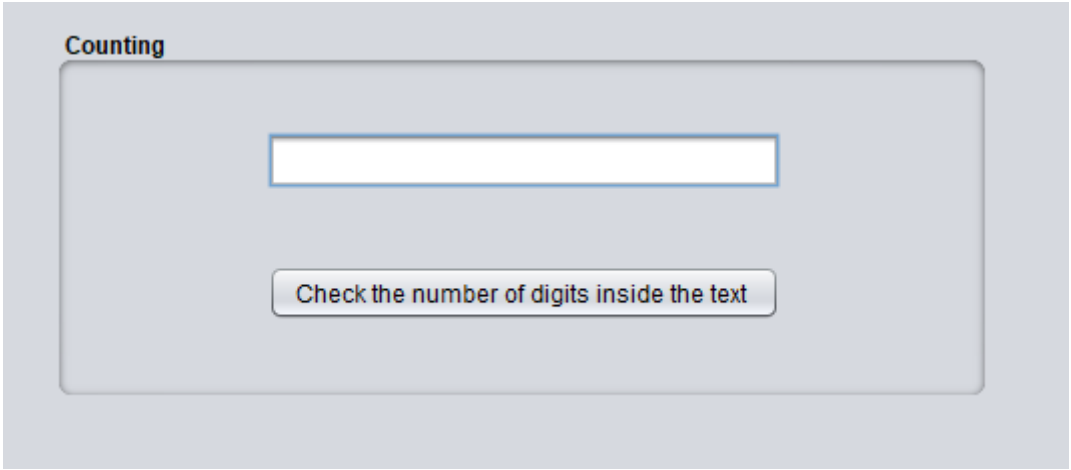
Exercise 4

In this exercise you learn basic creation of GUI in Java Swing library (GUI stands for Graphical User Interface).

1. Follow the lecture 4 and create the first example from the lecture. The example that rewrites name to a label component.
2. Try to run the project from point 1 as an application, without using NetBeans.
3. On the basis of the code from lecture 4 create an application that looks similarly as the example below:

Double click on every button and add appropriate code from lecture 4. Try out different configuration options for Confirm Dialog.

4. Create an application that looks similarly to the example below:



The application should count the number of digits inside given text. Use for this task the functions charAt, length from class String as well as the function `isDigit` from the `Character` class. You have to import the Character class into your source file (use Fix Imports). Display the number inside a MessageBox or use a label (add to the form).

5. Create program with GUI that implements the functionality of Ceasar's cipher. Program should contain a textfield where user can enter the message to code, labels that display alphabet and result code. A textfield that allows user to enter the key for the code should also be also present. Program should encrypt the message when user clicks a button.
6. Create program with GUI that implements the functionality of Ceasar's cipher. Program should contain a textfield where user can enter the coded message, a textfield that allows to enter the alphabet, a label that displays the decrypted message. A textfield that allows user to enter the key for the code should also be present. Program should decrypt the coded message when user clicks a button.
7. Add to program from point 5 a button that will create a random sequence of letters from alphabet. The new alphabet should be used in Ceaser's cipher. Use Math.random() and Math.round().

For upload section you upload only part of the solution for point 7. Only the fragment of the program the contains random sequence generation.