

## 8. Writing a program in Java implementing the quick sort algorithm

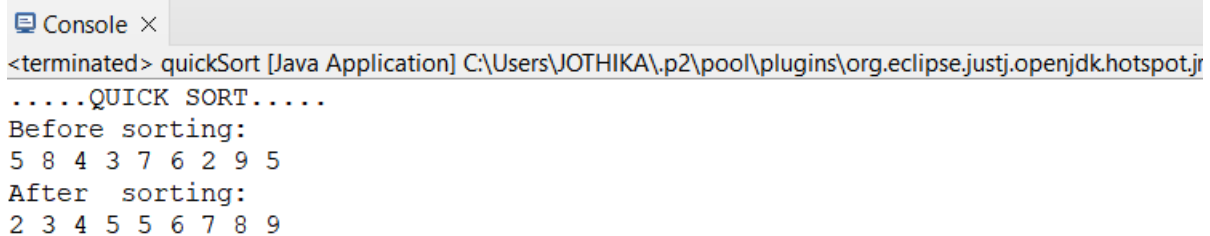
package javafsd4;

```
public class quickSort {
    public static void sort(int[] arr,int low,int high) {
        if(low>=high)
            return;
        int start=low;
        int end=high;
        int mid=(start+end)/2;
        int pivot=arr[mid];

        while(start<=end) {
            while(arr[start]<pivot)
                start++;
            while(arr[end]>pivot)
                end--;
            if(start<=end) {
                int temp=arr[start];
                arr[start]=arr[end];
                arr[end]=temp;
                start++;
                end--;
            }
        }
        if(low<end) {
            quickSort.sort(arr,low,end);
        }
        if(start<high) {
            quickSort.sort(arr,start,high);
        }
    }
}
```

```
public static void main(String[] args) {  
    // TODO Auto-generated method stub  
    int[] arr= {5,8,4,3,7,6,2,9,5};  
    System.out.println(".....QUICK SORT.....");  
    System.out.println("Before sorting:");  
    for(int num:arr) {  
        System.out.print(num+" ");  
    }  
  
    quickSort.sort(arr,0,arr.length-1);  
  
    System.out.println();  
    System.out.println("After sorting:");  
    for(int num:arr) {  
        System.out.print(num+" ");  
    }  
  
    }  
}
```

## OUTPUT



The screenshot shows a console window titled "Console" with a close button. The output text is as follows:

```
<terminated> quickSort [Java Application] C:\Users\JOTHIKA\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jr  
.....QUICK SORT.....  
Before sorting:  
5 8 4 3 7 6 2 9 5  
After sorting:  
2 3 4 5 5 6 7 8 9
```