

Programming III

Laboratory 6

Objectives

- Collections
- Comparing objects
- Streams
- Exceptions

Exercises

1. Resolve the following requests:

- Create a class Person that has like attributes first name, last name, last attendee studies and year of birth.
- Validate the name of persons two have at least 2 chracters.
- Create a generic class Pair that has two members the (x,y). Create set/get methods, constructor, a method that allows the displaying of an object of type pair and a method for switching the order of pair members.
- Create a list of type pairs of Persons and display the list
- Sort the list of pairs of persons based on first pair member last name, and if 2 persons have the same last name, based on second pair member last name
- Create a map that has like key the last attendee studies and like value the list of persons that done that studies (from the list of pair). Display the map
- From Person class derive classes Employee that has a salary and a class Student that has an attribute telling how many semesters it performed without taxes.
- Crete a method that allows to display list of Persons, list of Employee and lists of Students but does not allow to display list of pairs of persons
- Modify the pair class in order to allow the creation only just of pairs of persons
- Find the oldest Person from the list of pairs.

2. Create a class Flower that has a name, a species and a price.

- Create a list of lowers and display it
- using aggregate operation
 - calculate the average price from the flower list
 - display the flowers that belongs to a species that is passed like argument on command line
 - extract a list of flowers that name starts with a substring

OBS: For each requirement create a separate method