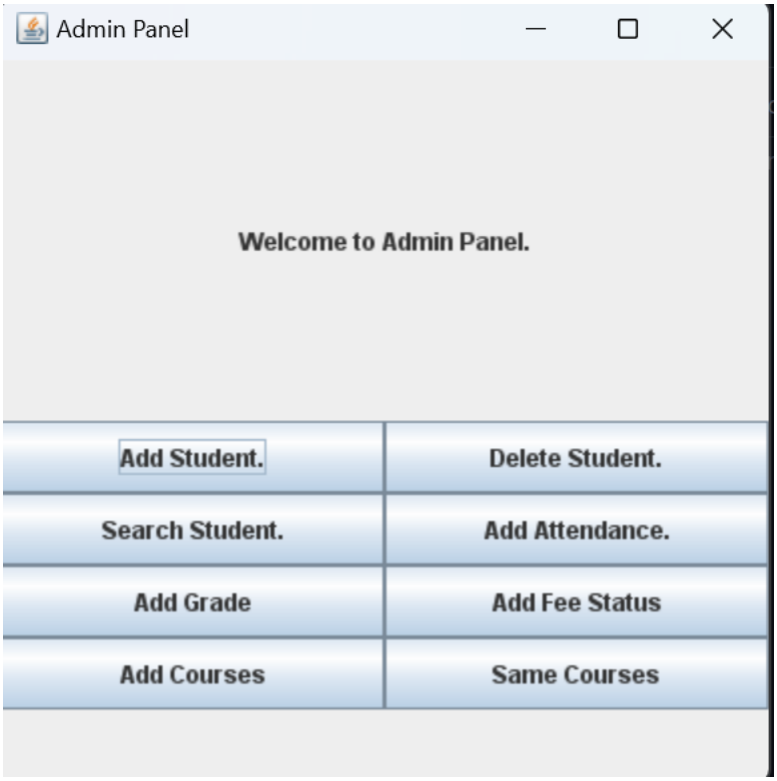
MAIN PANEL:


Welcome to Student Portal Management System!
User Panel
Admin Panel
Exit

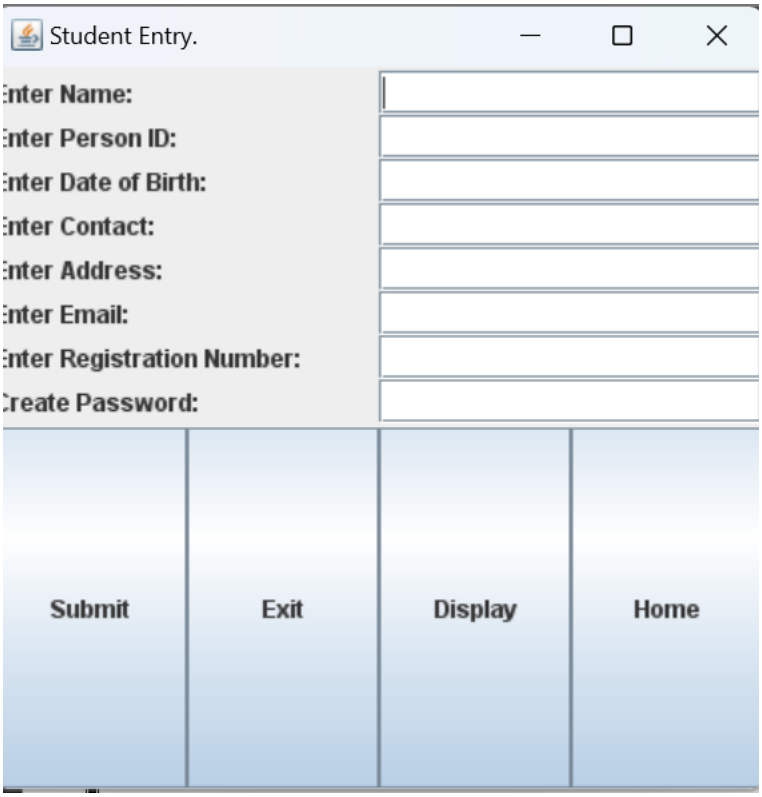
LOGIN PANEL:



