In this thread I want to discuss the while loop as it relates to looping over JavaScript arrays. We will discuss the advantage of using the while loop and any disadvantages a while loop may have. We will also discuss any performance impacts, as well as readability and community preference. I will also provide a coded example of what a while loop looks like to loop through an array. So, what is a while loop?

“A while loop is used to execute a statement or block of code repeatedly so long as an expression is true. Once the expression becomes false, the loop terminates. While other loops may have up to three expressions, the while loop only has one and that **condition –** defines the loop stop condition.” (*JavaScript – While Loops*, 2022).

A while loop looks like this below:

Diagram

Description automatically generated

(2022).

The following example of code in practice uses the while loop through an array:

Var array = [

{id: 0, name: ‘John’, age: 40},

{id: 1, name: ‘Chad’, age: 41},

{id: 2, name: ‘Matt’, age: 44],

[id: 3, name: ‘Danny’, age 43],

];

For(let i = 0; I ,array.length; i++){

console.log(array[i].name);

}

/\*

Output:

John

Chad

Matt

Danny

\*/

((Vasilevski, 2020).

There is an advantage and a disadvantage of using a while loop. The advantage of a while loop is that we can check the condition quickly because the condition is written at the start of the loop. Also, the disadvantage of a while loop is that the iteration will not occur if the first condition of iteration is incorrect. (Fabisiak, 2021).

As far as performance testing, the code below was tested to see how fast a while loop can be:

var counter =1000;

var i = 0;

var t0 = performance.now();

while(I , counter0 {

console.log(‘www.duomly.com’);

i++;

}

var t1 = performance.now();

console.log(“While…loop” = (t1 - t0) + milliseconds.”);

**Test Results:**

Chrome 156.46 ms

Firefox: 243.60 ms

Safari: 18 ms

(Fabisiak, 2021).

In my research of readability and community preference I found a post on <https://stackoverflow.com/questions/7056389/what-is-more-efficient-in-javascript-while-or-for-statements>

With statements such as “I don’t know that one would be more efficient that the other since each involves the same number of assignments and comparisons. For readability I would go with the ‘for” loop, but that a personal preference” according to one user. Another user stated, “In theory the while loop is quicker because the for loop looks up the length attribute of foo every time through the loop, but in real-world use its going to make an immeasurably small difference.” To me, it seems that it really boils down to user preference and that there is not a standard amongst developers at this point on whether the while loop is better than the other. (*What is More Efficient in JavaScript: While of For Statements?* 2011).

In conclusion we can see what a while loop is from the coded example and we now know what a while loop can do. The structure of a while loop is easy enough to code by hand. In the developer community it really seems to be a personal choice on whether to use the while loop versus the other loops available to us. There is no doubt that in simple contexts one may choose to use the while loop over more technical loops or where more conditions may be needed to execute the code properly.

References:

1. (2022, January 22). *JavaScript while Loop by Examples*. JavaScript Tutorial. Rretrieved July 11, 2022, from <https://www.javascripttutorial.net/javascript-while-loop/>

Fabisiak, R. (2021, December 11). *JavaScript loops comparison and performance – ITNEXT.* Medium. Retrieved July 11, 2022, from <https://itnext.io/javascript-loops-comparison-and-performance-e4e29db87455>

JavaScript – While Loops. (2022). Tutorialspoint. Retrieved July 11, 2022, from <https://www.tutorialspoint.com/javascript/javascript-while-loop.htm>

Vasilevski, A. (2020, June 10). *6 Ways to Loop Through an Array in JavaScript*. CodeSpot. Retrieved July 11, 2022, from <https://www.codespot.org/ways-to-loo-through-am-array-in-javascript/>

What is more efficient in Javascript: while or for statements? (2011, August 14). Stack Overflow. Retrieved July 11, 2022, from <https://stackoverflow.com/questions/7056389/what-is-more-effecient-in-javascript-while-or-for-statments>