

# For Loop

Justin Besteman

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## Synopsis

For Loops are great and powerful tools for looping over code for a present amount of time.

## Why

A for loop can literally save a coder to write a 100 lines of code to write. Remember the array of

```
1 //      index      0      1      3      4
2 var greet = ["Hi", "Bye", "Hello", "Goodbye"];
3
4 greet[0]; // "Hi "
5 greet[1]; // "Bye "
6 greet[2]; // "Hello "
7 greet[3]; // "Goodbye "
```

Can you imagine if the array is 10, 100, 1000, 10000, or 100000 items in there? What happens if for the program, you had to type it all out like it was done in the example of greet

I would ask for a rope and barstool first before doing that.

## Syntax

For Loops start with keyword “for” and follow by parenthesis  
It is block level code so(drumroll please) curly braces {}

Inside the parenthesis can get tricky but stay calm and code  
for (start ; finish ; counter)

This is the general idea with for loops

**Semicolons are used for seperation** not commas

Start: Tells the for loop where to start counting

Finish: Tells the for loop where to start or break

Counter: Tells the for loop how to count

## Advanced

Generally, a coder will use all three parameters in the for loop (start,finish,counter)

But you can omit some and all the parameters if your program calla for it

I have been coding for a long time and I can remember on one hand how many times I had to do that (and I could lose to three fingers).

## Examples

```
1
2 // ----- Example 1 -----
3
4 //   index    0      1      2      3
5 var greet = ["Hi", "Bye", "Hello", "Goodbye"];
6
7 greet[0]; // "Hi "
8 greet[1]; // "Bye "
9 greet[2]; // "Hello "
10 greet[3]; // "Goodbye "
11
12 // Instead doing this we can do this
13
14 for (var i = 0 ; i < 4 ; i++) {
15
16     // The i is going to be changing through every loop
17     // First time i = 0
18     // Second time i = 1
19     // Three time i = 2
20     // Four time i = 3
```

```

21 // Then will break because the middle condition because
    false
22 console.log(greet[i]);
23
24 } // End of For Loop I
25
26 // Lets breakdown what is in the parenthesis
27
28 // var i = 0 - we are saying start counter 0
29 // when you are looping through an array you,
30 // generally want to start at 0 because that is where,
31 // array will start counting from
32
33 // i < 4 - we are saying finish when this statement,
34 // or condition is true or still true keep going baby!!
35 // when the middle statement becomes false it will,
36 // start or break out of the loop
37
38 // i++ - everytime the code loops count by 1,
39 // saying i++ is the samething as i = i + 1 or i += 1
40
41
42 // ----- Example 2 -----
43
44 //   index    0      1      2      3
45 var greet = ["Hi", "Bye", "Hello", "Goodbye"];
46
47 for (var i = 3 ; i >= 0 ; i--){
48
49     // This will console log from the back of the array
50     // to the front rather then front to back
51     console.log(greet[i]);
52
53 } // End of For Loop I
54
55 // This for loop counts down instead of counting up
56 // Notice >= this mean greater or equal too
57 // <= this less then or equal too
58
59
60 // ----- Example 3 -----
61
62 //   index    0      1      2      3
63 var greet = ["Hi", "Bye", "Hello", "Goodbye"];
64

```

```
65 var start = 0;
66 var finish = 4;
67
68 for (start ; start < finish ; start++){
69
70     console.log(greet[start]);
71
72 } // End of For Loop Start
73
```