

# CS180 Homework 5

Due via email on 12/1 by 11:59pm

**This homeworks covers treaps and hash tables. Please see the lecture notes or textbook for reviews of these topics.**

1. Draw the unique treap which contains the following key/priority pairs, where the priority is an integer, the key is a character, and the underlying heap on the priorities is a min heap.  
Pairs: (2, H), (9,T), (3,G), (5,M), (11, E), (8, Z), (1,O), (14,W), (4, Q), (10,A), (17,B), (12, R), (6,L )  
Hint: Start by drawing a BST on the characters, and then "heapify" the priorities like we discussed in class.
2. R-8.4 on page 405 of text
3. R-8.5 on page 405 of text
4. R-8.6 on page 405 of text
5. R-8.7 on page 405 of text
6. R-8.14 on page 406 of text
7. Extra Credit: Draw two *different* binary trees whose nodes store a single character and whose inorder traversal gives the word "THANKSGIVING".