```java
import java.util.*;

public class StudentSort {

    public static void main(String[] args) {
        List<Student> stdList = new ArrayList<Student>();

        stdList.add(new Student("20160930", "윤동기", 88, 77, 66));
        stdList.add(new Student("20170930", "홍길동", 88, 97, 96));
        stdList.add(new Student("20180930", "개똥이", 76, 87, 92));
        stdList.add(new Student("20190930", "일지매", 75, 90, 80));
        stdList.add(new Student("20220930", "고길동", 66, 77, 88));
        stdList.add(new Student("20200930", "우영우", 66, 77, 88));

        System.out.println("정렬 전 : ");
        for (Student std : stdList) {
            System.out.println(std);
        }
        System.out.println();

        Collections.sort(stdList);
        System.out.println("학번 오름차순 정렬 : ");
        for (Student std : stdList) {
            System.out.println(std);
        }
        System.out.println();

        Collections.sort(stdList, new StudentScoreSum());
        System.out.println("총점 역순 정렬 : ");
        for (Student std : stdList) {
            System.out.println(std);
        }
        System.out.println();

        Collections.sort(stdList);
        System.out.println("총점이 같을때 학번의 내림차순");
        for (Student std : stdList) {
            System.out.println(std);
        }
    }
}


class StudentScoreSum implements Comparator<Student> {

    public int compare(Student str1, Student str2) {
        if (str1.getScoreSum() > str2.getScoreSum()) {
            return -1;
        } else if (str1.getScoreSum() == str2.getScoreSum()) {
            return 0;
```

```
51          } else {
52              return 1;
53          }
54      }
55  }
56
57  class Student implements Comparable<Student> {
58
59      private String studentID; // 오름차순 총점이 같으면 학번의 내림차순으로
60      private String name;
61      private int korScore;
62      private int engScore;
63      private int mathScore;
64      private int scoreSum; // 역순
65      private int rank;
66
67      public Student(String studentID, String name, int korScore, int
    engScore, int mathScore) {
68          super();
69          this.studentID = studentID;
70          this.name = name;
71          this.korScore = korScore;
72          this.engScore = engScore;
73          this.mathScore = mathScore;
74          scoreSum = korScore + engScore + mathScore;
75      }
76
77      public String getStudentID() {
78          return studentID;
79      }
80
81      public void setStudentID(String studentID) {
82          this.studentID = studentID;
83      }
84
85      public String getName() {
86          return name;
87      }
88
89      public void setName(String name) {
90          this.name = name;
91      }
92
93      public int getKorScore() {
94          return korScore;
95      }
96
97      public void setKorScore(int korScore) {
98          this.korScore = korScore;
99      }
```

```
100
101     public int getEngScore() {
102         return engScore;
103     }
104
105     public void setEngScore(int engScore) {
106         this.engScore = engScore;
107     }
108
109     public int getMathScore() {
110         return mathScore;
111     }
112
113     public void setMathScore(int mathScore) {
114         this.mathScore = mathScore;
115     }
116
117     public int getScoreSum() {
118         return scoreSum;
119     }
120
121     public void setScoreSum(int scoreSum) {
122         this.scoreSum = scoreSum;
123     }
124
125     public int getRank() {
126         return rank;
127     }
128
129     public void setRank(int rank) {
130         this.rank = rank;
131     }
132
133     @Override
134     public String toString() {
135         return "Student [학번=" + studentID + ", 이름=" + name + ", 국어점수="
    + korScore + ", 영어점수=" + engScore + ", 수학점수="
136                 + mathScore + ", 총점=" + scoreSum + ", 순위=" + rank + "]";
137     }
138
139     @Override
140     public int compareTo(Student std) {
141         return this.getStudentID().compareTo(std.getStudentID());
142     }
143
144 }
```