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import java.util.ArrayList;

import java.util.Collections;

import java.util.Comparator;

import java.util.List;


// Define a Student class to represent a student

class Student {

    String name;

    String rollNumber;

    double cgpa;


    public Student(String name, String rollNumber, double cgpa) {

        this.name = name;

        this.rollNumber = rollNumber;

        this.cgpa = cgpa;

    }

}


public class Main {

    // Comparator to compare students based on CGPA in descending order

    static class CGPAComparator implements Comparator<Student> {

        @Override

        public int compare(Student student1, Student student2) {

            // Sort in descending order of CGPA

            return Double.compare(student2.cgpa, student1.cgpa);

        }

    }


    // Function to sort a list of student objects based on CGPA in descending order

```



```

static void sortStudents(List<Student> students) {

    // Use the CGPAComparator to sort the list

    Collections.sort(students, new CGPAComparator());

}

public static void main(String[] args) {

    // Create a list of student objects

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

    students.add(new Student("Alice", "A123", 3.8));

    students.add(new Student("Bob", "B456", 3.5));

    students.add(new Student("Charlie", "C789", 3.9));

    students.add(new Student("David", "D101", 3.2));

    students.add(new Student("Eve", "E202", 4.0));

    // Sort the list of students based on CGPA

    sortStudents(students);

    // Print the sorted list

    System.out.println("Sorted List of Students by CGPA (Descending Order):");

    for (Student student : students) {

        System.out.println("Name: " + student.name + ", Roll Number: " + student.rollNumber + ", CGPA: " +
student.cgpa);

    }

}
}

```

