

COMP1039 – PGP - Java

Lab 3

5.1

Use the **Scanner** to read an integer from the keyboard (use the method **nextInt()**) and then output its value to the console. For example, after executing your java program, the following string should appear:

“Enter an integer number:”

You then need to type in an integer number, e.g, 5. The corresponding output should be:

“The input integer number is 5”

You will also need to handle potential exceptions, for example, if a string or any other primitive type data is received by the scanner then an **InputMismatchException** will arise and you need to catch that exception and output the following string to the console:

“The input should be an integer.”

Don’t forget to import the **java.util** package as both the scanner class and the **InputMismatchException** are defined in this package.

5.2

Modify the program you have for task 5.1, such that it continuously read integers from the keyboard until 0 is received. It then output the total summation value to the console. As in 5.1, any potential exceptions should be handled. For example, if a string is passed to the scanner, the program will ask the user to type in another integer number rather than halt immediately.

Note, if you use **nextInt()** to read a non-integer value, an exception will arise and the current cursor will remain at the same position until this non-integer value is read.

5.3

Use the **BufferedReader** to read an integer from the keyboard. Other requirements are the same as in task 5.1. Remember you need to import package **java.io** to use the **BufferedReader** class. Use the integer type wrapper to translate a string to an integer will potentially cause the **NumberFormatException**.

5.4

Use the **BufferedReader** class to finish task 5.2.

5.5

Read the content of a file called **input.txt**, make all the alphabetic letters to uppercase and then write the results to a file called **output.txt**. You may find the java built-in method **toUpperCase()** useful, which is defined in the class **String**.

For example, if “se li As Tum 23” is stored in the input file, then we should write “SE LI AS TUM 23” to the output file.