

## Searching Exercises

1. Prompt the user to enter 5 names and their respective phone numbers and store them in two arrays (name and phone array). Sort the names in alphabetical order using the selection sort and save it.
  - a) Prompt the user to enter a name to search in the array
  - b) Find the name in the array using the binary search method (write method)
2. Use the file, 'wordlist.txt' and write a program that includes the following:
  - a. A method that opens this sorted file 'wordlist.txt' and should read the words in it and store it to a data structure of your choice.
  - b. A method called `binarySearch( )` that accepts a word as a parameter and your method, should search **iteratively** whether the given word exists in the data structure that you used to store all the words and should return true if the word exists in the list and false if it doesn't.
  - c. Modify the above to be a `recursiveBinarySearch( )` method.
  - d. Test the two methods you wrote in b) and c) with similar data and record your observations in terms of running time. Did you notice any difference?