**Code Wars**

**Add ONLY Numbers in an Array**

**The Problem**

We need a function that only adds the numeric values within an array.

*let* test1 = []; //Should equal 0

*let* test2 = [null]; //Should equal 0

*let* test3 = [5, 3, "hat"]; //should equal 0

*let* test4 = [1, 2]; // Should equal 3

*let* test5 = [null, 5, 1]; //Should equal 6

*let* test6 = //Should equal 0

These are our rules with the expected output.

**Smaller Problems**

* The array must have a length greater than 0, otherwise we need to return 0.

*arr*.length > 0

This logic would ensure that the array is populated. This would work for our first test.

* The array must be an array.

*Array*.isArray(*arr*)

This logic could exclude anything that is not an array.

* The array must not contain any values that can’t be converted into a number.

!*arr*.some(isNaN)

The ! ensure that the array DOES NOT contain elements that can’t be converted into a number.

Our first statement;

if (*Array*.isArray(*arr*) && *arr*.length > 0 && !*arr*.some(isNaN))

This if statement immediately checks to see if all of our rules have been met. If we do have an array that contains only numbers and the length is greater than 1, then we can initiate our ‘for’ loop to begin to add the numbers.

If these conditions have not been met, then we can simply return 0.

**Final Code Block**

"strict";

//Logic to test if Array and array is populated.

*let* array = *function* (*arr*) {

*let* sum = 0;

if (*Array*.isArray(*arr*) && *arr*.length > 0 && !*arr*.some(isNaN)) {

for (*let* i = 0; i < *arr*.length; i++) {

sum = sum + *arr*[i];

}

} else {

sum = 0;

}

console.log(sum);

}; //END FUNCTION

//Array Testing

*let* test1 = []; //Should equal 0

*let* test2 = [null]; //Should equal 0

*let* test3 = [5, 3, "hat"]; //should equal 0

*let* test4 = [1, 2]; // Should equal 3

*let* test5 = [null, 5, 1]; //Should equal 6

//console.log(array(test2))

array(test1);

array(test2);

array(test3);

array(test4);

array(test5);

**Problems of Note**

*let* array2 = *function* (*arr*) {

*let* sum = 0;

for (i = 0; i < *arr*.length; i++) {

if (typeof *arr*[i] == "number") {

sum = sum + *arr*[i];

} else {

sum = 0;

}

}

console.log(sum);

};

The problem with this code is that for every value that is NOT a number, ‘sum’ will simply be reset to 0.

Let’s take two examples;

Array 1; ‘hat’, 2, 3. This code would produce the answer as 5. ‘hat’ = 0, 2 + 3 = 5.

Array 2; 2, 3, ‘hat’. This code would produce 0. When we get to ‘hat’ sum is set to 0.

Array 3; 2 ‘hat’, 3. This code would produce 3. When we get to ‘hat’ sum is set to 0. 0 + 3 is 3.

Think of it like this; this loop will

**Final Code Block**

"strict";

//Logic to test if Array and array is populated.

*let* array = *function* (*arr*) {

*let* sum = 0;

if (*Array*.isArray(*arr*) && *arr*.length > 0 && !*arr*.some(isNaN)) {

for (*let* i = 0; i < *arr*.length; i++) {

sum = sum + *arr*[i];

}

} else {

sum = 0;

}

console.log(sum);

}; //END FUNCTION

//Array Testing

*let* test1 = []; //Should equal 0

*let* test2 = [null]; //Should equal 0

*let* test3 = [5, 3, "hat"]; //should equal 0

*let* test4 = [1, 2]; // Should equal 3

*let* test5 = [null, 5, 1]; //Should equal 6

//console.log(array(test2))

array(test1);

array(test2);

array(test3);

array(test4);

array(test5);

**Graphical user interface, text, application, email

Description automatically generated**