



main.c



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Output

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```
1 #include <stdio.h>
2 #include <stdlib.h>
3 int getMax(int arr[], int n) {
4     int max = arr[0];
5     for (int i = 1; i < n; i++)
6         if (arr[i] > max)
7             max = arr[i];
8     return max;
9 }
10 void countSort(int arr[], int n, int exp) {
11     int output[n];
12     int i, count[10] = {0};
13     for (i = 0; i < n; i++)
14         count[(arr[i] / exp) % 10]++;
15     for (i = 1; i < 10; i++)
16         count[i] += count[i - 1];
17     for (i = n - 1; i >= 0; i--) {
18         output[count[(arr[i] / exp) % 10] - 1] = arr[i];
19         count[(arr[i] / exp) % 10]--;
20     }
21     for (i = 0; i < n; i++)
22         arr[i] = output[i];
```

```
Original array:
170 45 75 90 802 24 2 66
Sorted array:
2 24 45 66 75 90 170 802
```

=== Code Execution Successful ===



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Output

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```
1 #include <stdio.h>
2 void merge(int arr[], int left, int mid, int right) {
3     int i, j, k;
4     int n1 = mid - left + 1;
5     int n2 = right - mid;
6     int L[n1], R[n2];
7     for (i = 0; i < n1; i++)
8         L[i] = arr[left + i];
9     for (j = 0; j < n2; j++)
10        R[j] = arr[mid + 1 + j];
11    i = 0;
12    j = 0;
13    k = left;
14    while (i < n1 && j < n2) {
15        if (L[i] <= R[j]) {
16            arr[k] = L[i];
17            i++;
18        } else {
19            arr[k] = R[j];
20            j++;
21        }
22        k++;
```

```
Original array:
38 27 43 3 9 82 10
Sorted array:
3 9 10 27 38 43 82
```

=== Code Execution Successful ===

Python

JS

GO

PHP

main.c

Run

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```
1 #include <stdio.h>
2 void insertionSort(int arr[], int n) {
3     int i, key, j;
4     for (i = 1; i < n; i++) {
5         key = arr[i];
6         j = i - 1;
7         while (j >= 0 && arr[j] > key) {
8             arr[j + 1] = arr[j];
9             j = j - 1;
10        }
11        arr[j + 1] = key;
12    }
13 }
14 void printArray(int arr[], int n) {
15     int i;
16     for (i = 0; i < n; i++) {
17         printf("%d ", arr[i]);
18     }
19     printf("\n");
20 }
21 int main() {
22     int arr[] = {12, 11, 13, 5, 6};
```

Output

```
Original array:
12 11 13 5 6
Sorted array:
5 6 11 12 13

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