CS 100 Lab Eight – Spring 2019

Create a directory called **lab8** on your machine using **mkdir lab8** and move into that directory with **cd lab8**

Complete the following two programs.

1. Name this program **one.c** – You can download the starting `one.c` from Blackboard. The starting `one.c` creates a linked list of 13 nodes to represent "ELEVENPLUSTWO". Your job is to relink the 13 nodes in the specified space to form a linked list to represent ""TWELVEPLUSONE". You can only change the "next" field of these 13 nodes. You can't change the "info" field of any nodes.
2. Name this program **two.c** – You can download the starting `two.c` as shown below from Blackboard. This program will first build a linked list to represent the command line arguments. Please do not include the command name. It then prints out the linked list in the format as specified below.

```
#include <stdio.h>
#include <string.h>
#include <stdlib.h>

typedef struct _argument {
        char *argument;
        struct _argument *next;
} Argument;

// Build a linked list to represent the command line arguments.
// Return the head of the linked list built.
// Please do not include the command name.
Argument *buildList(int argc, char *argv[]);

// Print the linked list. For example, if the user enters
// ./a.out Monday Tuesday Wednesday Thursday Friday
// it prints Monday-->Tuesday-->Wednesday-->Thursday-->Friday
void printList(Argument *head);

int main(int argc, char *argv[])
{
    Argument *head=buildList(argc, argv);

    printList(head);

    return 0;
}
```

Your job is to complete the two functions as specified below.

- `Argument *buildList(int argc, char *argv[]);` Build a linked list to represent the command line arguments (excluding the command name) and return the head of the linked list built.
- `void printList(Argument *head);` Print the linked list. For example, if the user enters
  `./a.out Monday Tuesday Wednesday Thursday Friday`
  then the program should print
  `Monday-->Tuesday-->Wednesday-->Thursday-->Friday`
  Make sure the program prints an arrow (`-->`) between two arguments.

Submit your lab

First, on your machine, compress your **lab8** directory into a single (compressed) file, i.e. **lab8.zip**.
Second, once you have a compressed file named **lab8.zip**, submit that file to Blackboard.