

Laboratory 2

Tasks

Create the class **Set** representing a set of integers. This class is to implement the interface **ISet**. The elements of the set are to be stored in an array. The methods should be implemented:

- a. load - read the elements of the set from a text file.
NOTE: elements of the set can not be repeated. The load method is to ensure that there are no duplicates in the set [2p]
- b. print - write elements of the set onto the console [1p]
- c. add - adding elements to the set (with duplicate control) [1p]
- d. delete - deleting an element from the set [1p]
- e. contains - checks whether the given item belongs to the set [1p]
- f. isEqualTo - checks whether two sets contain exactly the same elements.
NOTE - the order of elements does not matter [1p]
- g. methods implementing algebraic operations on sets [3p]
 - i. sum (union)
 - ii. product
 - iii. difference
 - iv. symmetrical difference

```
public interface ISet {
    public void load(String filename);
    public void rite();
    public void add(int nowy);
    public void delete(int element);
    public boolean contains(int element);
    public boolean isEqualTo(IZbior drugi);
    public IZbior sum(IZbior drugi);
    public IZbior difference(IZbior drugi);
    public IZbior product(IZbior drugi);
    public IZbior symmetricalDiff(IZbior drugi);
}
```

Next week:

Stacks. Stacks representations. Operations on stacks. Applications of stacks.