

Array

Declaration and initialization

```
let array = ['cat', 'dog', 'fish'];
let array2 = new Array(3);
```

Adding an element

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

Setting a value

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

Deleting an element

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

Looping

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

Checking existence of a value

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

Dictionary

Creation

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

Adding an key-value pair

```
dict.add('cat', 10);
```

Setting a value for a key

```
dict.set('percentage',
  5.10);
```

Removing a key

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

Checking existence of a key

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

Checking existence of a value

```
dict.hasValue(10);
```

HashSet

Creation

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

Adding an element

```
hashset.add(1);
```

Removing an element

```
hashset.delete(1);
```

Checking the existence of an element

```
hashset.has(3);
```

HashSet (cont)

Looping

```
let keys = hashset.values();
for(let i = 0; i < keys.length; i++) {
  console.log(keys[i]);
}
```

List

Creation

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

Adding an element

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

Removing an element

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

Setting a value

```
list.set(0, 251);
```

Checking existence of a value

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

Looping

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

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);
```

SortedSet (cont)

Checking the existence of an element

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

Looping

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

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);
```

LinkedList

Creation

```
let linkedList = new LinkedList();
```

Adding an element

```
linkedList.append(1);
linkedList.prepend(1);
linkedList.addAt(1, 1);
```

Fetch of the head value

```
linkedList.fetchHead();
```

Get the value of a node

```
linkedList.getNodeAt(1);
```

Removing an element

```
linkedList.removeAt(1);
linkedList.delete(1);
```

Check existence of a value

```
linkedList.contains(1);
```

Looping

```
for(const e of linkedList) {
  console.log(e);
}
```