

Assignment 8

Hand-in date: Monday 02-11-2015 15:00h

8.1 Write a program that creates an array with 100 randomly chosen integers. Prompt the user to enter an index of the array, and display the corresponding element value. If the specified index is out of bounds, display the message “Out of Bounds” by catching the **ArrayIndexOutOfBoundsException**. Continue prompting for input until the user enters a valid index.

8.2 Create a custom exception **MyException**. Write a method that checks whether an integer is negative and if it is, throws **MyException** with the message “**Integer must not be negative**”.

8.3 Write a program that creates a file named **hello.txt** if it does not exist (hint: you can use the **createNewFile()** method from the **File** class to create a file). Store the message “Hello, World!” in the file. Read the text back from the file and display it.

8.4 Write a program that creates a file named **Exercise8_4.txt** if it does not exist. Write 100 integers created randomly into the file. Integers are separated by spaces in the file. Read the data back from the file into an array and display the data in increasing order (hint: you can use **Arrays.sort**)

8.5 Write a method that will count the number of characters, words, and lines in a file. Words are separated by whitespace characters. For example a file with the text:

*Mary had a little lamb
Whose fleece was white as snow.
And everywhere that Mary went,
The lamb was sure to go!*

Contains 4 lines, 22 words, and 89 characters.

8.6 (OPTIONAL) Write a program that removes all the occurrences of a specified string from a text file.