Problem 2722: Join Two Arrays by ID

Problem Information

Difficulty: Medium
Acceptance Rate: 56.57%
Paid Only: No

Problem Description

Given two arrays `arr1` and `arr2`, return a new array `joinedArray`. All the objects in each of the two inputs arrays will contain an `id` field that has an integer value.

`joinedArray` is an array formed by merging `arr1` and `arr2` based on their `id` key. The length of `joinedArray` should be the length of unique values of `id`. The returned array should be sorted in **ascending** order based on the `id` key.

If a given `id` exists in one array but not the other, the single object with that `id` should be included in the result array without modification.

If two objects share an `id`, their properties should be merged into a single object:

* If a key only exists in one object, that single key-value pair should be included in the object. * If a key is included in both objects, the value in the object from `arr2` should override the value from `arr1`.

Example 1:

Input: arr1 = [{"id": 1, "x": 1}, {"id": 2, "x": 9}], arr2 = [{"id": 3, "x": 5}] **Output:** [{"id": 1, "x": 1}, {"id": 2, "x": 9}, {"id": 3, "x": 5}] **Explanation:** There are no duplicate ids so arr1 is simply concatenated with arr2.

Example 2:

Input: arr1 = [{"id": 1, "x": 2, "y": 3}, {"id": 2, "x": 3, "y": 6}], arr2 = [{"id": 2, "x": 10, "y": 20}, {"id": 3, "x": 0, "y": 0}] **Output:** [{"id": 1, "x": 2, "y": 3}, {"id": 2, "x": 10, "y": 20}, {"id": 3, "x": 0, "y": 0}] **Explanation:** The two objects with id=1 and id=3 are included in the result array

without modifiction. The two objects with id=2 are merged together. The keys from arr2 override the values in arr1.

Example 3:

Input: arr1 = [{"id": 1, "b": {"b": 94},"v": [4, 3], "y": 48}] arr2 = [{"id": 1, "b": {"c": 84}, "v": [1, 3]}] **Output:** [{"id": 1, "b": {"c": 84}, "v": [1, 3], "y": 48}] **Explanation:** The two objects with id=1 are merged together. For the keys "b" and "v" the values from arr2 are used. Since the key "y" only exists in arr1, that value is taken form arr1.

Constraints:

* `arr1` and `arr2` are valid JSON arrays * Each object in `arr1` and `arr2` has a unique integer `id` key * `2 <= JSON.stringify(arr1).length <= 106` * `2 <= JSON.stringify(arr2).length <= 106`

Code Snippets

JavaScript:

```
/**
* @param {Array} arr1
* @param {Array} arr2
* @return {Array}
*/
var join = function(arr1, arr2) {

};
```

TypeScript:

```
type JSONValue = null | boolean | number | string | JSONValue[] | { [key:
string]: JSONValue };
type ArrayType = { "id": number } & Record<string, JSONValue>;

function join(arr1: ArrayType[], arr2: ArrayType[]): ArrayType[] {

};
```