```c
#include <stdio.h>

void heapify(int a[], int n, int i) {
    int largest = i, left = 2*i + 1, right = 2*i + 2;
    if (left < n && a[left] > a[largest]) largest = left;
    if (right < n && a[right] > a[largest]) largest = right;
    if (largest != i) {
        int temp = a[i]; a[i] = a[largest]; a[largest] = temp;
        heapify(a, n, largest);
    }
}

void heapSort(int a[], int n) {
    for (int i = n/2 - 1; i >= 0; i--)  // Build max heap
        heapify(a, n, i);
    for (int i = n - 1; i > 0; i--) {
        int temp = a[0]; a[0] = a[i]; a[i] = temp; // Swap
        heapify(a, i, 0); // Heapify reduced heap
    }
}

int main() {
    int a[] = {5, 2, 9, 1, 6};
    int n = sizeof(a) / sizeof(a[0]);

    heapSort(a, n);

    printf("Sorted Array: ");
```

```
    for (int i = 0; i < n; i++)
        printf("%d ", a[i]);
    return 0;
}
```

```
Sorted Array: 1 2 5 6 9

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