

CS 140A - Homework 5
Due Monday, November 17

1. Do the following problem from the book: 12.2-2
2. Consider inserting the keys 10, 22, 30, 4, 15, 28, 17, 88, 59 into a hash table of size 11 using open addressing with the primary hash function $HF(item) = item \% size$. Illustrate the result of inserting these keys using linear probing, quadratic probing, and using double hashing with $HF_2(item) = 1 + (item \% (size - 1))$. Give the number of collisions for each hash table.
3. What are the advantages and disadvantages of the various collision resolution strategies?
4. Given that the items to be stored in a hash table are strings, describe an *original* hash function that can be used. Note: you will be asked to implement your function in the next assignment, so put some thought into it. Explain any pros and cons about your function.