# Blue Prism Technical Test

Write a console application in Python that takes the following command-line arguments:

**DictionaryFile** - the file name of a text file containing four letter words (included in the test pack)

**StartWord** - a four letter word (that you can assume is found in the DictionaryFile file)

**EndWord** - a four letter word (that you can assume is found in the DictionaryFile file)

**ResultFile** - the file name of a text file that will contain the result

Your program should calculate the shortest list of four letter words, starting with StartWord, and ending with EndWord, with a number of intermediate words that must appear in the DictionaryFile file *where each word differs from the previous word by one letter only.* The result should be written to the destination specified by the ResultFile argument.

For example, if StartWord = Spin, EndWord = Spot and DictionaryFile file contains

Spin

Spit

Spat

Spot

Span

then ResultFile should contain

Spin

Spit

Spot

Two examples of incorrect results:

Spin, Span, Spat, Spot (incorrect as it takes 3 changes rather than 2)

Spin, Spon, Spot (incorrect as spon is not a word)

Your solution should deal with the case where the dictionary file is not in alphabetical order.

Please explain the thought/development process you went through to achieve your solution. Your solution should be both elegant and maintainable. Extra points awarded for solutions that have an emphasis on how the code will be tested, and performance implications.