Lab 6 - Java I/O, Reader/Writer, InputStream/OutputStream

This lab contains in-class exercises related to Java I/O, Reader/Writer, InputStream/OutputStream, Serialization

Task 1: Develop a class called `ByteTest` to print all byte values, signed and unsigned.

Task 2: Implement a method with the following signature

```
public static String toBinaryString(byte b)
```

It takes a byte and returns a String with the binary representation of its input

Use this method in class called `ByteBinaryValue` so that we can print any binary value for a byte. Use also `Integer.toBinaryString()` method from Integer class to print the binary value of an `Integer`. Test your implementation for `byte b = -1` and `int i = -1;`

Task 3: Develop a class called `CountSpace` so that you can count space from a file or from the standard input (console)

A character is a Java whitespace character if and only if it satisfies one of the following criteria: It is a Unicode space character (`SPACE_SEPARATOR, LINE_SEPARATOR,` or `PARAGRAPH_SEPARATOR`) but is not also a non-breaking space (`'\u00A0', '\u2007', '\u202F'`). It is `'\u0009', HORIZONTAL TABULATION`.

Hint: you can use `Character.isWhitespace()` to find out if a character is a whitespace char. You could run your program as

```
java CountSpace filileName
```

or

`java CountSpace` then by hitting [Enter] text on a single line followed by [Ctrl C or D]

Task 4: Write a program so that you can search for the first occurrence of `<char>` in the `<file>`. You should print the file line number where the `<char>` was found.

Run it as: `java FindChar <char> <file>`

Task 5: Read the `TranslateByte.java` program. What is the output of this program when you run it like this `java TranslateByte a X.` Type the text `"Java language"` on a new line.