ECE 175: Computer Programming for Engineering Applications
Lab 3

Topics: nested loop and File I/O
Demo to TA or ULA your code for each problem by the end of your lab session in order to earn your lab 3 score.

Problem 1 (15 points):
      Write a C program that outputs a half arrow pointing down that is consisted of a rectangle and a right triangle. The arrow dimensions are specified, by a user, with arrow base height, arrow base width, and arrow head width. Your program should make sure that *an arrow head width is larger than the arrow base width.*
Note: Your code must work for any user input. If you hard-code the pattern, you will get 0 point for this problem.
Hint:
For base, use a nested loop: the inner loop prints the *'s, and the outer loop iterates a number of times equal to the height of the arrow base.
For head, use a nested loop: the inner loop prints the *'s, and the outer loop iterates a number of times equal to the height of the arrow head.

Sample code execution 1: **Bold text** indicates information entered by a user
Enter arrow base height and width: **5 2**
Enter arrow head width: **1**
head width must be > base width
Enter arrow base height and width: **5 2**
Enter arrow head width: **4**
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*
```
Enter arrow base height and width: **3 3**
Enter arrow head width: **7**
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Problem 2 (15 points)

Write a C program that ***read*** values of time in seconds ***from a file*** called "time.txt" and convert it to **hours, mins,** and **secs** (in this order).

Given data in "time.txt" 5786 60 3610 999 0 4000 45 678 100000 7200
<mark>(you have to create this text file before running your program)</mark>

Sample code execution: **If any of the units is equal to zero, it should not be printed.**

5786	Time: 1 hours 36 mins 26 seconds
60	Time: 1 mins
3610	Time: 1 hours 10 seconds
999	Time: 16 mins 39 seconds
0	
4000	Time: 1 hours 6 mins 40 seconds
45	Time: 45 seconds
678	Time: 11 mins 18 seconds
100000	Time: 27 hours 46 mins 40 seconds
7200	Time: 2 hours