

1- LRU-Cache pro

I used an **OrderedDict** which is a subclass that remembers the order that keys were first inserted.

```
# initialising capacity
def __init__(self, capacity: int):
    self.cache = OrderedDict()
    self.capacity = capacity

# Return the value of the key
# that is queried in O(1) and return -1 if
# don't find the key in our cache.
# And also move the key to the end
# to show that it was recently used.
def get(self, key: int):
    if key not in self.cache:
        return -1
    else:
        self.cache.move_to_end(key)
        return self.cache[key]

# Add key and move the key to the end to show that it was recently
used.

# Check whether the length of
# ordered dictionary has exceeded capacity,
# If so remove the first key (least recently used)
def put(self, key: int, value: int):
    self.cache[key] = value
    self.cache.move_to_end(key)
```

```
if len(self.cache) > self.capacity:  
    self.cache.popitem(last = False)
```

Time Complexity = $O(1)$

Space Complexity = $O(n)$ n is the number of element we put in the cache.