PRINCP IN SYS DESGN, Lab 1

I&C SCI 53, Course Code: 36670
Quarter: Spring Quarter 2015

You need to write a *Record Keeper* program which allows you to view and manipulate data records. Assume that all records are initially contained in a *record file* which contains one record on each line of the file. Each record in the record file contains three data items separated by tab characters. The three data items are name, address, and phone number, in that order. For example, a record file containing three records might look like this:

```
Joe Smith    10 Main St.    555-1212
Jane Winter    11 Main St.    555-2323
June Spring    12 Main St.    +1-49-101-555-1212
```

Your record keeper program should prompt the user for a command, perform the command, and then prompt for the next command. Your program should support the following 5 commands:

- **read** - Read a record file from disk and represent its contents in memory using data structures of your choosing. This command takes one argument, the name of a record file to be read. This command does not print any output.
  Example use:

  ```
  > read test.rec
  >
  ```

- **write** - Write a record file to disk which contains the records currently stored in memory using data structures of your choice. This command takes one argument, the name of the record file to be written to disk. The command does not print any output.
  Example use:

  ```
  > write test.rec
  >
  ```

- **print** - Print all of the records currently loaded into memory, in order. Each record should be printed on a single line and should be prefixed with a unique number which indicates its order with respect to the other records.
  Example use:

  ```
  > print
  1 Joe Smith    10 Main St.    555-1212
  2 Jane Winter    11 Main St.    555-2323
  3 June Spring    12 Main St.    +1-49-101-555-1212
  >
  ```

- **delete** - Deletes a record from the your memory store. This command takes one argument which is the number of the record to be deleted. Note that the remaining records should be renumbered from 1 so that there is not a gap in the record numbering.

  Example use:

  ```
  > delete 2
  > print
  1 Joe Smith    10 Main St.    555-1212
  2 June Spring    12 Main St.    +1-49-101-555-1212
  >
  ```

- **quit** - This command takes no arguments and it ends the execution of your program.

TAs will tell you how to upload your work to the website.
