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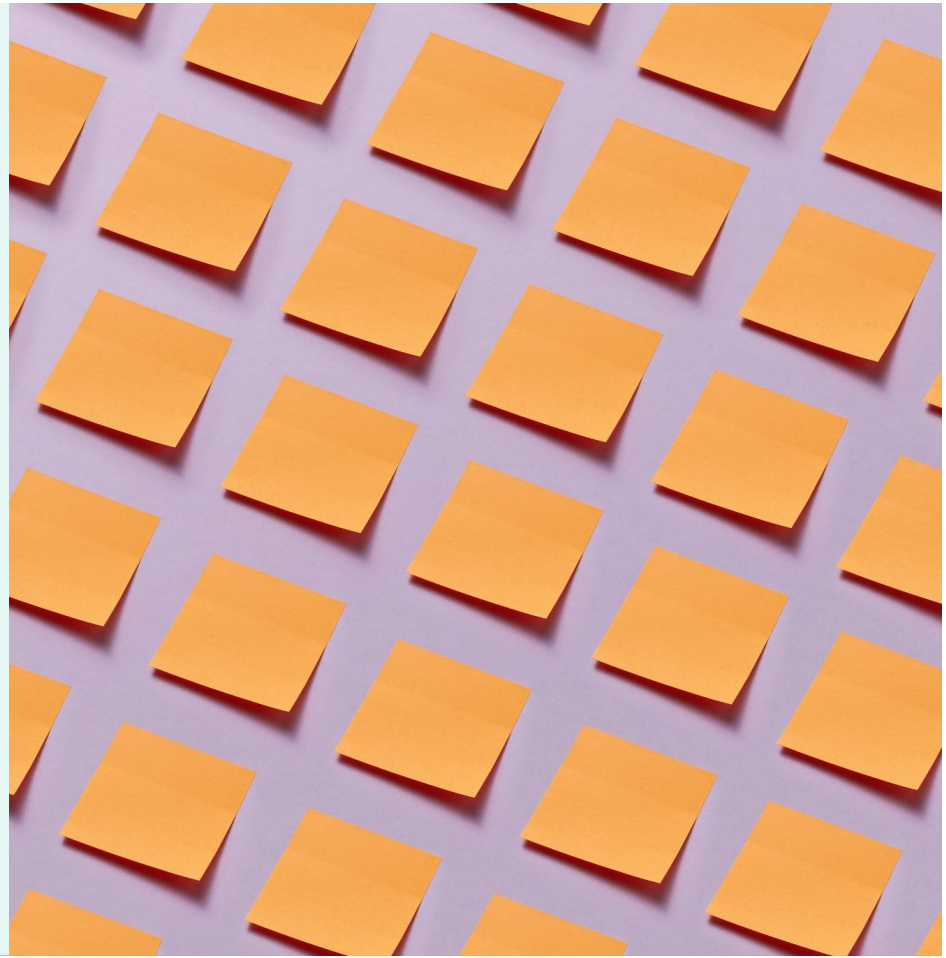
# Arrays

By Pranjal Nadhani



# Using a list of things

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```
let day1 = "Sunday";
let day2 = "Monday";
let day3 = "Tuesday";
let day4 = "Wednesday";
let day5 = "Thursday";
let day6 = "Friday";
let day7 = "Saturday";
```

# Using a list of things

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```
console.log(day1);
// Sunday
console.log(day2);
// Monday
console.log(day3);
// Tuesday
console.log(day4);
// Wednesday
console.log(day5);
// Thursday
console.log(day6);
// Friday
console.log(day7);
// Saturday
```

# Using a list of things

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```
function nameOfDay(num) {
 switch (num) {
   case 1:
     return day1;
   case 2:
     return day2;
   case 3:
     return day3;
   case 4:
     return day4;
   case 5:
     return day5;
   case 6:
     return day6;
   case 7:
     return day7;

   default:
     return null;
 }
}
```

# Arrays to the rescue

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```
let day1 = "Sunday";
let day2 = "Monday";
let day3 = "Tuesday";
let day4 = "Wednesday";
let day5 = "Thursday";
let day6 = "Friday";
let day7 = "Saturday";
```

CAN BE WRITTEN AS

```
const days = [
 "Sunday",
 "Monday",
 "Tuesday",
 "Wednesday",
 "Thursday",
 "Friday",
 "Saturday",
];
```

# Arrays to the rescue

skill academy

```
console.log(day1);
// Sunday
console.log(day2);
// Monday
console.log(day3);
// Tuesday
console.log(day4);
// Wednesday
console.log(day5);
// Thursday
console.log(day6);
// Friday
console.log(day7);
// Saturday
```

