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#include <stdio.h>

int main(){
    int n = 7, i, j, ar[7], temp;
    for(i = 0; i < n; i++){
        scanf("%d", &ar[i]);

        int max1, pos;
        // Loop invariant: at the beginning of k-th iteration for k > 1,
        // The (k-1) largest elements of the array would already be placed
        // inside ar[0] ... ar[k-2]. All I have to do is place the k-th
        // largest element inside ar[k-1]. This invariant does not make
        // sense for k = 1 (i.e. the first iteration) i.e. the base case.
        // So for base case, we have to put the largest element in ar[0]
        for(i = 0; i < 3; i++){
            // This is iteration number k = i+1
            // Assume the k-th largest element is ar[i]
            max1 = ar[i];
            pos = i;
            // If we find a larger element, remember its location and value
            for(j = i; j < n; j++){
                if(max1 < ar[j]){
                    pos = j;
                    max1 = ar[j];
                }
            }
            // Swap the element at ar[i] with the k-th largest element
            temp = ar[pos];
            ar[pos] = ar[i];
            ar[i] = temp;
        }

        for(i = 0; i < n; i++){
            printf("%d", ar[i]);
            // Take care of trailing spaces
            if(i < n-1) printf(" ");
        }
        return 0;
    }
}
```