

There are 2 types of Loops:

(1) For Loops

(2) While Loops

An example of a FOR LOOP of numbers:

```
for (var i=0; i<=100; i+=1) {  
    console.log(i);  
}
```

```
0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39... etc
```

An example of a FOR LOOP for an Array:

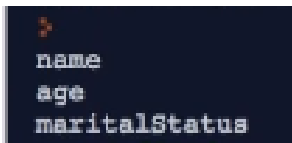
```
var fruits = ["mango", "banana", "apple", "cherry", "asd", "cucumber"];
```

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

```
>  
mango  
banana  
apple  
cherry  
asd  
cucumber
```

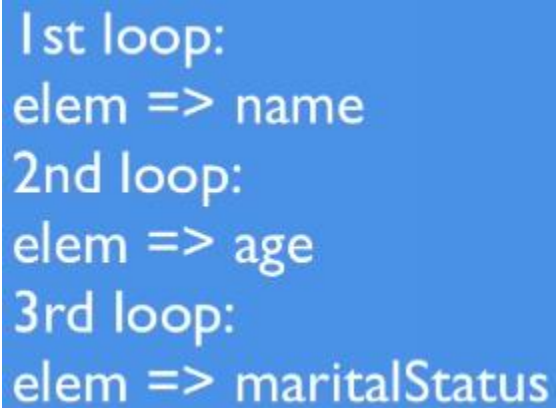
An example for a FOR LOOP for an Object:

```
var data = {  
  name: "john",  
  age: 28,  
  maritalStatus: true  
}  
  
for (var elem in data) {  
  console.log(elem);  
}
```



```
name  
age  
maritalStatus
```

... to summarize the FOR LOOP in this scenario:



```
1st loop:  
elem => name  
2nd loop:  
elem => age  
3rd loop:  
elem => maritalStatus
```

... basically, we only got the property to print out.

If we want the FOR LOOP to also get us the value, we write:

```
var data = {  
  name: "john",  
  age: 28,  
  maritalStatus: true  
}  
  
for (var elem in data) {  
  console.log(elem, data[elem]);  
}
```

```
>  
name john  
age 28  
maritalStatus true
```

An example of a WHILE LOOP for Numbers: Printing 0 through 10:

```
var num = 0; // initializer  
  
while (num < 11) {  
  console.log(num);  
  num++;  
}
```

```
0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10
```

An example of a WHILE LOOP for Numbers: Incremental addition

```
var sum = 0; // store all the addition of numbers // final value
var num = 0;
while (num < 10) {
  sum += num;
  num++;
}
console.log(sum);
```

.. basically, what we did:

0+0 = 0

0+1 = 1

1+2 = 3

3+3 = 6

6+4 = 10

10+5 = 15

15+6 = 21

21+7 = 28

28+8 = 36

36+9 = 45

A terminal window with a dark background showing the number 45 in a light blue font.

... if we wish to include 10, we change = to <= :

```
var sum = 0; // store all the addition of numbers // final value
var num = 0;
while (num <= 10) {
  sum += num;
  num++;
}
console.log(sum);
```

... which will give us 55:

A terminal window with a dark background showing the number 55 in a light blue font.

An example of a WHILE LOOP for an Array of random objects:

```
var randomStuff = ["apple", 3.2414, 9999, true, false, undefined, ['apple', 'ball', 'cat'], 3, 2, "lastobject"];
var x = 0;
while (x < randomStuff.length) {
  console.log(x);
  // console.log(randomStuff[x]);
  x++;
}
```

```
0
1
2
3
4
5
6
7
8
9
```

... so this only gave us an index of our 10 items. If we wish to access the 10 items, we write:

```
var randomStuff = ["apple", 3.2414, 9999, true, false, undefined, ['apple', 'ball', 'cat'], 3, 2, "lastobject"];
var x = 0;
while (x < randomStuff.length) {
  console.log(randomStuff[x]);
  x++;
}
```

```
apple
3.2414
9999
true
false
undefined
[ 'apple', 'ball', 'cat' ]
3
2
lastobject
```