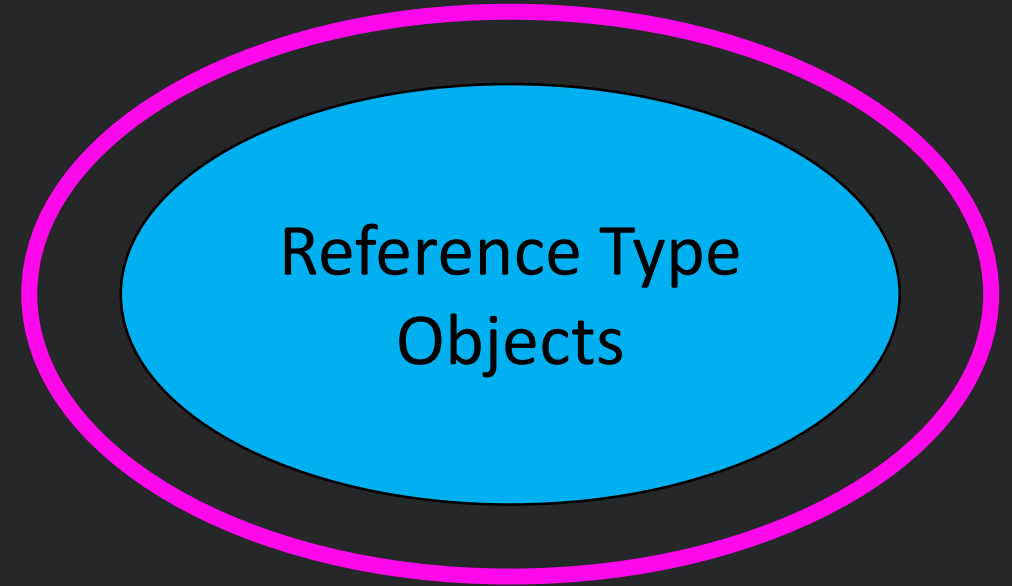
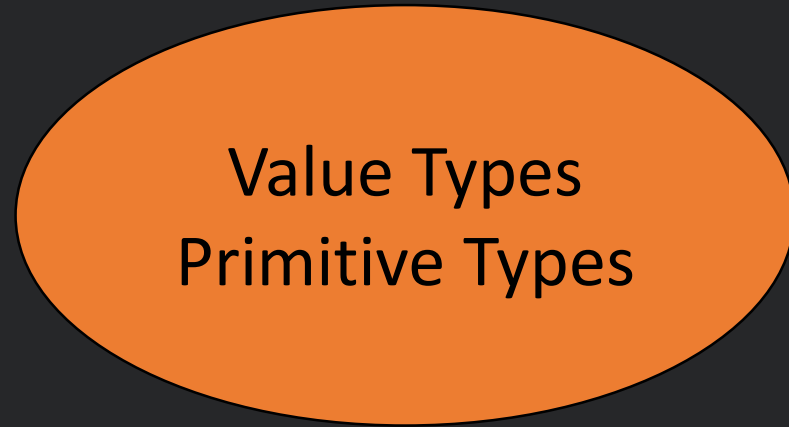


# JavaScript for Developers

## *Data Types*

*(part 2: array)*

# Data Types



```
const a = [1, 2, 3];  
console.log(typeof a); // => object
```

# 3. Array

- ✓ Add any type of data:

```
const arr = [1, 2, 3, "Bon", "Nam"];
```

- ✓ Can access out of range index:

```
console.log(arr[100]); // undefined
```

- ✓ Also can add element at any position:

```
arr[100] = 100;  
console.log(arr.length); // 101
```

- ✓ Add property for array:

```
const arr = [1, 2, 3];  
arr["name"] = "Jim";  
arr.age = 10;
```

# 3. Array

- ✓ Another way to create array:

```
const a = [1, 2, 3]; // literal method  
const b = new Array(1, 2, 3);
```

- ✓ Note for **const** array:

```
const arr = [1, 2, "ba", "bon"];  
arr[1] = "Mot"; //? OK  
arr = []; //! ERROR
```

- ✓ Wrapper Object: *Array*

```
Array.isArray()
```

# 3. Array

✓ looping:

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

```
for (const x of arr) {  
  console.log(x);  
}
```

(for-of loop)

```
for (const index in arr) {  
  console.log(arr[index]);  
}
```

(for-in loop)

(like a dictionary)

```
a.forEach((e) => {  
  console.log(e);  
});
```

(using callback function)

# 3. Stack

✓ array + push, **pop** = **stack**

```
const myStack = [];  
myStack.push(1);  
myStack.push(2);  
myStack.push(3);  
  
while (myStack.length > 0) {  
  console.log(myStack.pop());  
}  
//=> 3, 2, 1
```

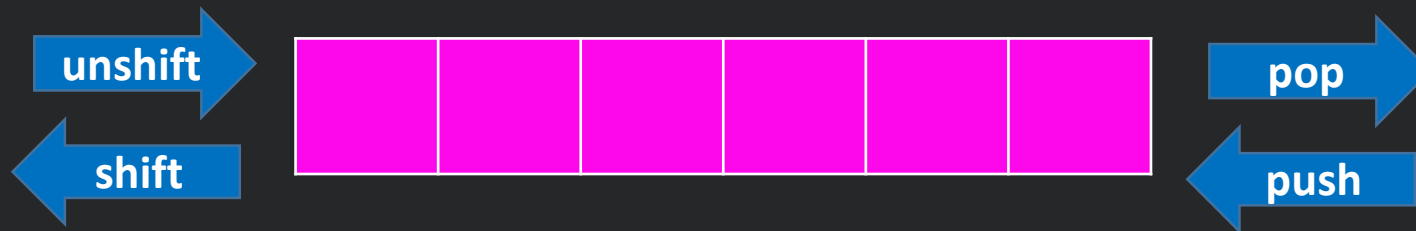
# 3. Queue

✓ array + push, **shift** = **queue**

```
const myQueue = [];  
myQueue.push(1);  
myQueue.push(2);  
myQueue.push(3);  
  
while (myQueue.length > 0) {  
  console.log(myQueue.shift());  
}  
//=> 1, 2, 3
```

### 3. Dequeue

✓ array + **push, pop, unshift, shift** = double ended queue





# 3. Array

## ✓splice

Để add hoặc remove phần tử ở vị trí bất kỳ

## ✓slice

Để lấy 1 đoạn bất kỳ trong array (giống hệt **substring**)

## ✓concat

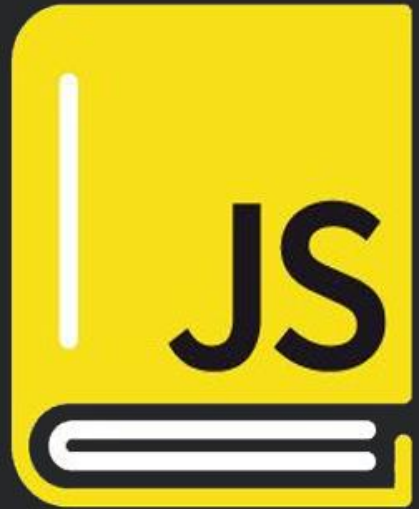
Nối 2 array

# 3. Refs

<https://devdocs.io/javascript-array/>

[https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\\_Objects/Array](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array)

[https://www.w3schools.com/JSREF/jsref\\_obj\\_array.asp](https://www.w3schools.com/JSREF/jsref_obj_array.asp)



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## *Data Types*

*(part 2: array)*