

# JAVASCRIPT FUNCTIONS

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10:01 PM

There are three main things involved in a function.

1. Input (arguments)
2. Code
3. Output

## DECLARING A FUNCTION.

```
let greetUser = function () {  
    console.log('Welcome')  
}  
  
greetUser()
```

```
let square = function(n) {  
    console.log(n*n)  
}  
  
let num = 9  
// square(9)  
square(num)
```

```
let square = function(num) {  
    let result = num*num  
    return result  
}  
  
let value = square(3)  
console.log(value)
```

```
let convertFToC = function(F){  
  let celcius = (F-32)*(5/9);  
  return celcius  
}
```

```
let cel = convertFToC(32)  
let cel2 = convertFToC(111)  
console.log(cel)  
console.log(cel2)
```

## UNDEFINED AND NULL

```
let name  
console.log(name)
```

(OUTPUT: UNDEFINED, THE PROGRAM WON'T THROW ANY ERROR. )  
UNDEFINED FOR A VARIABLE

```
// undefined for function arguments  
let square = function (num){  
  console.log(num)  
}  
  
square()
```

(OUTPUT: UNDEFINED, THE PROGRAM WON'T THROW ANY ERROR)  
UNDEFINED FOR FUNCTION ARGUMENTS

```
let square = function (num){  
  console.log(num)  
}  
  
let result = square()  
console.log(result)
```

*(OUTPUT: UNDEFINED, THE PROGRAM WON'T THROW ANY ERROR)  
UNDEFINED FOR RETURN VALUES*

```
let age = 33  
  
age = undefined  
  
console.log(age)
```

*(OUTPUT: UNDEFINED, THE PROGRAM WON'T THROW ANY ERROR)*

```
let age = 33  
  
age = null  
  
console.log(age)
```

*(OUTPUT: NULL, THE PROGRAM WON'T THROW ANY ERROR)*

- In case of undefined it is the script that is finding an undefined variable
- But in case of null it's the developer who is declaring that variable null explicitly.



```
let add = function(a, b) {  
    return a+b;  
}
```

```
let result = add(11, 234)  
console.log(result)
```

DEFAULT VALUES FOR AN ARGUMENT:

HERE WE WILL PROVIDE A DEFAULT ARGUMENT IN THE FUNCTION ITSELF, SO WHEN A FUNCTION IS CALLED WITHOUT ANY ARGUMENTS DEFAULT ARGUMENTS WILL BE USED

```
let getScoreText = function(name = 'Player 1', score = 0) {  
    console.log(name)  
    console.log(score)  
}
```

```
getScoreText()
```

AS SIMILAR TO ABOVE GIVEN CASE WE HAVE PROVIDED DEFAULT VALUES TO OUR FUNCTION. IN THE FUNCTION CALL WE ARE GIVING ARGUMENTS SO OR CODE TAKES IN THE GIVEN ARGUMENTS

```
let getScoreText = function(name = 'Player 1', score = 0) {  
    console.log(name)  
    console.log(score)  
}
```

```
getScoreText(name?: string, score?: number)
```

```
getScoreText('Vatsal', 112)
```

```
let getTip = function(amt, tipP = 0.05){  
    let tip = amt*tipP
```

CTION CALL

ON, BUT IN  
MENTS.

```
    return tip
  }

  let resultTip = getTip(3000)
  console.log(resultTip)
```

Arguments of a function are also bound to that local scope

```
// Global Scope (convertFToC, cel, cel2)
// Local Scope(fahrenheit, celcius)

let convertFToC = function(F){
  let celcius = (F-32)*(5/9);
  return celcius
}

let cel = convertFToC(32)
let cel2 = convertFToC(111)
console.log(cel)
console.log(cel2)
```

```
let getGrade = function(score, maxScore){
  let perc = (score/maxScore)*100
  if(perc >= 90 && perc <= 100){
    return(`You got an A grade: ${perc}%`)
  } else if(perc >= 80 && perc <= 89){
    return(`You got a B grade: ${perc}%`)
  } else if(perc >= 70 && perc <= 79){
    return(`You got a C grade: ${perc}%`)
  } else if(perc >= 60 && perc <= 69){
    return(`You got a D grade: ${perc}%`)
  }
}
```

```
    } else {  
        return(`You got an E grade: ${perc}%`)  
    }  
}
```

```
let getResult = getGrade(88,100)  
console.log(getResult);
```