# Homework8

Presentation of the notions of virtual function and polymorphism for language C ++ programming.

April 2021, Draghici Andreea, CR2.1B

## 1 Task:

**1. Build a class hierarchy that describes dog breeds. It is considered the class basic Caine, and from it is derived the class CaineCuPete and the class CaineFaraPete. About a dog knows the following information: name, height, weight, age, color. The number of spots is also known about spotted dogs. Define for each class a function for reading data, respectively one for displaying; both functions will be virtual functions.**

**2. Create a class hierarchy that describes the habitat of the animals in a natural reserve. The following animals can be found in the reserve: rabbits, bears, deer,foxes and lions. Some of the animals are herbivores, others carnivores or even herbivores and carnivores. The class hierarchy will have the basic class CAnimal, abstract class, from which they will be derived two classes: Herbivorous Animal and Carnivorous Animal. For each type of animal will design an appropriate class that will extend one of the above classes, or both classes, corresponding to the way the animal is fed. The following common information is known about an animal: name, date of arrival, weight, preferred food, amount of food per day. In addition, the surface is known about the rabbit the minimum he can live on; about the fox - the maximum temperature it can withstand, the type (polar, indigenous); about the lion - the minimum temperature supported, the country of origin; about bear - hibernation period; about deer - the number of chickens. For each class they will implement both a data reading function and a data writing function which will be declared as purely virtual functions within the basic class CAnimal. Let's design a Creservation class containing a lot of animals and populating them reservation.**