CSC263 Tutorial #5

Hash tables

February 10, 2023

Things covered in this tutorial

* What's a Hash table?
* What are the two ways to address hash collisions covered in this course?

Hash Tables

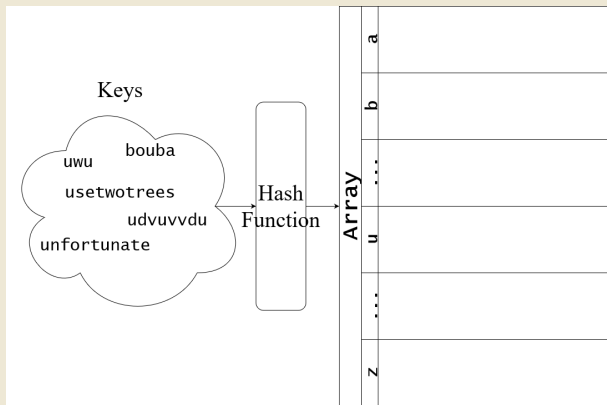A hash table is an efficient way of implementing the Dictionary ADT.

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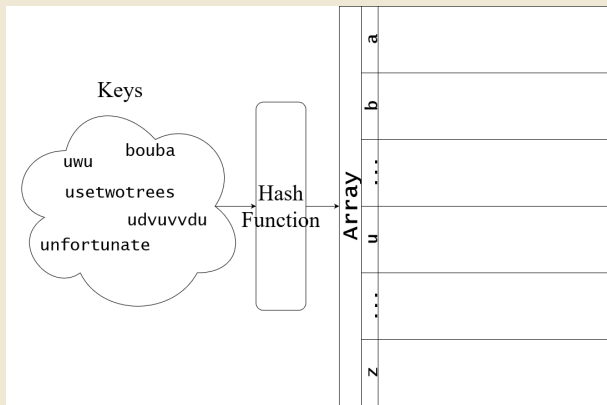
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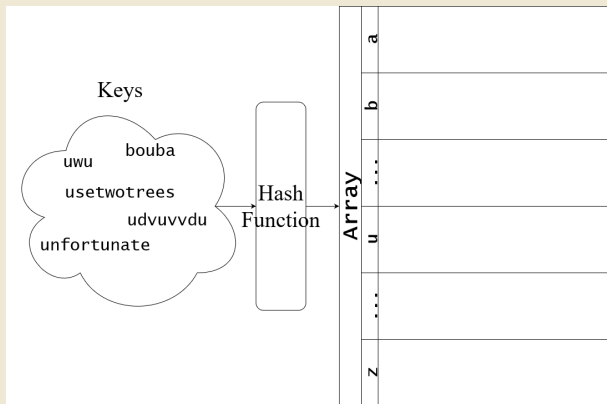
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Problem: What if two distinct keys get mapped to the same address?

Hash Tables: Chaining

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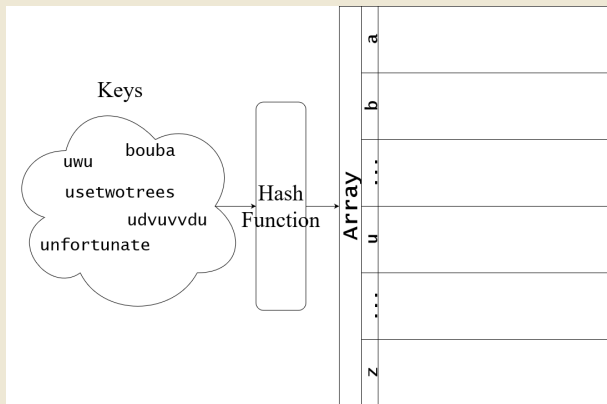
Task: Referring to the above diagram, assume the hash function is

$$h(w) = \text{first letter of } w.$$

Store all keys (in the "Keys" cloud) in the array.

Hash Tables: Chaining

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Answer: Don't try it; this is a terrible idea. Why not?

Tutorial Activity: Try Question 1(a) from the tutorial activities!

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Tutorial Activity: Try Question 1(a) from the tutorial activities!

Hash Tables 2: Electric Boogaloo

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Task: Suppose $m = 8$ and $h'(k) = k \bmod 8$. Insert $10, 22, 31, 4, 15, 28, 17$ into the hash table.

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