CS 121 **Program #5**
Bruce Bolden **20 Points**
April 13, 2023 **Due:** April 26, 2023

Objective Write a program to hold information for a small TV show database using a binary search tree. Specifically, the show names, broadcast years, category, and the actor/actress names.

Program Description One method of storing this information is to hold the information in a tree structure. Another method of storing this information is in a hash table, which we will see later. Your program is to store information in a binary search tree based upon the TV show name or actor name (your choice).

Requirements

1. Write functions to:
   - Display all shows in the tree (only the titles!).
   - Display all actors of a given show in the tree: *NCIS*, *McHale's Navy*, *The Prisoner*, *The Office* and two others of your choice.
   - Display all shows of a given actor: Bill Daily, Dana Elcar, Andy Griffith, Tress MacNeille and two others of your choice.
   - Display all shows released between 2005 and 2015 and one other decade range of your choice.
2. Test your program:
   - Read TV show information from an external file (on the web).
   - Display all output in a useful manner.

Deliverables

- Program—fully documented.
- A program design. Describe all classes and methods needed to implement your program.
- Programming Log:
  - Record the time required to design and implement your program.
  - Record of things you encountered/learned while implementing your program.
- Output—proof that your program worked.

If you have any questions regarding this assignment, do not hesitate to contact me. Start working on this assignment as soon as possible.

Grading Scheme

Category	Description	Maximum Penalty
Design	None	4
	Organized	1
Style	Comments	2
	Functions (modular)	2
	Function names	1
	Organized	2
	Header	1
	Formatted (indent)	1
	Stapled	1
Output	None	4
	Incorrect	2
Programming Log	None	3
	Details / Time	2

The function / variable names should be meaningful names.

All functions should be documented (commented)! If the program lacks comments take 2 points off. If something is not obvious, take 1 point off.

The output should be clearly understandable.