

Assignment 1

Create the *ExceptionsDemo* class with the following elements:

- the *numbers* attribute that represents an array of int values;
- A method that prints (on the console) the first element of the *numbers* array;
- A method that creates the *numbers* array with the capacity of 10 elements; the method should also print (on the console) the 11th element of the array.

Create the *TestExceptionsDemo* class. In the *main* method of this class, create an object of the *ExceptionsDemo* class and call its methods (one by one).

Add to the class *ExceptionsDemo* the following methods:

- A method that receives an argument of the type String and returns its length. If the received argument is null, the method throws an exception with an appropriate message.
- A method that receives, as its input parameter, a number representing the height of a person. The method should first check if the height is in the bounds (120cm – 250cm). If the height is out of the bounds, the method throws an exception with an appropriate message. Otherwise, the method prints on the console the height category the person belongs to (height <160 – low-height; 160<= height <185 – average height; 185 <= height – above average height). (*students should do this method on their own*)
- A method that receives, as its input parameter, a number representing the age of a person. The method should first check if the age is in the bounds (0 – 125). If the age is out of the bounds, the method should throw a CHECKED exception with an appropriate message. Otherwise, the method prints on the console the age category the person belongs to (age<30 – a young person; 30<= age <56 – a middle-age person; 56 <= age – an elderly person).

In the *TestExceptionDemo* class call the method for determining a person's age category.

Assignment 2

Create the *KeyboardInput* class with:

- A static method that reads a string from the keyboard and writes that string to the screen with an appropriate message.

Create the *TestKeyboardInput* class. In its main method call the *KeyboardInput*'s method for reading a string from the keyboard.

Add the following methods to the *KeyboardInput* class:

- A static method that reads a decimal number from the keyboard and prints on the console its square with an appropriate message.
- A static method that reads an int value from the keyboard, checks if that value is odd or even and prints an appropriate message on the console. (*students should do this method on their own*)
- A static method that reads a sentence from the keyboard and prints on the console the number of words in the sentence. (*students should do this method on their own*)

Test all the methods within the *TestKeyboardInput* class.