

# Hash Tables: Use

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**By the end of this video you will be able to...**

- Explain the difference between a Hash Set and a Hash Map

# Hash Set

index	data
	a
	car
	boat

**Tells you if an item is  
in the set or not.**

# Hash Set

index	data
	a
	car
	boat

**A Dictionary is perfect  
as a Hash Set**

java.util

## Class HashSet<E>

### Methods

Modifier and Type	Method and Description
boolean	<b>add(E e)</b> Adds the specified element to this set if it is not already present.
boolean	<b>contains(Object o)</b> Returns true if this set contains the specified element.

# Hash Map

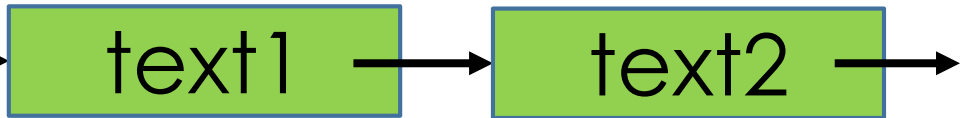
index	data	data
	key	value

**Stores both a key and some data associated with the key**

# Hash Map

index	data	data
	Ivan	

Store friends with  
**recent texts**



java.util

## Class HashMap<K,V>

### Methods

Modifier and Type	Method and Description
V	<b>get</b> (Object key) Returns the value to which the specified key is mapped, or null if this map contains no mapping for the key.
V	<b>put</b> (K key, V value) Associates the specified value with the specified key in this map.



# Hash Table Key Points



**Average:  $O(1)$  lookup,  
insert, and remove**



**Resizing costs  
No data ordering**