

## ENGINEERING 1D04, Lab 8: File I/O

This assignment should be submitted via ELM before the end of the lab session. If you are not done the lab, please finish it at a later time and submit it using ELM. Although the submissions for unmarked labs are not graded, it is good to have a record of the work that you have done in ENG 1D04.

**Assignment: File I/O.** Set up a form as shown in Figure 1.

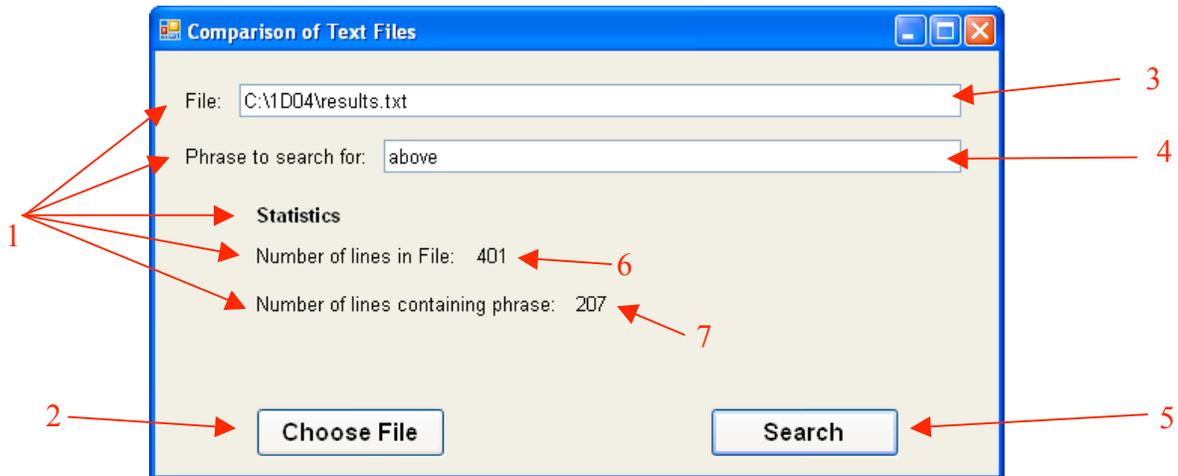


Figure 1

### Requirements

1. Information labels. Arial 12 point.
2. Button labelled as shown. Arial 12 point. When clicked, the user is shown an open file dialog. The dialog shall allow the user to select the file that will be used (now called File). When selected, the filename must be displayed in textbox (3), and the number of lines in the file displayed in (6).
3. Textbox containing full path name of File. Arial 12 point. User can enter a file name to do the search, but it is assumed that the file name will come from the open file dialog.
4. Textbox containing a phrase to search for. Arial 12 point. The user must enter the phrase. For this example use phrases “above” and “below” to test the application. (Test with others also.)
5. Button labelled as shown. Arial 12 point. When clicked, the lines in File shall be searched. The number of lines in File that contain at least one occurrence of the phrase specified in (4) shall be displayed in label (7). If the name of File is name.txt, then a new file called name2.txt should be created, containing the lines from File, but in each line, the first occurrence of the phrase in (4) shall be converted into uppercase. [You can use `s.ToUpper()` to convert a string `s` to its uppercase equivalent.]
6. Label in Arial 12 point. The label shall show the number of lines in File. If no lines in File, label shall display “none”. Initial value and when File’s name is changed, shall be “none”.
7. Label in Arial 12 point. The label shall show the number of lines in File in which there is at least one occurrence of the given phrase. Its initial value, and when File’s name is changed, shall be “none”.
8. Assume no checking for valid file name when the “Search” button is clicked.

9. Apart from your own tests, test your program on the file “results.txt”. This file is available for download on ELM. It is zipped so download the zip file and then extract the file. ***Store the file in a folder other than the working directory for Visual Studio.*** Use the phrases “above” and “below” as well as any phrases you think appropriate.

**Extra:** Protect against crashes if the user enters an invalid filename for the File or an empty string for the phrase.