

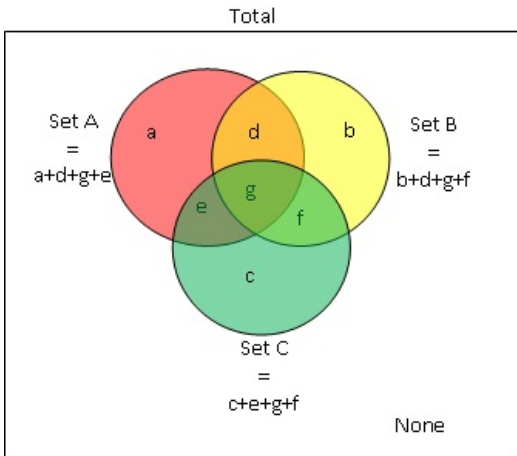
Data Structures I : Hash Tables



Disclaimer: Keep alcohol out of the hands of minors.

- 45 white rum
- 25 lime juice
- 15 simple syrup
- 4 strawberries





A **hash table** is a data structure that can map keys to values.

`https://www.youtube.com/watch?v=h2d9b_nEzoA`



In **open hashing**, keys are stored in linked lists attached to cells of a hash table.

`https://www.cs.usfca.edu/~galles/visualization/OpenHash.html`

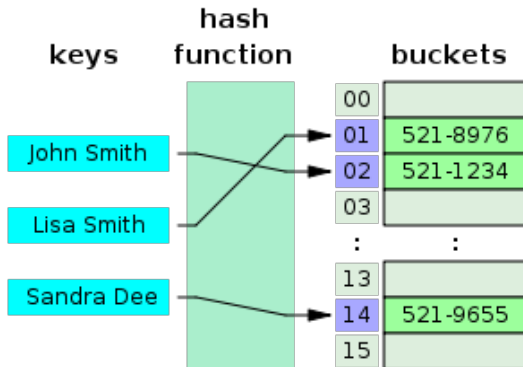


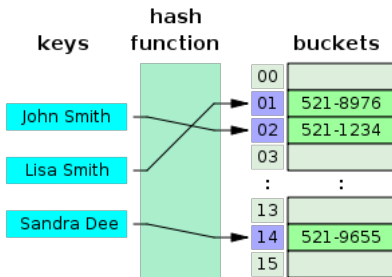
In **closed hashing**, all entry records are stored in the array. When a new entry has to be inserted, the buckets are examined, starting with the hashed-to slot and proceeding in some **probe sequence**, until an unoccupied slot is found.

<https://www.cs.usfca.edu/~galles/visualization/ClosedHash.html>



Well-known probe sequences include: linear probing, quadratic probing and double hashing.





Simulation: <http://visualgo.net/hashtable.html>

- In Java, Class `HashTable` is deprecated.

- Now, we use class `HashMap`

- Class `HashTable` Vs Class `HashMap`

<http://javahungry.blogspot.com/2014/03/>

[hashtable-vs-hashmap-difference-with-example-java-interview.html](http://javahungry.blogspot.com/2014/03/hashtable-vs-hashmap-difference-with-example-java-interview.html)

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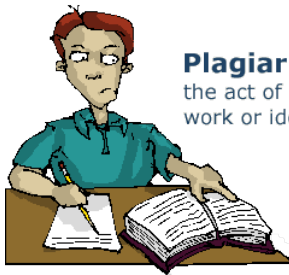
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- Please learn how to reference images, trademarks, videos and fragments of code.
- Avoid plagiarism



Plagiarism:

the act of presenting another's work or ideas as your own.

Figure: Figure about plagiarism, University of Malta [Uni09]



University of Malta.

Plagiarism — The act of presenting another's work or ideas as your own, 2009.

[Online; accessed 29-November-2013].

- Hash tables

- https://en.wikipedia.org/wiki/Hash_table

