The quick sort is a recursive sorting algorithm that was described by a hand out in class. Write a program to do the quick sort of an integer array. Use the main program and function prototype below to exercise your program.

```cpp
#include<iostream>
using namespace std;
const int ASIZE = 12;

void Quick(int a[], int LB, int UB);
int Partition(int a[], int LB, int UB);

void main()
{
    int a[ASIZE] = {99, 1, 4, 90, 9, 1, 34, 53, 54, 12, 87, 0};
    int i;
    Quick(a, 0, ASIZE-1);
    for(i=0;i<ASIZE;i++)
        cout << a[i] << " ";
    return;
}
```