Cheatography

stathw-js-cheatsheet Cheat Sheet

by Boge (username1) via cheatography.com/195153/cs/40822/

Array

Declaration and initialization

```
let array = ['cyber', 'insecurity', 'sapienza'];
let also = new Array(3);
```

Adding an element

```
array[3] = 'statistics';
```

Setting a value

```
array[1] = 'security';
```

Deleting an element

```
delete array[3];
```

Looping

```
array.forEach(function(item){
    console.log(item);
});
```

Checking the existence of a value #1

```
array.includes('cyber');
```

Checking the existence of a value #2

```
array.indexOf('statistics') !== -1;
```

Checking the existence of a value #3

```
for (let i = 0; i < array.length; i++) {
    if (array[i] === searchValue) {
        found = true;
        break;
    }
}
```

Checking the existence of a value #4

```
array.find(item => item === searchValue) !== undefined;
```

Arrays are also used to implement List, Queue, Stack. For these data structures I'll create a JS class that exposes useful methods.

LinkedList

List

Creation

```
const list = new List();
```

Adding an element

```
list.add(1);
list.addAtHead(0);
```

Removing an element

```
list.remove(2);
```

Setting a value

```
list.set(0, 1337);
```

Checking existence of a value

```
list.contains(1);
```

Looping

```
for(let i = 0; i < list.size(); i++)
{
    console.log(list.get(i));
});
```

The type SortedList has the same methods, but ensures that the values are sorted.

Dictionary

Creation

```
let dict = new Dictionary();
```

Adding an key-value pair

```
dict.add('frequency', 20);
```

Setting a value for a key

```
dict.set('percentage', 40.10);
```

Removing a key

```
dict.remove('perceptage');
```

Checking existence of a key

```
dict.hasKey('frequency');
```

Checking existence of a value

```
dict.hasValue(20);
```

HashSet

Queue

Creation

```
let queue = new Queue();
```

Adding an element

```
queue.enqueue(1);
```

Fetch of the first element

```
queue.front();
```

Removing an element

```
queue.dequeue();
```

Checking the existence of an element

```
queue.contains(7);
```

Stack

Creation

```
let stack = new Stack();
```

Adding an element

```
stack.push(1);
```

Fetching top of stack

```
stack.peek();
```

Removing an element

```
stack.pop();
```

SortedSet

Creation

```
let sortedSet = new SortedSet();
```

Adding an element

```
sortedSet.add(3);
```

Removing an element

```
sortedSet.delete(3);
```

Checking the existence of an element

```
sortedSet.has(1);
```

Looping

```
for(element in sortedSet.toArray()) {
    console.log(element);
});
```

Creation

```
let linkedList = new Linked List();
```

Adding an element

```
linked Lis t.a ppe nd(3);
linked Lis t.p rep end(1);
linked Lis t.a ddAt(1, 3);
```

Fetch of the head value

```
linked Lis t.f etc hHe ad();
```

Get the value of a node

```
linked Lis t.g etA t(2);
```

Removing an element

```
linked Lis t.r emo veA t(1);
linked Lis t.d ele te(7);
```

Check existence of a value

```
linked Lis t.c ont ain s(7);
```

Looping

```
for (const element of linked List)
{
    consol e.l og( ele ment);
}
```

Creation

```
let hashset = new HashSet();
```

Adding an element

```
hashse t.a dd(1);
```

Removing an element

```
hashse t.d ele te(1);
```

Checking the existence of an element

```
hashse t.h as(3);
```

Looping

```
let keys = hashse t.v alu es();
for(let i = 0; i < keys.l ength; i++)
{
    consol e.l og( key s[i]);
});
```

The HashSet is pretty similar to the Dictionary, but it doesn't have values; it just uses the keys.

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