

Problem 2775: Undefined to Null

Problem Information

Difficulty: Medium

Acceptance Rate: 0.00%

Paid Only: No

Problem Description

Given a deeply nested object or array

obj

, return the object

obj

with any

undefined

values replaced by

null

.

undefined

values are handled differently than

null

values when objects are converted to a JSON string using

`JSON.stringify()`

. This function helps ensure serialized data is free of unexpected errors.

Example 1:

Input:

```
obj = {"a": undefined, "b": 3}
```

Output:

```
{"a": null, "b": 3}
```

Explanation:

The value for obj.a has been changed from undefined to null

Example 2:

Input:

```
obj = {"a": undefined, "b": ["a", undefined]}
```

Output:

```
{"a": null, "b": ["a", null]}
```

Explanation:

The values for obj.a and obj.b[1] have been changed from undefined to null

Constraints:

`obj`

is a valid JSON object or array

$2 \leq \text{JSON.stringify}(\text{obj}).\text{length} \leq 10$

Code Snippets

JavaScript:

```
/** 
 * @param {Object|Array} obj
 * @return {Object|Array}
 */
var undefinedToNull = function(obj) {

};

/** 
 * undefinedToNull({ "a": undefined, "b": 3 }) // { "a": null, "b": 3 }
 * undefinedToNull([undefined, undefined]) // [null, null]
 */

```

TypeScript:

```
type JSONValue = null | boolean | number | string | JSONValue[] | { [key: string]: JSONValue };
type Value = undefined | null | boolean | number | string | Value[] | { [key: string]: Value };

type Obj1 = Record<string, Value> | Array<Value>
type Obj2 = Record<string, JSONValue> | Array<JSONValue>

function undefinedToNull(obj: Obj1): Obj2 {

};

/** 
 * undefinedToNull({ "a": undefined, "b": 3 }) // { "a": null, "b": 3 }
 * undefinedToNull([undefined, undefined]) // [null, null]
 */

```

Solutions

JavaScript Solution:

```
/**  
 * Problem: Undefined to Null  
 * Difficulty: Medium  
 * Tags: array, string  
  
 * Approach: Use two pointers or sliding window technique  
 * Time Complexity: O(n) or O(n log n)  
 * Space Complexity: O(1) to O(n) depending on approach  
 */  
  
/**  
 * @param {Object|Array} obj  
 * @return {Object|Array}  
 */  
var undefinedToNull = function(obj) {  
  
};  
  
/**  
 * undefinedToNull({ "a": undefined, "b": 3 }) // { "a": null, "b": 3 }  
* undefinedToNull([undefined, undefined]) // [null, null]  
*/
```

TypeScript Solution:

```
/**  
 * Problem: Undefined to Null  
 * Difficulty: Medium  
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 * Approach: Use two pointers or sliding window technique  
 * Time Complexity: O(n) or O(n log n)  
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 */  
  
type JSONValue = null | boolean | number | string | JSONValue[] | { [key: string]: JSONValue };  
type Value = undefined | null | boolean | number | string | Value[] | { [key: string]: Value };  
  
type Obj1 = Record<string, Value> | Array<Value>
```

```
type Obj2 = Record<string, JSONValue> | Array<JSONValue>

function undefinedToNull(obj: Obj1): Obj2 {

};

/** 
* undefinedToNull({ "a": undefined, "b": 3}) // { "a": null, "b": 3}
* undefinedToNull([undefined, undefined]) // [null, null]
*/

```