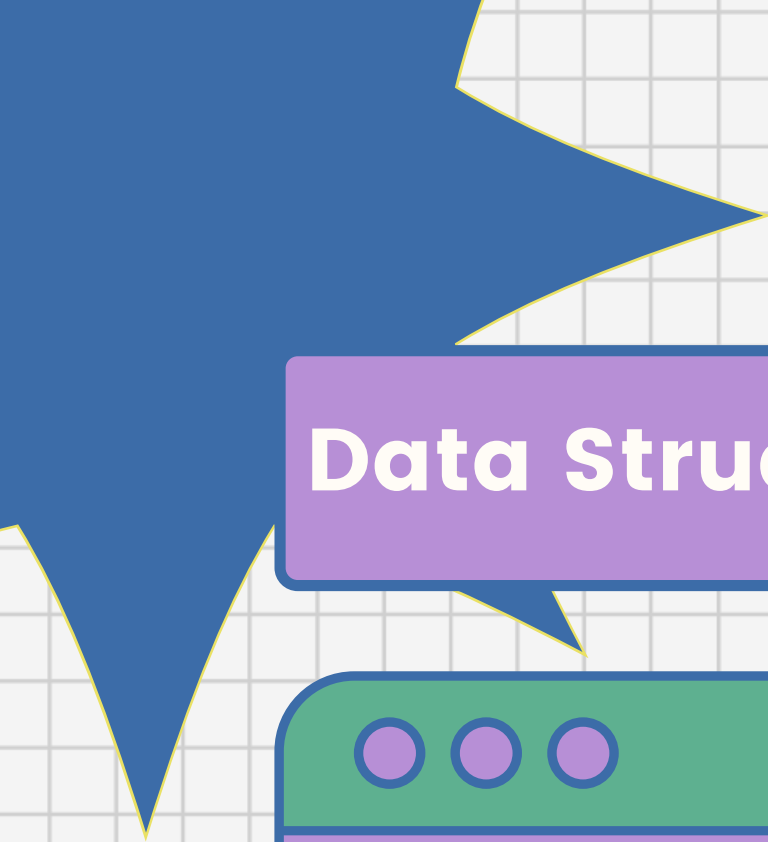
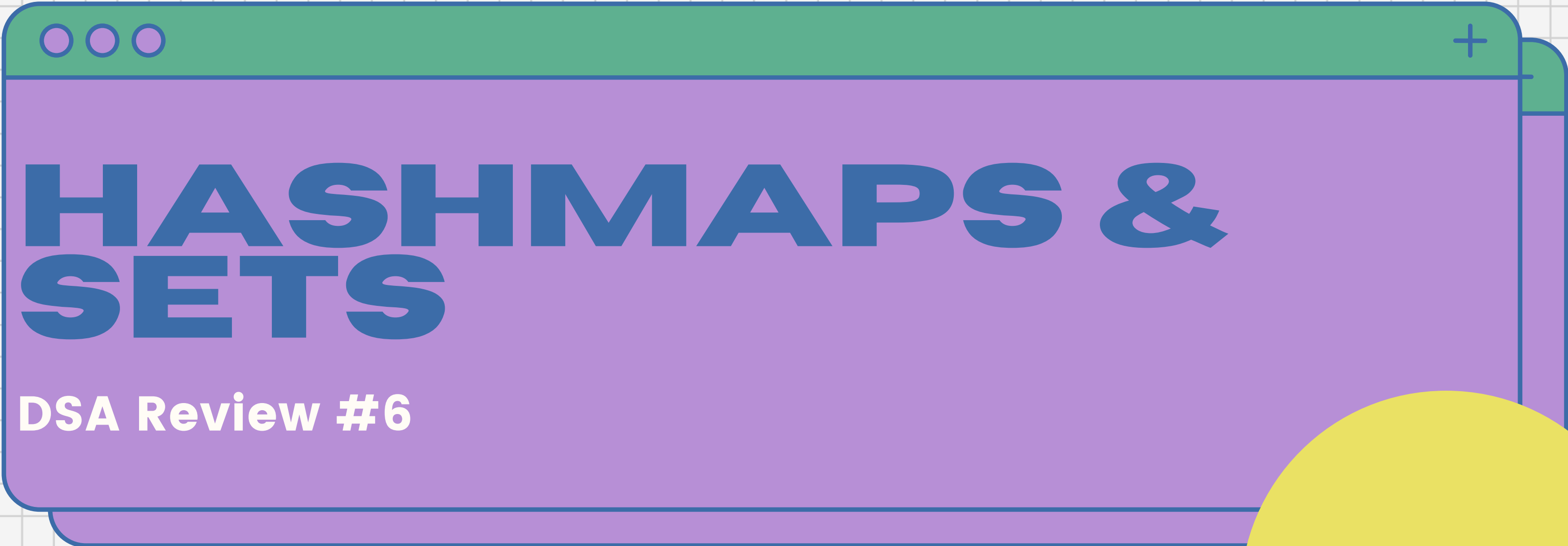




