Online C++ 14 Compiler IDE

Project Name: NP-merge01

```cpp
#include <iostream>

using namespace std;

void merge(int arr[], int left[], int right[], int leftSize, int rightSize) {
    int i = 0, j = 0, k = 0;

    while (i < leftSize && j < rightSize) {
        if (left[i] <= right[j]) {
            arr[k++] = left[i++];
        } else {
            arr[k++] = right[j++];
        }
    }

    while (i < leftSize) {
        arr[k++] = left[i++];
    }

    while (j < rightSize) {
        arr[k++] = right[j++];
    }
}

void mergeSort(int arr[], int size) {
    if (size < 2) {
        return;
    }

    int mid = size / 2;

    int left[mid];
    int right[size - mid];

    for (int i = 0; i < mid; i++) {
        left[i] = arr[i];
    }

    for (int i = mid; i < size; i++) {
        right[i - mid] = arr[i];
    }

    mergeSort(left, mid);
```

```
    mergeSort(right, size - mid);
    merge(arr, left, right, mid, size - mid);
}

int main() {
    int arr[] = { 5, 3, 8, 1, 2, 9, 7, 6, 4 };
    int size = sizeof(arr) / sizeof(arr[0]);

    mergeSort(arr, size);

    for (int i = 0; i < size; i++) {
        cout << arr[i] << " ";
    }

    cout << endl;

    return 0;
}

```

Execute Mode, Version, Inputs & Arguments

CommandLine Arguments

Stdin Inputs

Result

CPU Time: 0.00 sec(s), Memory: 1740 kilobyte(s) **compiled and executed in 1.127 sec(s)**

```
1 2 3 4 5 6 7 8 9
```

Note: Please check our documentation, or Youtube channel. for more details