Assignment

```java
import java.util.ArrayList;

import java.util.HashSet;

import java.util.List;

import java.util.Set;


public class Student {

    private int studentId;

    private String studentName;

    private String emailId;

    private String event;


    public Student(int studentId, String studentName, String emailId, String event) {

        this.studentId = studentId;

        this.studentName = studentName;

        this.emailId = emailId;

        this.event = event;

    }


    public int getStudentId() {

        return studentId;

    }


    public String getStudentName() {

        return studentName;

    }
```

```java
public String getEmailId() {

    return emailId;

}


public String getEvent() {

    return event;

}


@Override
public boolean equals(Object o) {

    if (this == o) return true;

    if (o == null || getClass() != o.getClass()) return false;

    Student student = (Student) o;

    return emailId.equals(student.emailId);

}


@Override
public int hashCode() {

    return emailId.hashCode();

}


@Override
public String toString() {

    return "Student Id: " + studentId + ", Student Name: " + studentName + ", Email Id: " +
emailId;

}
```

```java
public static void main(String[] args) {

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


    students.add(new Student(5004, "Wyatt", "Wyatt@example.com", "Dance"));
    students.add(new Student(5010, "Lucy", "Lucy@example.com", "Dance"));
    students.add(new Student(5550, "Aaron", "Aaron@example.com", "Dance"));
    students.add(new Student(5560, "Ruby", "Ruby@example.com", "Dance"));
    students.add(new Student(5015, "Sophie", "Sophie@example.com", "Music"));
    students.add(new Student(5013, "Clara", "Clara@example.com", "Music"));
    students.add(new Student(5010, "Lucy", "Lucy@example.com", "Music"));
    students.add(new Student(5011, "Ivan", "Ivan@example.com", "Music"));
    students.add(new Student(5550, "Aaron", "Aaron@example.com", "Music"));


    // Print all students
    System.out.println("All Students:");
    for (Student student : students) {
        System.out.println(student);
    }


    // Example of using HashSet to find unique students
    Set<Student> uniqueStudents = new HashSet<>(students);
    System.out.println("\nUnique Students (based on emailId):");
    for (Student student : uniqueStudents) {
        System.out.println(student);
    }


    // Example of finding students who have nominated for both events
```

```java
        Set<Student> duplicateStudents = new HashSet<>();

        Set<String> seenEmails = new HashSet<>();


        System.out.println("\nStudents who have submitted nominations for both events:");

        for (Student student : students) {

            if (!seenEmails.add(student.getEmailId())) {

                duplicateStudents.add(student);

            }

        }

        for (Student student : duplicateStudents) {

            System.out.println(student);

        }

    }

}
```

Output

```
C:\Users\student\Desktop>java Student
All Students:
Student Id: 5004, Student Name: Wyatt, Email Id: Wyatt@example.com
Student Id: 5010, Student Name: Lucy, Email Id: Lucy@example.com
Student Id: 5550, Student Name: Aaron, Email Id: Aaron@example.com
Student Id: 5560, Student Name: Ruby, Email Id: Ruby@example.com
Student Id: 5015, Student Name: Sophie, Email Id: Sophie@example.com
Student Id: 5013, Student Name: Clara, Email Id: Clara@example.com
Student Id: 5010, Student Name: Lucy, Email Id: Lucy@example.com
Student Id: 5011, Student Name: Ivan, Email Id: Ivan@example.com
Student Id: 5550, Student Name: Aaron, Email Id: Aaron@example.com

Unique Students (based on emailId):
Student Id: 5013, Student Name: Clara, Email Id: Clara@example.com
Student Id: 5550, Student Name: Aaron, Email Id: Aaron@example.com
Student Id: 5015, Student Name: Sophie, Email Id: Sophie@example.com
Student Id: 5560, Student Name: Ruby, Email Id: Ruby@example.com
Student Id: 5004, Student Name: Wyatt, Email Id: Wyatt@example.com
Student Id: 5011, Student Name: Ivan, Email Id: Ivan@example.com
Student Id: 5010, Student Name: Lucy, Email Id: Lucy@example.com

Students who have submitted nominations for both events:
Student Id: 5550, Student Name: Aaron, Email Id: Aaron@example.com
Student Id: 5010, Student Name: Lucy, Email Id: Lucy@example.com
```