

***** Explanation_1 *****

LRU Cache:

- The LRU cache implementation uses Hashmaps and Doubly Linked List to achieve a constant time operation, The with every set operation the code uses prepend method of the linked list class to prepend the LRU list and update the hash map with the Node object in LRU list.
- If the cache Size is reached, the Poptail() method is used to remove the LRU element and Prepend method is used to add the new Node.
- Get Operation looks for key in the hash map if found return the node object and prepend the node object LRU List

Time Complexity:

Since we are maintaining the head and tail of the list and the node object in Hashmap
the get and set methods have a time complexity of $O(1)$.

Space complexity:

Since the dependence is on number of key if number of keys is n the space complexity is $O(n)$