MERGE SORT

PROGRAM

main.c

Share Run

```c
#include <stdio.h>
void merge(int a[], int l, int m, int r) {
    int i = l, j = m + 1, k = 0;
    int temp[100];
    while (i <= m && j <= r) {
        if (a[i] < a[j])
            temp[k++] = a[i++];
        else
            temp[k++] = a[j++];
    }
    while (i <= m) temp[k++] = a[i++];
    while (j <= r) temp[k++] = a[j++];
    for (i = l, k = 0; i <= r; i++, k++)
        a[i] = temp[k];
}
void mergeSort(int a[], int l, int r) {
    if (l < r) {
        int m = (l + r) / 2;
        mergeSort(a, l, m);
        mergeSort(a, m + 1, r);
        merge(a, l, m, r);
        }
}
```

```c
int main() {
    int a[] = {5, 2, 4, 6, 1, 3};
    int n = sizeof(a) / sizeof(a[0]);
    mergeSort(a, 0, n - 1);
    printf("Sorted array: ");
    for (int i = 0; i < n; i++)
        printf("%d ", a[i]);
    printf("\n");
    return 0;
}
```

OUTPUT

Output Clear

```
Sorted array: 1 2 3 4 5 6


=== Code Execution Successful ===
```