Writing a program in Java implementing the quick sort algorithm

```
        class QuickSort
{

   int partition(int arr[], int low, int high)
   {
      int pivot = arr[high];
      int i = (low-1); // index of smaller element
      for (int j=low; j<high; j++)
      {
         if (arr[j] <= pivot)
         {
            i++;

            // swap arr[i] and arr[j]
            int temp = arr[i];
            arr[i] = arr[j];
            arr[j] = temp;
         }
      }

      // swap arr[i+1] and arr[high] (or pivot)
      int temp = arr[i+1];
      arr[i+1] = arr[high];
      arr[high] = temp;
```

```
    return i+1;
}



void sort(int arr[], int low, int high)
{
    if (low < high)
    {

        int pi = partition(arr, low, high);



        sort(arr, low, pi-1);
        sort(arr, pi+1, high);
    }
}
static void printArray(int arr[])
{
    int n = arr.length;
    for (int i=0; i<n; ++i)
        System.out.print(arr[i]+" ");
    System.out.println();
}

// Driver program
```

```
    public static void main(String args[])
    {
        int arr[] = {10, 7, 8, 9, 1, 5};
        int n = arr.length;

        QuickSort ob = new QuickSort();
        ob.sort(arr, 0, n-1);

        System.out.println("sorted array");
        printArray(arr);
    }
}
```