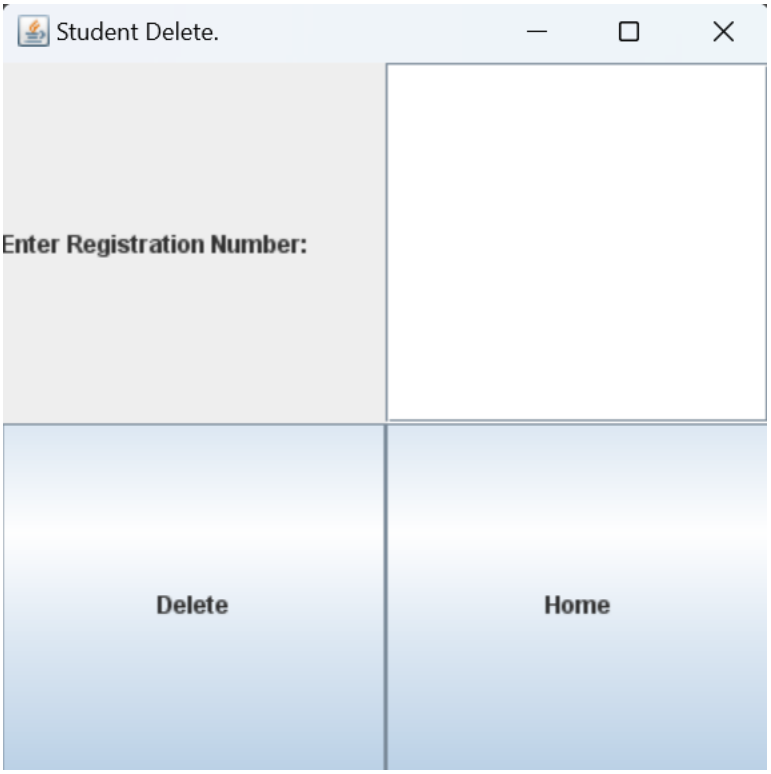
ADMIN PANEL:


Admin Panel
Welcome to Admin Panel.
Add Student.
Delete Student.
Search Student.
Add Attendance.
Add Grade
Add Fee Status
Add Courses
Same Courses

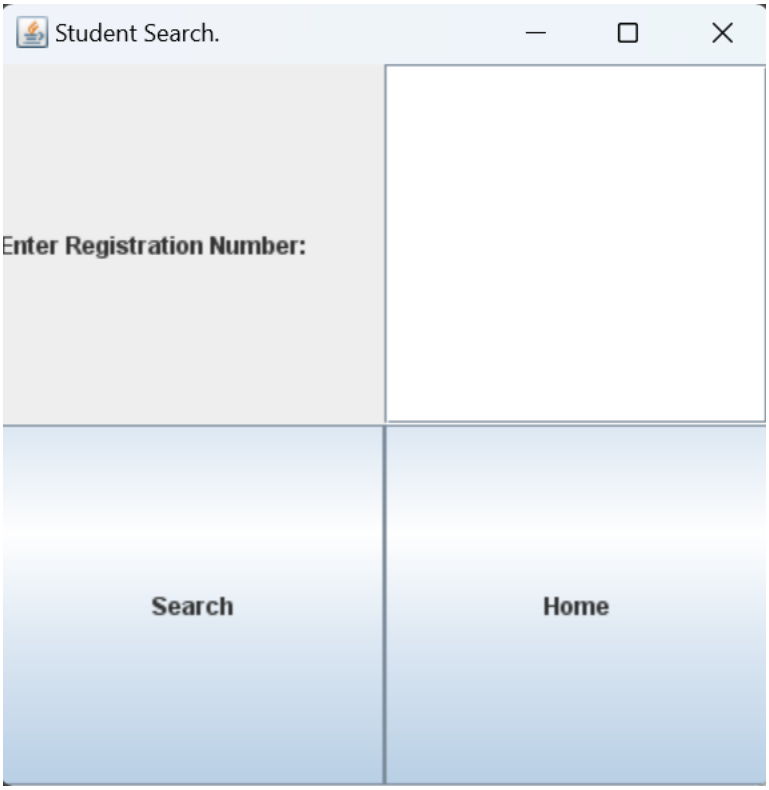
STUDENT ENTRY:



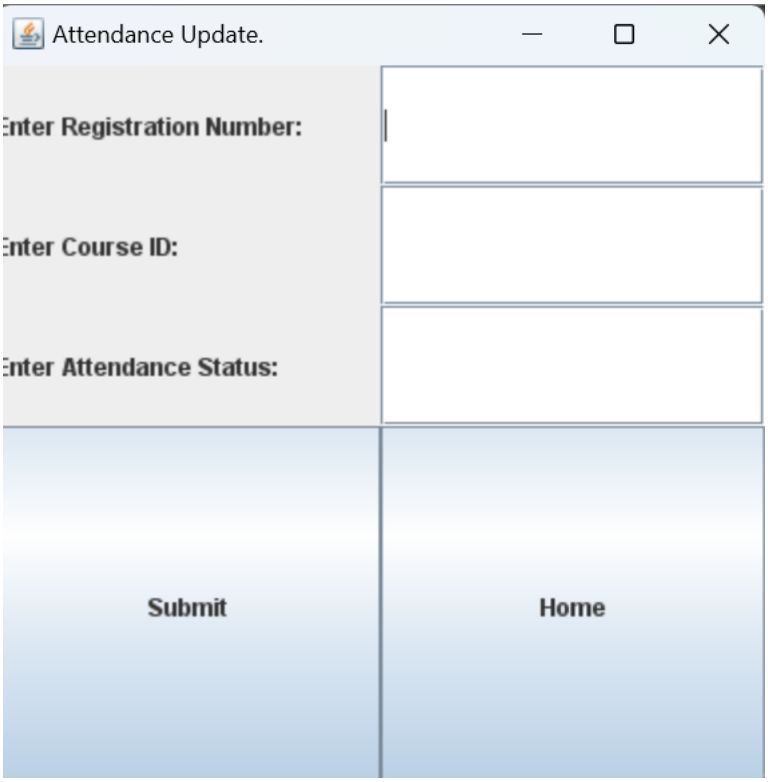
STUDENT DELETE:



