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Java sorting algorithm.

Sorting algorithms explained

Java flatMap Interview Questi

Haan, main aapko ek sorting algorithm ke java code ke madhyam se samjha sakta hun. Chaliye, hum bubble sort algorithm ko samajh lete hain.

Bubble sort ek simple comparison-based sorting algorithm hai, jisme adjacent elements ko compare karke unhe correct order mein arrange kiya jata hai. Yadi dono elements ka order sahi nahi hai, toh unhe swap kiya jata hai. Is process ko karte-karte, array mein sabse bada element last position par pahunchta hai aur is tarah se array sorted ho jata hai.

Yahan, hum ek simple java program likhenge jo bubble sort algorithm ka use karta hai. Ye program ek integer array ko lekar usko sort karega:

php Copy code

```php
public class BubbleSortExample {
    public static void main(String[] args) {
        int[] array = {5, 2, 9, 1, 5, 6};
        int n = array.length;
        int temp = 0;

        for (int i = 0; i < n; i++) {
            for (int j = 1; j < (n - i); j++) {
                if (array[j - 1] > array[j]) {
                    // Swap the elements
                    temp = array[j - 1];
                    array[j - 1] = array[j];
                    array[j] = temp;
                }
            }
        }

        // Print the sorted array
        for (int i = 0; i < n; i++) {
            System.out.print(array[i] + " ");
        }
    }
}
```

Is program mein, humne ek integer array `array` ka use kiya hai jisme humare elements hain. Humne `n` ko array ke length ke equal kiya hai aur `temp` ko temporary variable ke roop mein use kiya hai.

Phir, humne nested for loop ka use kiya hai jisme hum pehle `i` loop mein array ke length se kam tak chalte hain aur doosre `j` loop mein `(n-i-1)` tak chalte hain. `j` loop mein hum adjacent elements ko compare karte hain aur agar koi element apne next element se bada hai, toh unhe swap kiya jata hai.

Jab humne array ko sort kar liya, toh humne ek aur loop ka use kiya hai jiske madhyam se hum sorted array ko print karte hain.

Is tarah se, ye program bubble sort algorithm ka ek simple implementation hai.

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