

11.2-3

Successful Search:  $O(n)$  because traversing even a sorted linked list is  $O(n)$

Unsuccessful Search:  $O(n)$  because exhaustive search even through a sorted linked list will take worst-case  $O(n)$

Insert:  $O(n)$  because if linked lists are sorted descending and the new value is less than all existing values, it takes  $O(n)$  time to insert it at the tail

Delete:  $O(n)$  because in the worst case all  $n$  elements hash to the same slot and you may have to traverse all  $n$  of them to get to the list's tail

11.3-1

Because comparing long character strings can be an expensive operation, first calculate the hash (search key) and compare that value to the hash value contained in each node. Single integer-to-integer comparisons are faster than long string comparisons, so it will be faster to find a match this way. When an equivalent hash value is found, you can then use string comparison to verify that the strings are truly equal and not just a hash collision.