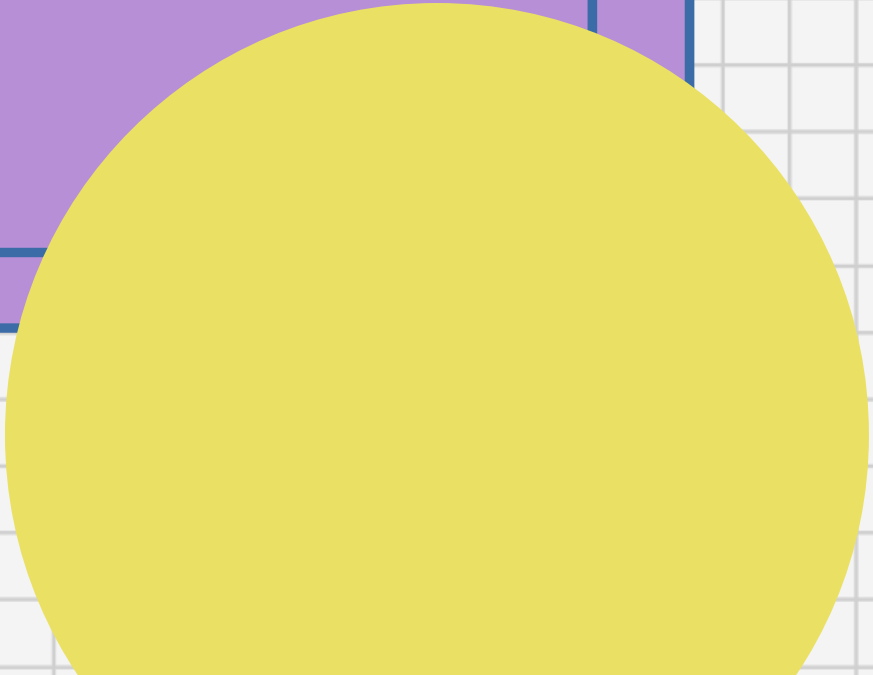
Data Structures and Algorithms Review

Search



HASHMAPS & SETS

DSA Review #6



THINGS ABOUT HASH

Includes hashmaps and hashsets

1

$O(1)$ Big-O
in terms of
searching
and
manipulation

2

creates a
series of keys
that directly
relate to any
value or
object you

3

Allows null
values to be
stored

4

All found
within the
`java.util.*`;

HASHSETS VERSUS HASHMAPS

HASHSETS

- **declaration of one element**
- **contains more boolean aspects**

- cannot have duplicates/ takes unique values
- doesn't maintain insertion order
- Both require declaration using the <>

HASHMAPS

- **declaration of two elements**
- **easier to access elements**

HASHSET **DECLARATION**

```
import java.util.HashSet;
```

```
HashSet<String> hs  
=  
new HashSet<String>();
```

Common Method Declarations

`.add(element)` – adds to set

`.contains(Object)` – boolean

`.remove(Object)` – removes from set

`.toArray(array)` – returns an array of the set

input



```
HashSet<String> hs = new  
HashSet<String>();
```

```
    hs.add("dog");  
    hs.add("cat");  
    hs.add("mouse");  
    hs.add("dog");
```

output



[dog, cat, mouse]

HASHMAP **DECLARATION**

```
import java.util.HashMap<K,V>;
```

```
HashMap<Integer, String> hm  
=  
new HashMap<Integer, String>();
```

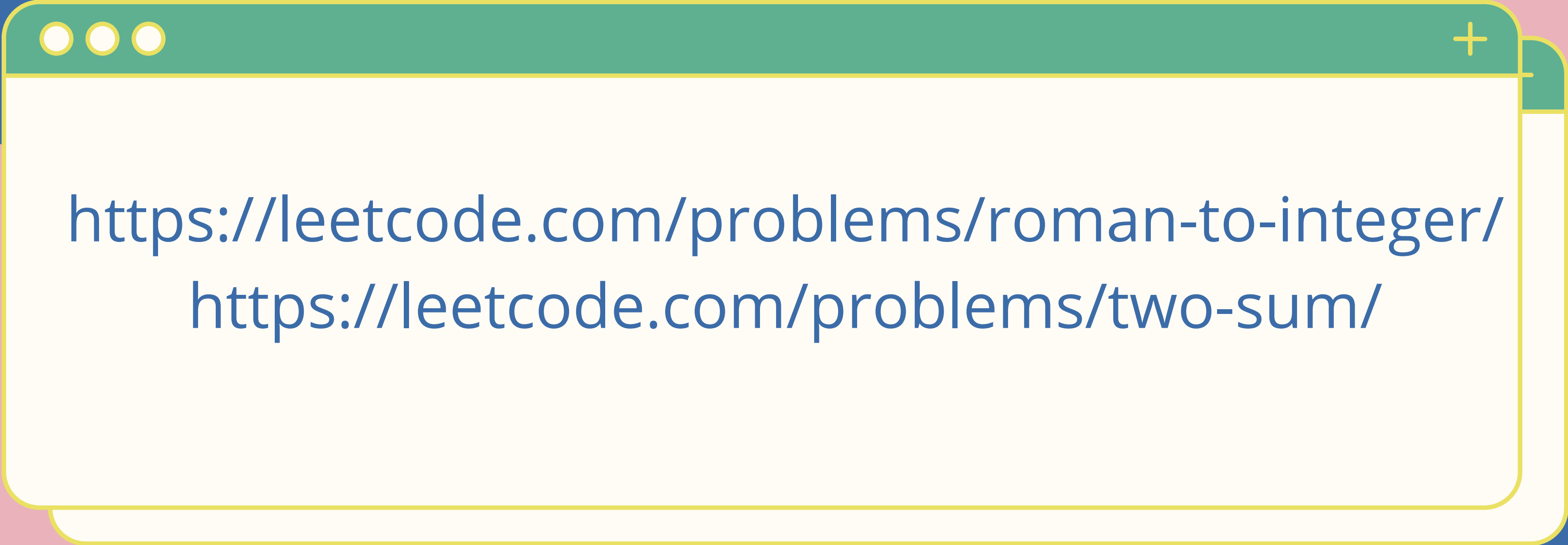
Common Method Declarations

.get(key) - gets the value of the key

.put(key,value) - connects a key to a value

.replace(K,OV,NV) - changes value of a key in the map

Leetcode Questions



<https://leetcode.com/problems/roman-to-integer/>
<https://leetcode.com/problems/two-sum/>