COP4530 Recitation Fall 2012
Week 10

Objective

1. Selecting a data structure for a problem

Sample problem

Consider a simple spam (junk email) filter as described below. We keep track of senders (say, the *from* field in the email) whose messages should be tagged as spam. Initially, no one is listed as a spammer.

Each time the user marks an email as spam, we record that sender as a spammer. Each time we receive an email, if the sender has been recorded earlier as a spammer, then the message is tagged as spam.

Decide on a suitable data structure, from among those that we have discussed in class, to store the records of spammers. State any reasonable assumptions that you make, and justify your answer.

Data Structures' Complexities

Fill in the table.

Data Structure	**Insert**	**Delete**	**Search**	**Memory Requirement**
Vector				
Sorted Vector				
Singly Linked List				
Doubly Linked List				
Deque				
BST				
AVL Tree				
Hash Table				