Hash table

Desired functions of Hashtable:

① insert function ⇒ insert value into correct location

② contains function ⇒ iterates through hashtable and return each key value pair.

Hashtable (initial size)
↗ determines # of buckets

③ remove/delete function ⇒ can remove value from Hashtable.

④ size function ⇒ give size of Hashtable

⑤ capacity function ⇒ how many total spaces

Smart Hashtable will use chaining.

Each bucket = linked list

← bucket

Key gets hash value ⇒ placed in corresponding bucket

(Key 1) →

if collision new key value is appended @ end of bucket.

bucket 0   b1   b2   b3

Tests for functions

① insert multiple key value pairs into hashtable then cout what hashtable contains using contains function.

② remove a key value pair the call contains function on that pair to see if it is still in hashtable.

③ get size iterate through buckets then cout amount of buckets being used.

④ capacity is the initial size used when creating an instance of Hashtable.