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#include <stdio.h>
/* =====
 *                               File: msort.c
 *                               Purpose: Demonstrate Merge Sort
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 * ===== */
void copy(int b[], int a[], int l, int r) {
    int i;
    int j = l;
    int n = r - l + 1;
    for (i = 0; i < n; i++) a[j++] = b[i];
}
/* ===== */
void merge(int a[], int l, int r, int m) {
    int b[r - l + 1];
    int i = l, j = m + 1, k = 0;
    while ((i <= m) && (j <= r)) {
        if (a[i] <= a[j]) b[k++] = a[i++];
        else b[k++] = a[j++];
    }
    int p;
    if (i > m) {
        for (p = j; p <= r; p++) b[k++] = a[p];
    }
    else {
        for (p = i; p <= m; p++) b[k++] = a[p];
    }
    copy (b, a, l, r);
}
/* ===== */
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, r, m);
    }
}
/* ===== */
int main(int argc, char** argv) {
    int a[argc - 2];
    int i = 0;
    for (i; i < argc - 1; i++) {
        a[i] = atoi(argv[i + 1]);
    }
    mergesort(a, 0, argc - 2);
    for (i = 0; i < argc - 1; i++) printf("%d ", a[i]);
    return 0;
}
```