```
 1  namespace EXAMEN
 2  {
 3      public class Stadistics
 4      {
 5          public static double GetAverageIMC(Classroom classroom)
 6          {
 7              double result = 0.0;
 8              int count = 0;
 9
10              List<Student> list = classroom.StudentList;
11              for (int i = 0; i < list.Count; i++)
12              {
13                  result += list[i].GetIMC();
14                  count++;
15              }
16
17              if (count == 0)
18                  return 0.0;
19
20              return result / count;
21          }
22
23          public static Student GetBestStudent(Classroom classroom)
24          {
25              List<Student> list = classroom.StudentList;
26              Student studentResult = new Student();
27
28              double bestNote = 0.0;
29
30              for (int i = 0; i < list.Count; i++)
31              {
32                  if (list[i].Notes.GetMajorNote(list                    ↵
                      [i].Notes.ListSignatures) >= bestNote)
33                      studentResult = list[i];
34              }
35
36              return studentResult;
37          }
38
39          public static Student GetYoungestStudent(Classroom classroom)
40          {
41              List<Student> list = new List<Student>();
42              Student studentResult = list[0];
43
44              for (int i = 1; i < list.Count; i++)
45              {
46                  if (list[i].Age < studentResult.Age)
47                      studentResult = list[i];
48              }
49              return studentResult;
50          }
51
52          public static List<Student> GetSortStudentsWithSignature       ↵
```

```
            (Classroom classroom, Subject subject)
53          {
54              List<Student> listResult = classroom.StudentList;
55
56
57              for (int i = 0; i < listResult.Count; i++)
58              {
59                  List<Signature> listSignatures = listResult
                      [i].Notes.ListSignatures;
60
61                  for (int j = 0; j < listSignatures.Count; j++)
62                      if (listSignatures[j].Subject == subject)
63                      {
64                          listResult.RemoveAt(i);
65                      }
66              }
67
68              for (int i = 0; i < listResult.Count; i++)
69              {
70                  Student studentAux = new Student();
71                  if (listResult[i].Notes.ListSignatures[0].NotesSubject
                      < listResult[i + 1].Notes.ListSignatures
                      [0].NotesSubject)
72                  {
73                      studentAux = listResult[i];
74                      listResult[i] = listResult[j];
75                      listResult[j] = studentAux;
76                  }
77              }
78              return listResult;
79          }
80
81          public static List<Student> GetStudentsWithGender(Classroom
              classroom, Gender gender)
82          {
83              List<Student> listResult = classroom.StudentList;
84              for (int i = 0; i < listResult.Count; i++)
85              {
86                  if (listResult[i].Gender != gender)
87                  {
88                      listResult.RemoveAt(i);
89                      i--;
90                  }
91              }
92
93              for (int i = 0; i < listResult.Count - 1; i++)
94              {
95                  Student studentAux = new Student();
96                  for (int j = i + 1; j < listResult.Count; j++)
97                  {
98                      if (listResult[i].Age < listResult[j].Age)
99                      {
100                         studentAux = listResult[i];
```

```
101                         listResult[i] = listResult[j];
102                         listResult[j] = studentAux;
103                     }
104                 }
105             }
106
107             return listResult;
108         }
109
110         public static string GetStadistics(Classroom classroom)
111         {
112             List<Student> listResult9 = new List<Student>();
113             List<Student> listResult7 = new List<Student>();
114             List<Student> listResult5 = new List<Student>();
115             List<Student> listResult3 = new List<Student>();
116             List<Student> listResult0 = new List<Student>();
117
118             for (int i = 0; i < classroom.StudentList.Count; i++)
119             {
120                 if (classroom.StudentList[i].Notes.GetAverageNotes() >= ↵
                        9)
121                     listResult9.Add(classroom.StudentList[i]);
122
123                 if (classroom.StudentList[i].Notes.GetAverageNotes() >= ↵
                        7 &&
124                     classroom.StudentList[i].Notes.GetAverageNotes() <  ↵
                       9)
125                     listResult7.Add(classroom.StudentList[i]);
126
127                 if (classroom.StudentList[i].Notes.GetAverageNotes() >= ↵
                        5 &&
128                     classroom.StudentList[i].Notes.GetAverageNotes() <  ↵
                       7)
129                     listResult5.Add(classroom.StudentList[i]);
130
131                 if (classroom.StudentList[i].Notes.GetAverageNotes() >= ↵
                        3 &&
132                     classroom.StudentList[i].Notes.GetAverageNotes() <   ↵
                       5)
133                     listResult3.Add(classroom.StudentList[i]);
134
135                 if (classroom.StudentList[i].Notes.GetAverageNotes() >= ↵
                        0 &&
136                     classroom.StudentList[i].Notes.GetAverageNotes() <   ↵
                       3)
137                     listResult0.Add(classroom.StudentList[i]);
138             }
139
140             string result = "";
141
142             result += "El numero de estudiantes con nota media superior ↵
                    a nueve es: " + listResult9.Count + "\n";
143             result += "El numero de estudiantes con nota media superior ↵
```

```
                a siete es: " + listResult7.Count + "\n";
144             result += "El numero de estudiantes con nota media superior ↪
                a cinco es: " + listResult5.Count + "\n";
145             result += "El numero de estudiantes con nota media superior ↪
                a tres es: " + listResult3.Count + "\n";
146             result += "El numero de estudiantes con nota media superior ↪
                a cero es: " + listResult0.Count + "\n";
147
148             return result;
149         }
150     }
151 }
152
```