

Hash Table (Time Complexity)

time complexity of the search, insertion and deletion functions of the hash table (Reading time: under 1 minute)

T I M E			S P A C E
Type	Average	Worst	Worst
Search	$O(1)$	$O(n)$	$O(n)$
Insertion	$O(1)$	$O(n)$	
Deletion	$O(1)$	$O(n)$	

Average:

As we get the right location directly from the hash, we don't need to iterate over anything. The data is directly accessible.

Worst:

It is possible that the user stores all items in one bucket, which we would then have to iterate through.

Worst space:

The more items, the bigger the hash table.

Now, let's move on to another data structure - the graphs.