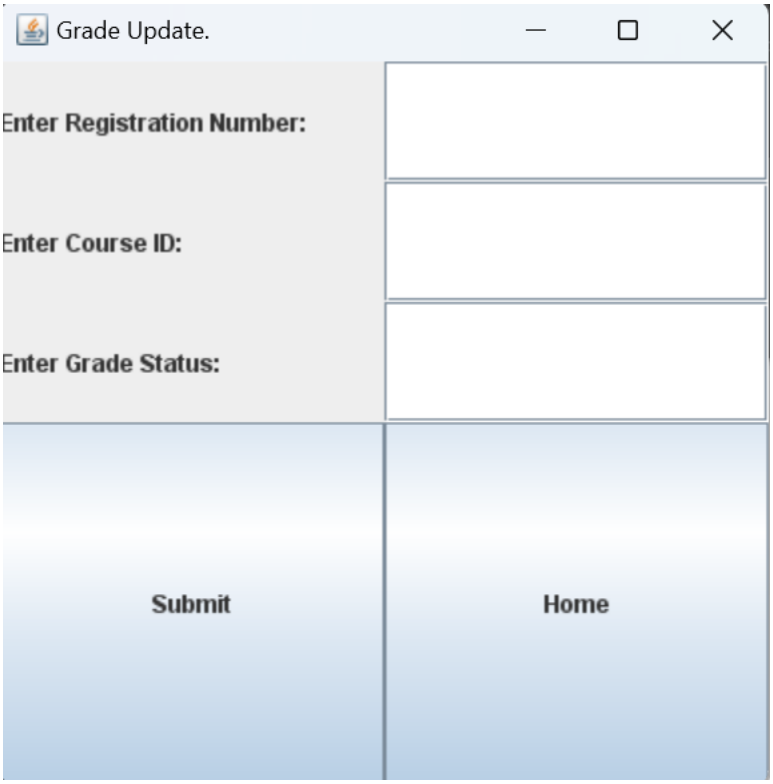
SEARCH STUDENT:



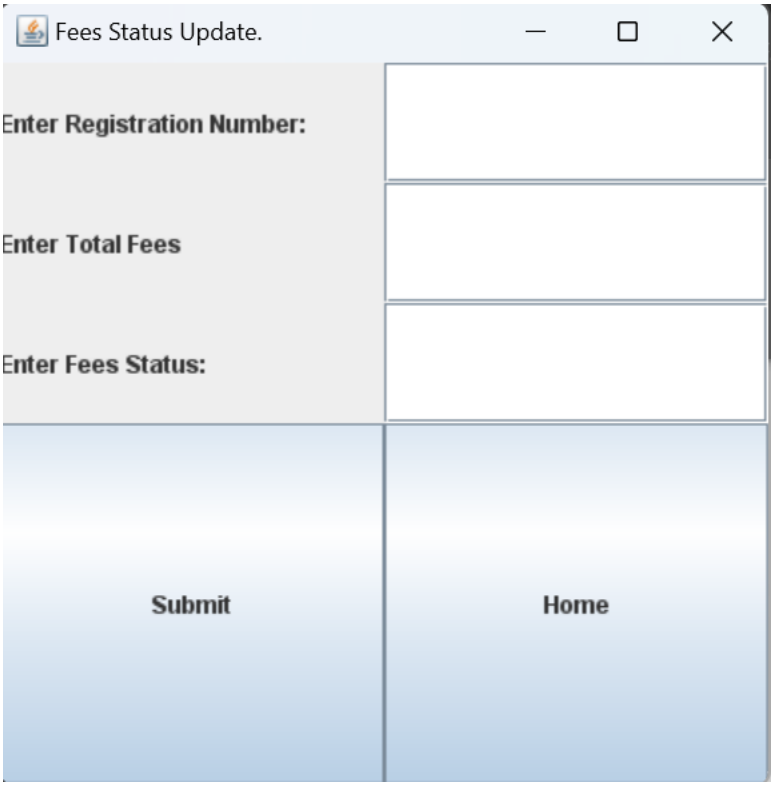
ADD ATTENDANCE:



