Hashing with Linear Probing

1. ***Hashing with Linear Probing:*** Implement the followingAPI using hashing with linear probing using resizing.
   1. void **put**(**Key** k, **Value** v): insert key and value pair into the hash table. If value is null, then remove the key from the hash table.
   2. **Value** **get**(**Key** k): return value if key present in the hash table otherwise return null.
   3. void **delete**(**Key** k): remove the key and value pair from the hash table if key exists otherwise return from the function by doing nothing.
   4. void **display**(): print all the key value pairs in the following format.

{k1:v1, k2:v2, k3:v3}

**Note:** Use 11 \* k % m as a hash function where k is the ascii value of the key and m is the hash table size.

**Note:** Resize to double the size of the array when it is half full before inserting an element and resize the array to half when one eighth elements are remaining in the array after removing an element from the hash table.

**Note:** The keys are Strings (String) and the values are integers (Integer).

**Input Format:**

* The first line of the input contains the number of operations to be performed on hash table.
* Each line starts with an operation and the parameters required for that operation which are separated by spaces.

**Note:**

* Insert the key and a value pair into the hash table using the put method into an appropriate index.
* Print a value that is returned from the get by passing the key as a parameter, if key not present return null and print “**null”**.
* Remove the key and a value pair from the hash table if the key exists, if not return from the hash table by doing nothing.
* Check for the test cases given in the folder.

**Output Format:**

Print all the key and value pairs as specified in the sample test case.

**Sample Input #1:**

**10**

**put L 4389**

**display**

**get E**

**put W 7900**

**delete L**

**delete A**

**delete Y**

**put O 2901**

**display**

**get O**

**Sample Output #1:**

**{L:4389}**

**null**

**{W:7900, O:2901}**

**2901**