

# PPJ13

December 7, 2022

## 1 Problem 1

Create a class Fruit with two fields: **String name** and **double weighth**. The name of fruit will be initialised by value passed to the constructor, the weighth will be initialised by a random value between 0.5 and 0.8.

Then create show method which will print out on the console all information about the Fruit.

## 2 Problem 2

Let's assume one balloon filled with 0.007m3 helium can lift 6 grams. Create a Balloon class which will have:

- Default constructor - which will randomly assign how much helium the balloon is filled with. (between 0.005 and 0.009m3)
- getLoad method - which will calculate the weight the balloon can lift.

Additionally create a class Donkey, which will have private fields: double mass (in kg), and one-dimensional array of Balloons. Next create methods:

- addBalloon(Balloon) which will add the balloon to the existing array
- isFlying() which will return true if the amount of balloons in donkey allow it to be lifted.

Create a program which will add so many balloons to Donkey, so that it will lift off and exclaim: "I am flying!"

Make it so that the array of Balloons will have the same size as the Balloons stored in there.

## 3 Problem 3

Create a Point2D class which has two fields: x and y. Then create methods:

- get - which will return one-dimensional array of values [x, y, 1].
- set - which will assign values to x and y based on one-dimensional array [x, y, 1] passed as an argument.