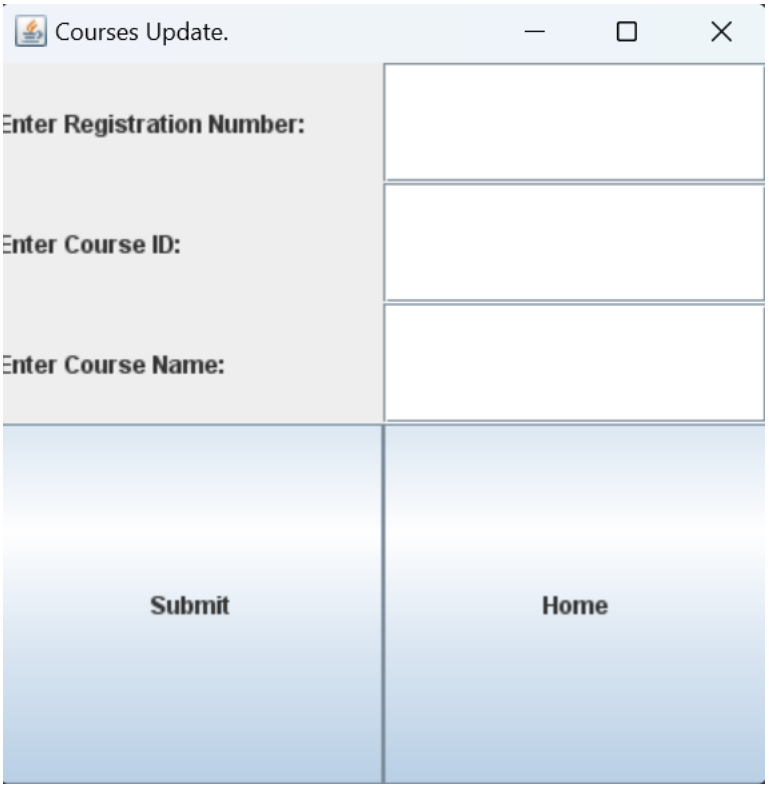
ADD GRADE:


Grade Update.
Enter Registration Number:
Enter Course ID:
Enter Grade Status:
Submit
Home

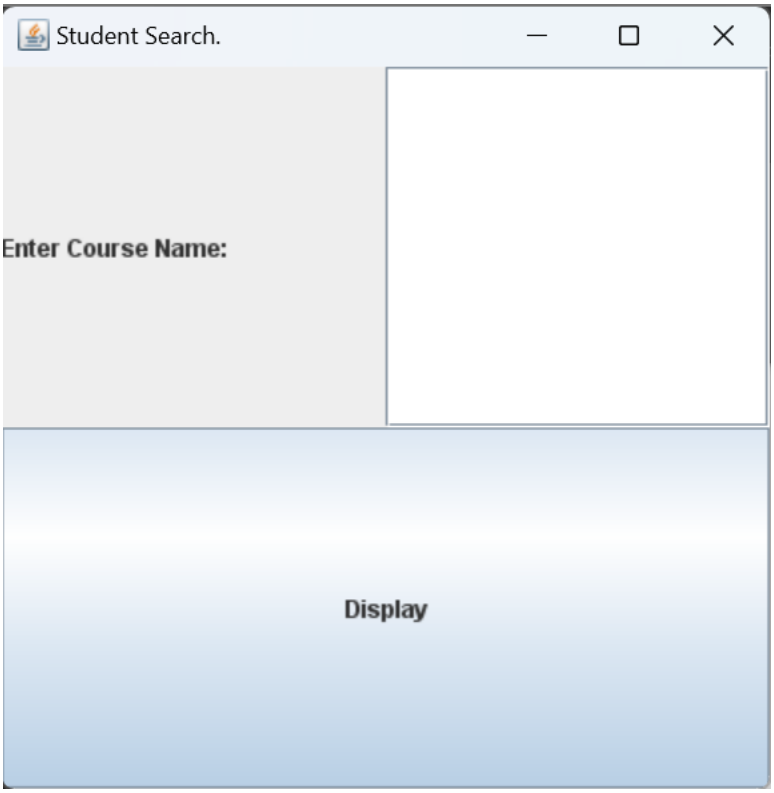
FEES UPDATE:


Fees Status Update.
Enter Registration Number:
Enter Total Fees
Enter Fees Status:
Submit
Home

