

```

/*
Student Name : Sagar Kapase
Roll NO : BEA-07
*/
import java.util.Arrays;
import java.util.Scanner;
public class Main {

    // Function to partition the array on the basis of the pivot value;

    static int partition(int[] array, int low, int high) {

        int pivot = array[low];
        int start = low;
        int temp;

        while(low < high)
        {
            while(low <= high && array[low] <= pivot)
                low++;
            while(high >= low && array[high] > pivot)
                high--;
            System.out.print("Low:"+low+"High:"+high);

            if(low < high)
            {
                temp = array[low];
                array[low] = array[high];
                array[high] = temp;
            }
        }
        temp = array[start];
        array[start] = array[high];
        array[high] = temp;

        return high;
    }

    // Function to implement quick sort

    static void quickSort(int[] array,int low,int high){

        if(low<high){

            int loc = partition(array,low,high);

            if(loc > 0)
            {
                quickSort(array,low,loc-1);
                System.out.println(Arrays.toString(array));
            }
            if(loc < array.length-1)
            {
                quickSort(array,loc+1,high);
                System.out.println(Arrays.toString(array));
            }
        }
    }
}

```

```

    }

}

// Function to read user input

public static void main(String[] args) {

    Scanner sc=new Scanner(System.in);

    int size;

    System.out.print("Enter the size of the array:");

    size = Integer.parseInt(sc.nextLine());

    int[] array = new int[size];

    System.out.println("Enter array elements");

    int i;

    for (i = 0; i < array.length; i++) {

        array[i] = Integer.parseInt(sc.nextLine());

    }

    System.out.println("The initial array is");

    System.out.println(Arrays.toString(array));

    quickSort(array,0,array.length-1);

    System.out.println("The sorted array is");

    System.out.println(Arrays.toString(array));

}

}

```