# Object Oriented Programming

## Problems Definition – Common Type System

1. **Define a class Student, which contains data about a student – first, middle and last name, SSN, permanent address, mobile phone e-mail, course, specialty, university, faculty. Use an enumeration for the specialties, universities and faculties. Override the standard methods, inherited by System.Object: Equals(), ToString(), GetHashCode() and operators == and !=.**
2. **Add implementations of the ICloneable interface. The Clone() method should deeply copy all object's fields into a new object of type Student.**
3. **Implement the IComparable<Student> interface to compare students by names (as first criteria, in lexicographic order) and by social security number (as second criteria, in increasing order).**
4. **Create a class Person with two fields – name and age. Age can be left unspecified (may contain null value. Override ToString() to display the information of a person and if age is not specified – to say so. Write a program to test this functionality.**
5. **Define a class BitArray64 to hold 64 bit values inside an ulong value. Implement IEnumerable<int> and Equals(…), GetHashCode(), [], == and !=.**