CS1050 – Prelab 10
Fall 2024

Concepts to Practice
- Pointers
- Strings
- Arrays of Strings
- Testing

Description
For the prelab assignment, you need to implement a program that takes pre-defined arrays of string literals, and reorders them as specified in the starter code.

To get started on this prelab, type the following while logged in to hellbender.rnet.missouri.edu:

    cs1050start prelab10

This command will create a directory called prelab10. Go into that directory ("cd prelab10") and get a list of the files there ("ls -la"). Notice that there is a file called prelab10.c. You can start editing this file to do your prelab.

Functions You Must Write
You may write any functions you wish to implement this program, but you have to at least write the two functions I "stubbed out" for you:

- void PrintStrings(char * * strings, int count);
- void SwapStrings(char * * strings, int indexFrom, int indexTo);

The Catch
Sounds easy. What's the catch? The trouble is, **you cannot use the index operator []**. That is, the only uses of the square brackets [] in the program are to be the declarations of the two testing arrays in main(). You cannot use the square brackets [] at all other than whatever is already provided to you in main().

Hint
If a prototype has "char ** s" as a parameter, this is the same to the compiler as "char * s[]". That is, you can think of the parameter as an array of character pointers.

```
[jer676@hellbender-login temp]$ cs1050start prelab10
Cloning into 'prelab10'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 3 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.
[jer676@hellbender-login temp]$ cd prelab10
[jer676@hellbender-login prelab10]$ d
total 2
drwxrwxr-x  3 jer676 jer676 4096 Oct 10 16:16 .
drwxrwxr-x 10 jer676 jer676 4096 Oct 10 16:16 ..
drwxrwxr-x  8 jer676 jer676 4096 Oct 10 16:16 .git
-rw-rw-r--  1 jer676 jer676 1751 Oct 10 16:16 prelab10.c
[jer676@hellbender-login prelab10]$ compile prelab10.c
[jer676@hellbender-login prelab10]$ ./a.out
Original list of teams:

Reordered (improved) list of teams

Original list of professors:

Reordered list of professors:
```

```
[jer676@hellbender-login prelab10]$ compile prelab10.c
[jer676@hellbender-login prelab10]$ ./a.out
Original list of teams:
        Chicago Cubs
        St. Louis Cardinals
        Kansas City Royals
        New York Yankees

Reordered (improved) list of teams
        St. Louis Cardinals
        Kansas City Royals
        Chicago Cubs
        New York Yankees

Original list of professors:
        Kamrul Islam
        Justin Legarsky
        Yi Shang
        Derek Anderson
        Prasad Calyam
        Rohit Chadha
        Jianlin Cheng
        Curt Davis
        Gui DeSouza
        Sean Goggins
        Mike Jurczyk
        Jim Ries
        Ekin Ufuktepe

Reordered list of professors:
        Ekin Ufuktepe
        Justin Legarsky
        Yi Shang
        Derek Anderson
        Prasad Calyam
        Rohit Chadha
        Jianlin Cheng
        Curt Davis
        Gui DeSouza
        Sean Goggins
        Mike Jurczyk
        Jim Ries
        Kamrul Islam
```