Saving Keys

3 min

A hash collision resolution strategy like separate chaining involves assigning two keys with the same hash to different parts of the underlying data structure. How do we know which values relate back to which keys? If the linked list at the array index given by the hash has multiple elements, they would be indistinguishable to someone with just the key.

If we save both the key and the value, then we will be able to check against the saved key when we're accessing data in a hash map. By saving the key with the value, we can avoid situations in which two keys have the same hash code where we might not be able to distinguish which value goes with a given key.

Now, when we go to read or write a value for a key we do the following: calculate the hash for the key, find the appropriate index for that hash, and begin iterating through our linked list. For each element, if the saved key is the same as our key, return the value. Otherwise, continue iterating through the list comparing the keys saved in that list with our key.

Instructions

Now that we save our keys, we can have it so that assigning to the same key overwrites the original key-value pair.

We can also retrieve values consistently.

Add a few keys and values to the hash map and then look up a key.