

# Homework 3, CSCE 240, Fall 2016

## Overview

The goal of this assignment is to have you learn to read from and write to multiple files and to get practice dealing with strings and tokenizing of strings.

You are given input data that is a list of phone book items, one item per line. Each line will turn into one instance of a **Record**. You are to read the data into a **vector** of **Record** instances and then to be able to sort either by surname or by phone number.

## Assumptions about the input data

The input data will consist of three or more tokens per line. The first token will be the **forename**. The last token will be the **phoneNumber**. The penultimate token will be the **surname**. Any intermediate tokens will be taken as the “other name”.

You may assume the input data has no instances of a “Jr.” or a “Sr.” or a “III” or something like that.

You may assume that all individuals have at least a **forename** and a **surname**. (e.g., the MIT computer science professor whose name is just “Arvind” will not show up in the list.) Thus there are at least three tokens in every line, and if there are more than three tokens all the tokens in the middle can be pulled together into the **othername**.

You are required to read the data into a **vector** of **Record** instances and to output the **vector** once in the order in which the data is read in, then again sorted by surname, and then again sorted by phone number.

You may use any sorting algorithm or code that you want.