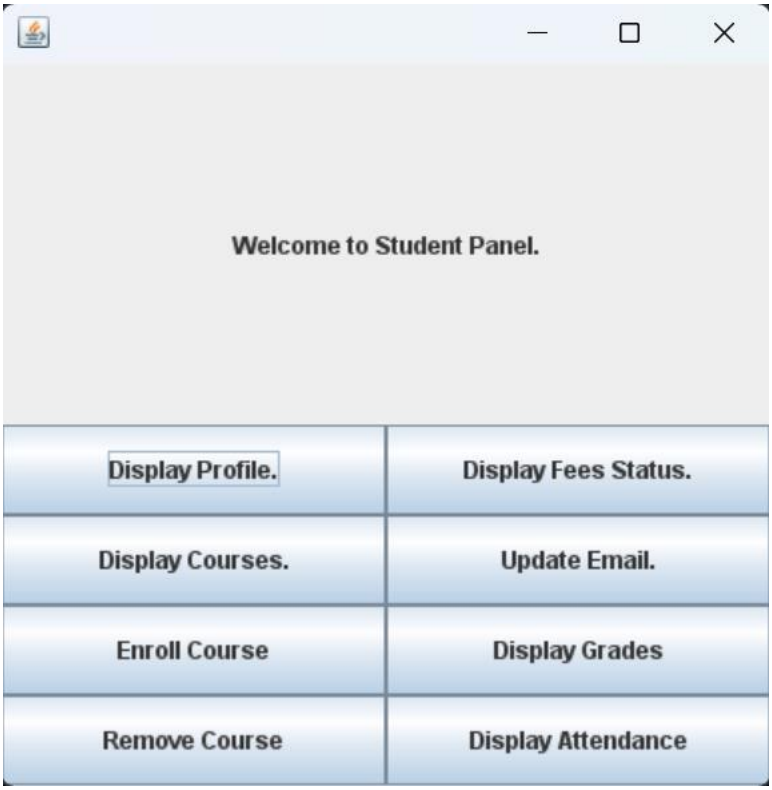
COURSE UPDATE:



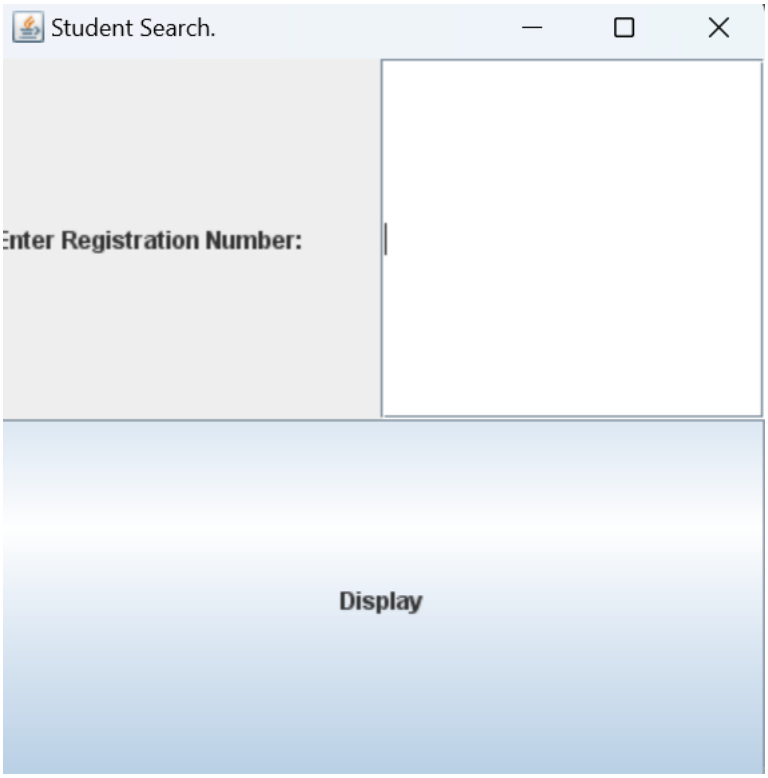
COURSE SAME REGISTRATION DISPLAY:

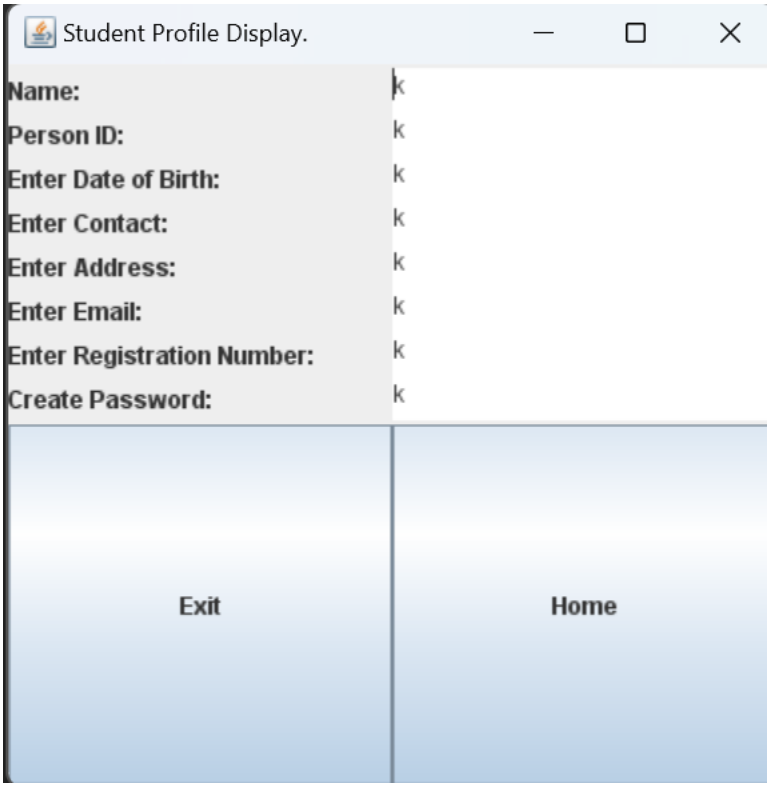


STUDENT PANEL:

