## Functions in JS

Block of code that performs a specific task, can be invoked whenever needed



### **Functions in JS**

**Function Definition** 

```
function functionName() {
 //do some work
function functionName(param1, param2 ...) {
 //do some work
```

### **Function Call**

functionName();

### **Arrow Functions**

Compact way of writing a function

```
const functionName = ( param1, param2 ...) => {
  //do some work
}
```

```
const sum = ( a, b ) => {
  return a + b;
}
```

### Let's Practice

Qs. Create a function using the "function" keyword that takes a String as an argument & returns the number of vowels in the string.

Qs. Create an arrow function to perform the same task.

# forEach Loop in Arrays

arr.forEach( callBackFunction )

CallbackFunction: Here, it is a function to execute for each element in the array

\*A callback is a function passed as an argument to another function.

```
arr.forEach((val) => {
   console.log(val);
})
```

## Let's Practice

Qs. For a given array of numbers, print the square of each value using the forEach loop.



### Some More Array Methods

Map

Creates a new array with the results of some operation. The value its callback returns are used to form new array

```
arr.map( callbackFnx( value, index, array ) )
```

```
let newArr = arr.map( ( val ) => {
    return val * 2;
})
```

### Some More Array Methods

### **Filter**

Creates a new array of elements that give true for a condition/filter.

Eg: all even elements

```
let newArr = arr.filter(((val) => {
    return val % 2 === 0;
})
```

## Some More Array Methods

### Reduce

Performs some operations & reduces the array to a single value. It returns that single value.

# JavaScript Demo: Array.reduce() 1 const array1 = [1, 2, 3, 4]; 2 // 0 + 1 + 2 + 3 + 4 const initialValue = 0; const sumWithInitial = array1.reduce( (accumulator, currentValue) => accumulator + currentValue, initialValue, ); 9 console.log(sumWithInitial); 11 // Expected output: 10

# Let's Practice

Qs. We are given array of marks of students. Filter our of the marks of students that scored 90+.

Qs. Take a number n as input from user. Create an array of numbers from 1 to n. Use the reduce method to calculate sum of all numbers in the array. Use the reduce method to calculate product of all numbers in the array.