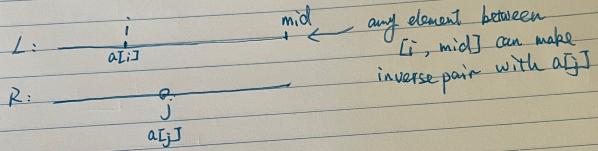


788. Inverse pair

In an array  $i < j$  and  $a[i] > a[j]$  then  $a[i]-a[j]$  are inverse pair.



Other than that, it is merge-sort

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```
#include <iostream>
using namespace std;
typedef long long LL;
const int N = 1e5 + 10;
int a[N], tmp[N];
LL merge_sort(int q[], int l, int r)
{
    if (l >= r) return 0;
    int mid = l + r >> 1;
    LL res = merge_sort(q, l, mid) + merge_sort(q, mid + 1, r);
    int k = 0, i = l, j = mid + 1;
    while (i <= mid && j <= r)
        if (q[i] <= q[j]) tmp[k ++] = q[i ++];
        else
    {
        res += mid - i + 1;
        tmp[k ++] = q[j ++];
    }
    while (i <= mid) tmp[k ++] = q[i ++];
    while (j <= r) tmp[k ++] = q[j ++];
    for (i = l, j = 0; i <= r; i ++, j ++) q[i] = tmp[j];
}
int main()
{
    int n;
    scanf("%d", &n);
    for (int i = 0; i < n; i ++ ) scanf("%d", &a[i]);
    cout << merge_sort(a, 0, n - 1) << endl;
    return 0;
}
```

