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Java sorting algorithm. ✎ 🗑

Sorting algorithms explained.

Java flatMap Interview Question



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

Insertion sort algorithm mein hum array ke pehle element ko sorted array ki tarah consider karte hain. Fir, hum next element ko dhundhkar use sorted array ke correct position par insert karte hain. Isi process ko karte-karte, hum array ko sort kar dete hain.

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

```
php
Copy code

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

        for (int i = 1; i < n; i++) {
            int key = array[i];
            int j = i - 1;

            // Move elements of array[0..i-1], that are greater than key,
            // to one position ahead of their current position
            while (j >= 0 && array[j] > key) {
                array[j + 1] = array[j];
                j = j - 1;
            }
            array[j + 1] = key;
        }

        // 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.

Phir, humne ek for loop ka use kiya hai jisme hum array ke saare elements ke liye traverse karte hain. Har ek iteration mein, hum next element ko dhundhte hain aur use sorted array ke correct position par insert karte hain. Iske liye, humne ek variable `key` ka use kiya hai.

Iske baad, humne while loop ka use kiya hai jisme hum sorted array ke saare elements ke saath compare karte hain. Jab tak sorted array ke kisi element se `key` bada element milta hai, hum uss element ko ek position aage move karte hain.

Jab humne `key` ko correct position par insert kar diya, toh humne ek aur loop ka use kiya hai jiske madhyam se hum sorted array ko print karte hain.

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



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