Wrocław, 10.10.2014

Assignment #2

1. Define the following enumeration type Colour

```
public enum Colour {
 WHITE, BLACK, RED, YELLOW, BLUE;  //; is required here.
        public String toString() {    //only capitalize the first letter
         String s = super.toString();
         return s.substring(0, 1) + s.substring(1).toLowerCase();
        }
};
```

2. In a similar manner define the enumeration type Gender with two values: FEMALE, MALE.
3. Define a class Student that describes a student.
    a. It should contain the following private data members. Their default values are put in ().
        i. id: a unique integer; any call to any constructor should increase the value of Id so use a static data member in implementation.
        ii. lastName – a String of up to 20 characters, longer names are to be truncated. It is made up of an upper case letter followed by lower cas latters. Change the case if necessary. ("Zx")
        iii. firstName: a string, allowable values are: "Ann", "Barbara", "Andrew", "Ben". ("")
        iv. height – an integer (from 120 to 210, default 180)
        v. weight - a double value; (from 30 to 130, default 70.0)
        vi. eyeColour – Colour (BLUE)
        vii. gender – Gender. (MALE)
        viii. remarks - a String ("");
    b. and interface (public) methods:
        i. constructor without any parameters.
        ii. constructor with parameters: lastName, firstName, height, weight, eye colour, gender.
        iii. void print(bool full); // with full==true the method prints in a readable manner all data members, with full==false only the first and last name are printed.
        iv. and getters and setters for all data members except id.

4. Define a class StudentGroup that contains an array of up to k references to the Student objects; where k is the only parameter of its constructor. The class should include at least the following methods:
    a. boolean addStudent(Student st); // inserts a student in the array, equal students are not allowed, the size of the array could not change.
    b. void showStudents(bool full); // all of them
    c. void showRemarks(); // prints out names and remarks of all students.
    d. void showRemarks(String text) // as above but the remarks must contain the string text.
    e. void showRemarks(String text, Gender g) // as above but the student must be of a proper gender.
    f. boolean remove(int i)- removing the ith element from the array.

Andrzej Siemiński