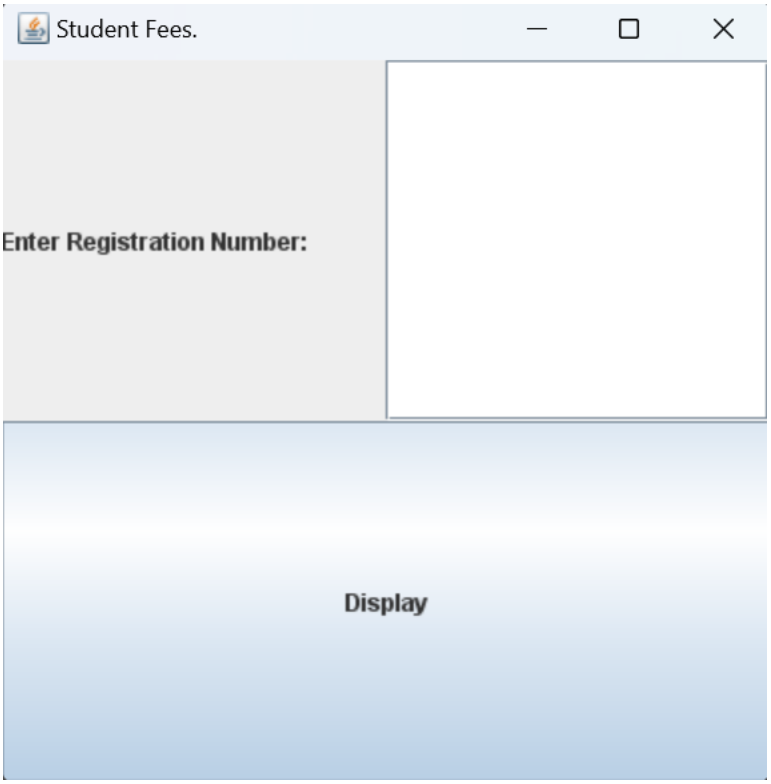


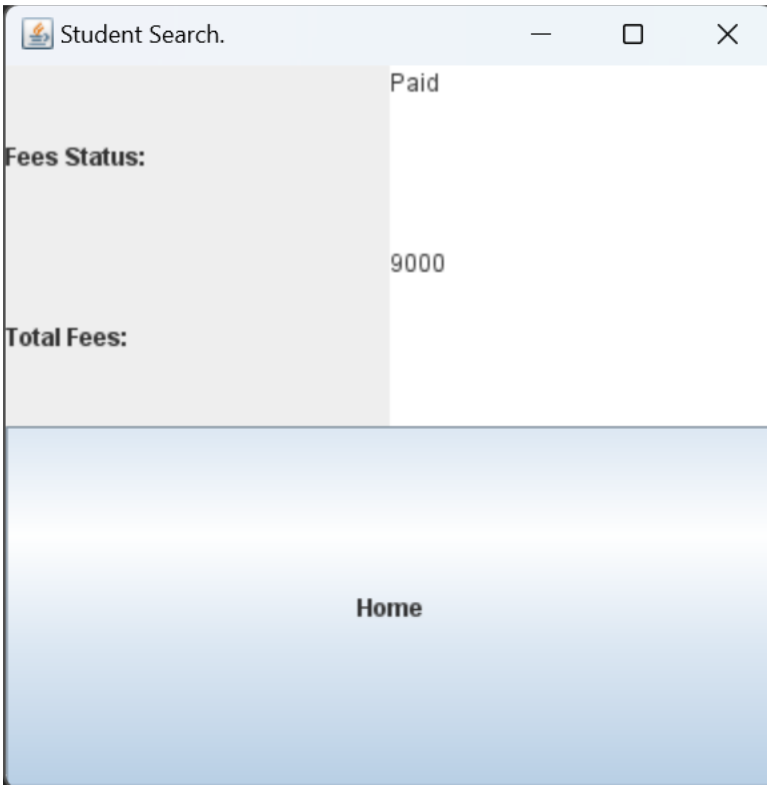
PROFILE DISPLAY:



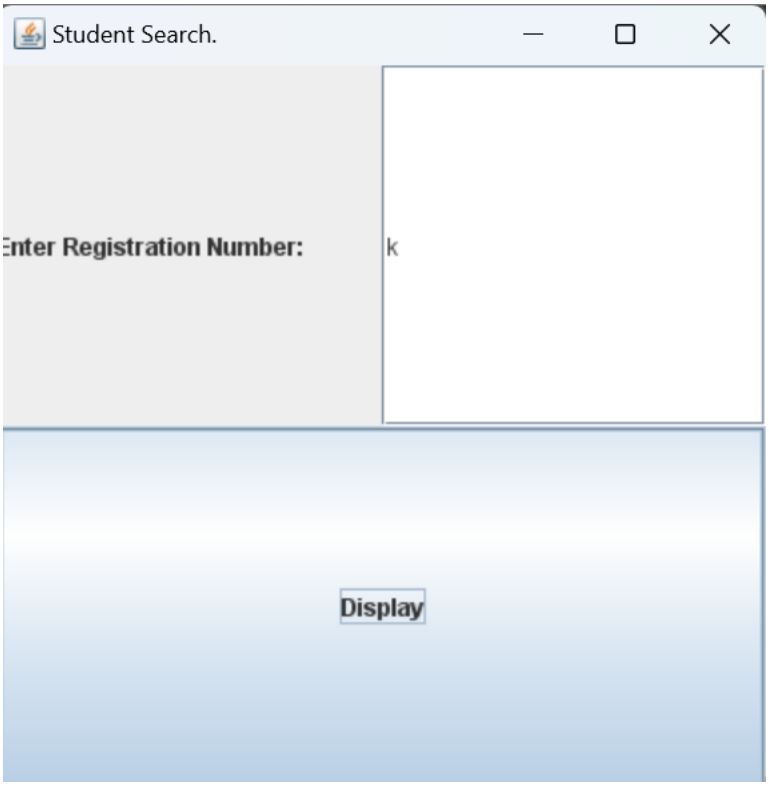


FEES STATUS DISPLAY:

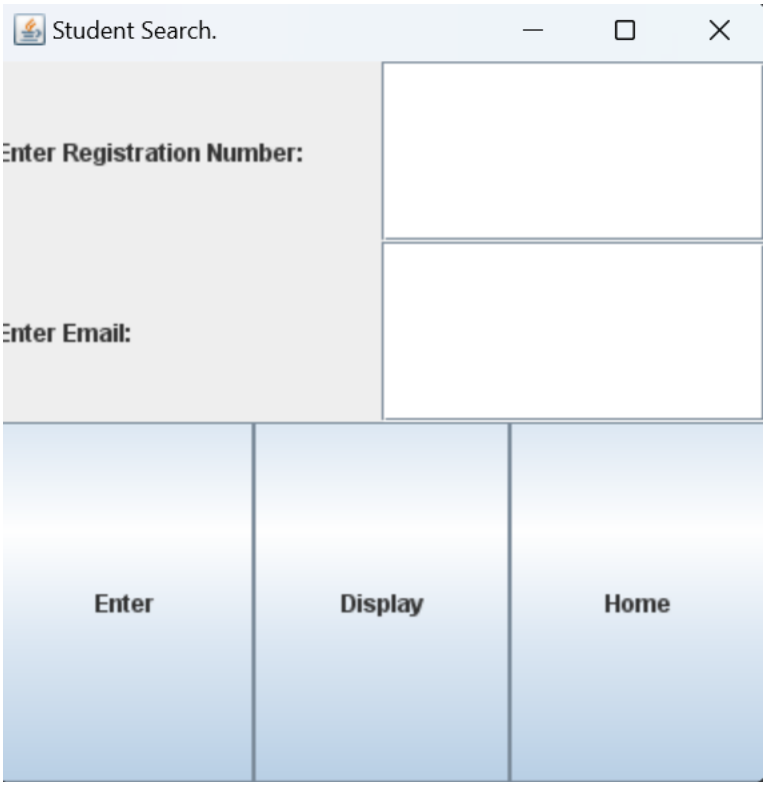




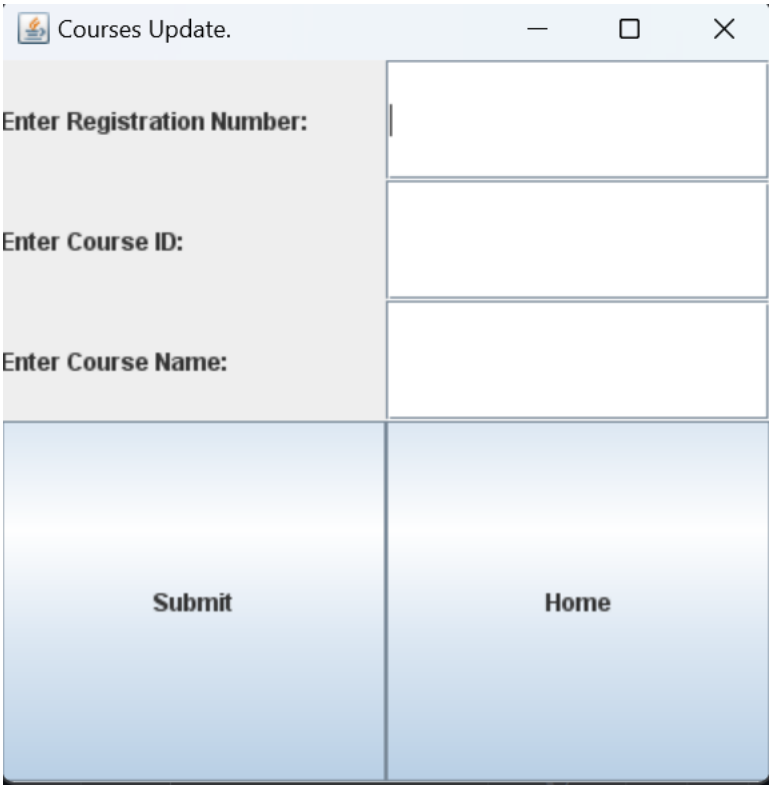
DISPLAY COURSES REGISTERED:



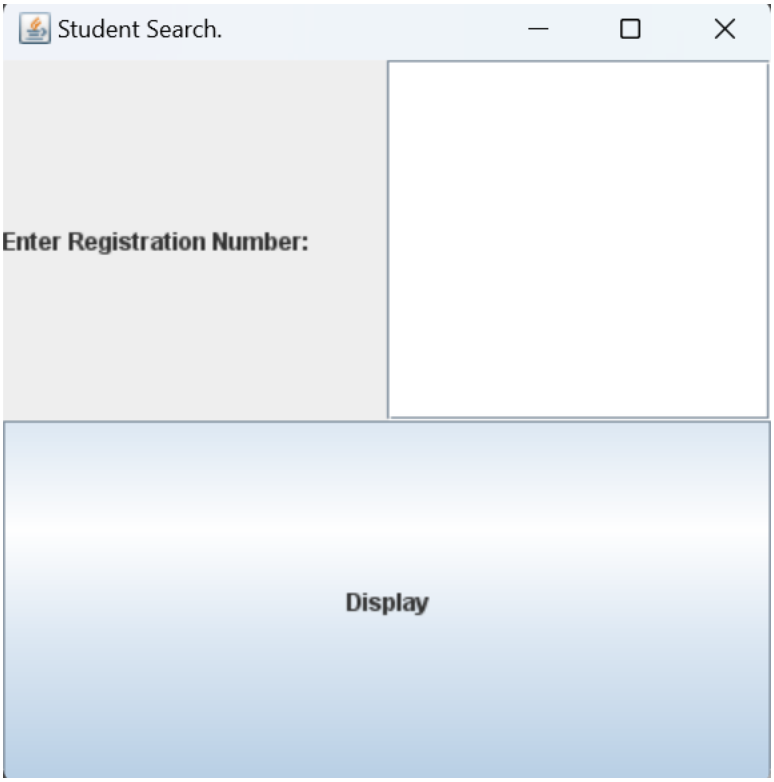
EMAIL UPDATE:



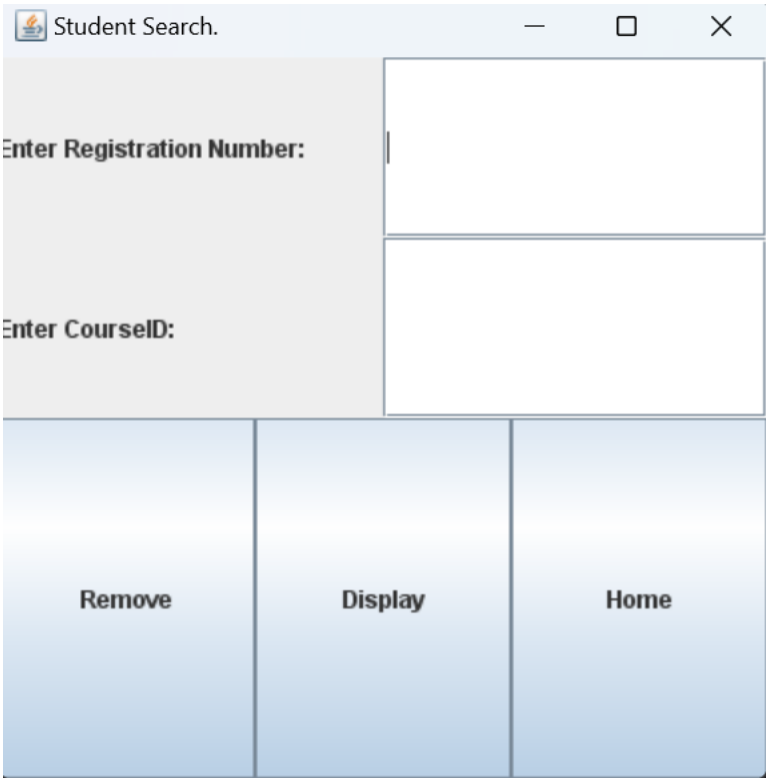
ENROLL IN COURSE:



GRADE DISPLAY:



REMOVE COURSE:



ATTENDANCE DISPLAY: