

CSE 373 – Data Structures

Homework 4

Assigned: Wednesday, April 24, 2002

Due: Wednesday, May 1, 2002

At the start of class

Remember:

Attach a copy of your turnin receipt

Do a web turnin of hash.c and symbol_hash.c

Do a web turnin of hashtv.txt, hashpid.txt,
hashbin.txt, and hashperfect.txt

Your name: _____

Student number: _____

4. Consider the output file hashbin.txt, produced using the symbols in binsymbols.txt.
 - a. In test 2, the hash table is built using the character shift and add Hasher with 100 slots in the table. Although there are an average of about 15 entries expected in each list, there may be at least one list with many more than that. What is the longest list in this table?
 - b. Looking at the list of symbol names in the longest list (printed at the end of the test 2 section) explain why all the symbols in this list were hashed to the same index by your character shift and add Hash function.
 - c. Tests 5 and 6 in hashbin.txt use the character radix hasher to build the tables. What is the maximum list length in test 5? What is the maximum list length in test 6?
 - d. In general terms, explain why you think they are the same or why they are different.