Before you start writing your program:

Read all of these instructions carefully. Submitting a development plan is not required for this assignment. I suggest that you create one and use it when writing your program.

*Problem***:**

*Program***: assign08.c**

Print a report of the Auburn 2012 softball season game results. The result statistics are saved in `data08c.txt`.

> *NOTE: Your submitted file(s) MUST be spelled and cased as instructed. [-5 points per file for not doing so.]*

Instructions:

- ☐ Insert comments at the top and throughout each file
    - • Include the follow comments at the beginning of this (and ALL) files.
        - **//** your name
        - **//** assignment number
        - **//** date you completed the assignment
        - **// statement(s) about collaboration**
        - **//** a short narrative about what the file does

    > *-5 points for absence of any of these required comments at the top*

    - • Use your development plan as a guide for comments throughout each file
- ☐ Use descriptive variable names.
- ☐ Use Sample Input/Output as a guide.
- ☐ Indent blocks.

- ☐ CONSTANT variables
    - • Define a constant variable with the name of the file; use the variable name as the argument with the **fopen()**.
    - • Define a constant variable with the maximum number of games. Use a number large enough for a full season including possible post season games, SEC playoff and a bowl game, but not too big. The program should work for any Auburn softball season.

- ☐ Using the data file
    - • Protect your program from crashing by making sure that the file opens. If the file doesn't open properly, print an error message and end the program.

- ☐ Input
    - • Read the Auburn 2011 season game results from `data08c.txt`
    - • The first line of the data file will be used a the title of the report.
    - • There are five (5) columns of data in the data file.
      1 - month, 2 - day, 3 - conference, 4 – opp name, 5 – opp runs, 6 - AU runs
    - • Read the data into three (3) integer 2-D arrays and two (2) character arrays. Note the arrays are parallel arrays, i.e., the result information of the first game is in the first row of each of the five arrays; the second game information in the second row of each array, etc.
    - • Sum runs for each game for all innings into `scoreAll`.
    - • Sum runs for each game for innings 1-4 into `score4th`.
    - • Your program should work for any number of games in the file. Count the number of games.

> **New commands/terms**
> 2-D arrays
> string arrays
> read data into 2-D arrays
> user-defined functions with
> 2-D array parameters
> print with leading zeros
> `strcmp()`
> `fgets()`

- ☐ Count
    - • Auburn SEC record: wins-losses of just SEC games
    - • Auburn record for all games: wins-losses
    - • Auburn record after 4th inning: lead, trail, ties

```
#define FILENAME     "data08c.txt"  // data file name
#define TITLELEN      30 // max title length
#define MAXNUMGAMES   40 // max number of games in season
#define NAMELEN       25 // max opponent name length
#define CONFLEN        4 // length of conference name
#define NUMINNINGS    10 // max number of innings for each team
#define STATINNING     4 // runs after this inning for stats
#define NUMCOLS        2

//Function Prototypes
int  readDatafile(char title[], char dates[][NUMCOLS],
                  char oppNames[][NAMELEN], char conf[][CONFLEN],
                  int scoreAll[][NUMCOLS], int score4th[][NUMCOLS]);
void printReport(char title[], char dates[][NUMCOLS],
                 char oppNames[][NAMELEN], char conf[][CONFLEN],
                 int scoreAll[][NUMCOLS], int score4th[][NUMCOLS],
                 int numGames);
void printHeader(char title[]);
```

Output
- Refer to the Sample Output for the information that should be included in the report.
    - Use the first line of the data file as the title of the column report.
    - The column report is just SEC games.
    - MULTIPLE `printf()`s CAN BE USED TO PRINT ONE LINE.
    - Depending on whether Auburn wins or loses, print "W" or "L".
- Print a legend that indentifies the flags in the report.
☐ Printing
- Column numbers **right-justified**, i.e., right-aligned
- Print the month, day, and scores in the table with leading zeros.

Sample Input/Output: *THESE ARE PARTIAL LISTS.*

```
     2012 AUBURN SOFTBALL                    data08c.txt

DATE    OPPONENT            SCORE W     2012 AUBURN SOFTBALL
                            OP-AU L     2  9 SWC  Alabama_State   0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 3 2 0 0 0 0
                                        2 10 HZN  Wright_State    3 0 0 0 0 1 0 0 0 0 1 5 0 0 2 4 0 0 0 0 0
------------------------------------    2 10 MAM  Bowling_Green   0 0 2 0 0 0 0 0 0 0 3 6 1 0 0 0 0 0 0 0 0
03/14   LSU                 04-01 L     2 11 SUM  IPFW            0 0 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0 0 0 0 0
03/14   LSU                 00-02 W     2 12 SOU  Appalachian_St  0 1 0 0 0 1 0 0 0 0 0 1 3 1 0 1 0 0 0 0 0
03/16   Georgia             00-02 W     2 17 B12  Oklahoma_St     0 0 0 0 0 0 0 0 0 0 0 0 0 2 6 0 0 0 0 0 0
03/17   Georgia             06-03 L     2 19 ATL  Virgina_Tech    0 0 0 0 0 0 0 0 0 0 1 0 1 0 7 0 0 0 0 0 0
03/18   Georgia             04-02 L     2 19 ATL  Georgia_Tech    0 2 0 3 0 0 0 0 0 0 0 4 0 4 3 1 0 0 0 0 0
03/23   Kentucky            08-04 L     2 22 COL  Georgia_State   1 0 0 0 0 0 0 0 0 0 4 2 0 1 2 0 0 0 0 0 0
03/24   Kentucky            05-02 L     2 24 NOT  Florida_Atlantic 0 0 0 0 0 0 0 0 0 1 0 1 0 7 0 0 0 0 0 0 0
03/25   Kentucky            01-02 W     2 24 NOT  Florida_Atlantic 0 0 0 0 0 1 0 0 0 0 1 3 0 0 2 0 0 0 0 0 0
03/27   Alabama             04-02 L     2 25 NOT  Michigan_State  1 0 0 0 0 0 0 0 0 0 2 1 0 0 1 0 0 0 0 0 0
03/27   Alabama             05-02 L     . . .
03/30   Ole_Miss            05-09 W     3 24 SEC  Kentucky        1 0 0 1 3 0 0 0 0 0 1 0 0 1 0 0 0 0 0 0 0
04/01   Ole_Miss            06-01 L     3 25 SEC  Kentucky        1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0
04/06   Tennessee           09-01 L     3 27 SEC  Alabama         2 0 0 0 0 2 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0
04/07   Tennessee           05-03 L     3 27 SEC  Alabama         0 0 0 3 1 0 1 0 0 0 0 0 0 0 2 0 0 0 0 0 0
04/08   Tennessee           06-02 L     3 30 SEC  Ole_Miss        0 4 0 1 0 0 0 0 0 0 2 0 0 0 3 0 0 0 4
                                        4  1 SEC  Ole_Miss        2 0 0 2 2 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0
Auburn SEC Record:   4-11               4  6 SEC  Tennessee       0 7 0 2 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0
                                        4  7 SEC  Tennessee       2 0 0 0 1 0 0 0 0 2 0 3 0 0 0 0 0 0 0 0 0
Auburn Season Record: 22-14             4  8 SEC  Tennessee       2 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 0
Stats after 4th innings:
AU lead:  19
AU trail: 11
AU tie:    6
```

Submit via Blackboard:
```
assign08.c       C program file
data08c.txt      Data file
```