Week 4

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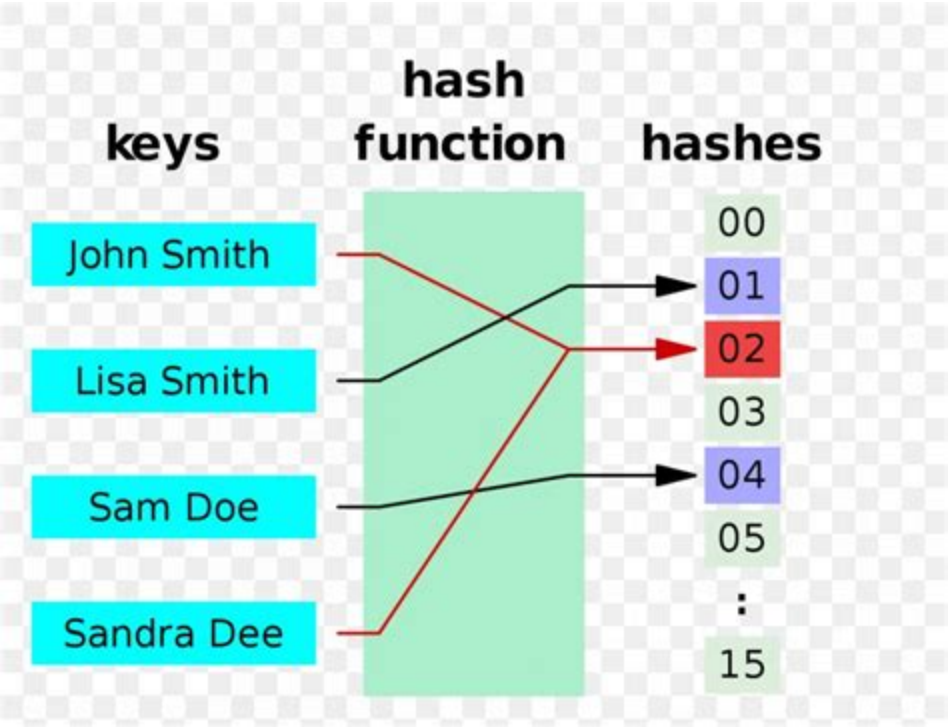

This week in data structure:

Hash Tables and Chaining

You may not know it, but you already encountered a variety of hash tables in the form of Python dictionaries. Simply put, hash tables (and their close relatives, hash maps) hash data to a key. In C++, hash tables are composed of buckets, each a hash table's array element(s). These buckets are accessed by the hash function, which determines the bucket index from the item's key. In this arrangement, the item's keys are most typically integers, and the hash function uses a modulo function to quickly access the bucket indexes.

This week in algorithms:

By organizing data in distinct buckets, search algorithms in particular gain significant efficiency O(1). Since the search only needs to be performed on the data found in the bucket that contains it, the remaining data can be ignored in the search. In this module, you will implement a hash algorithm over a set of data values loaded from a CSV file to store them in a hash table. In the event of collisions in the hashing algorithm, you will need to implement chaining logic using linked lists.

references:

https://www.freecodecamp.org/news/hash-tables/

This week's assignment reminder:

Complete Hash table data structure pseudocode for ABC University

Implement hash tables for eBid data software