CAN BE WRITTEN AS

```
for (const day of days) {
 console.log(day);
}
// Sunday
// Monday
// Tuesday
// Wednesday
// Thursday
// Friday
// Saturday
```

# Arrays to the rescue

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```
function nameOfDay(num) {
 switch (num) {
   case 1:
     return day1;
   case 2:
     return day2;
   case 3:
     return day3;
   case 4:
     return day4;
   case 5:
     return day5;
   case 6:
     return day6;
   case 7:
     return day7;

   default:
     return null;
 }
}
```

# Arrays - Storage



# Arrays - Index

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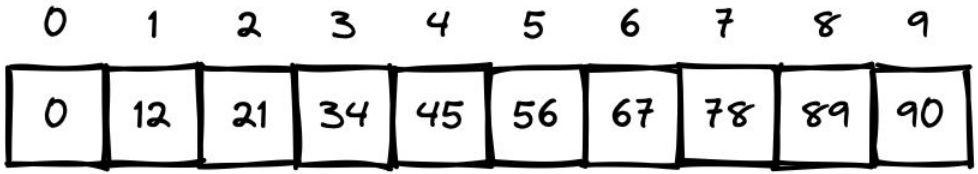

# Arrays - Access

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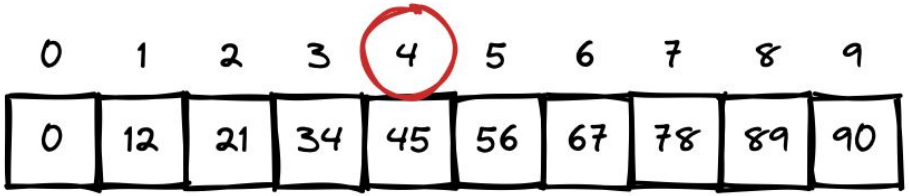
```
const fourthDay = nums[4];
```



# Arrays - Iteration

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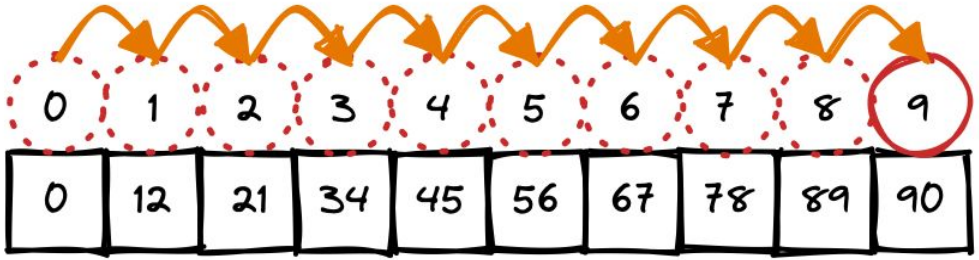
```
for (const num of nums) {
 console.log(num);
}
```



# Arrays - Search

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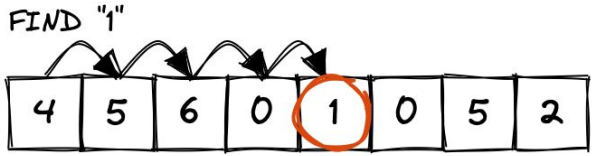
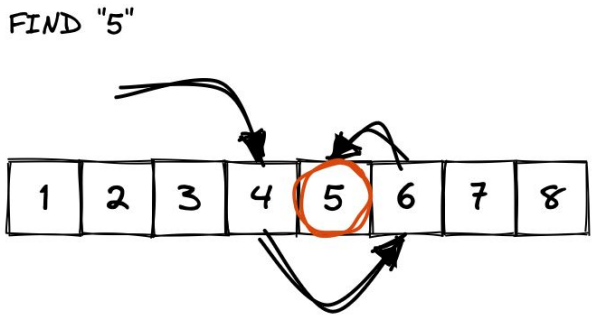
```
function linearSearch(A, target) {
 for (let i = 0; i < A.length; i++) {
   if (A[i] === target) {
     return i;
   }
 }

 return -1;
}
```




```
function binarySearch(A, target) {
 let start = 0;
 let end = A.length - 1;

 while (start <= end) {
   const mid = Math.floor((start + end) / 2);

   if (A[mid] === target) {
     return mid;
   } else if (A[mid] > target) {
     end = mid - 1;
   } else {
     start = mid + 1;
   }
 }

 return -1;
}
```