**Java Lab – 10**

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1) Write a Java program that implements a Quick sort algorithm for sorting a list of names in ascending order.

**Program code:**

import java.util.Scanner;

class QuickSort{

public static void quickSort(String arr[], int s,int e){

if(s<e){

int q = partition(arr,s,e);

quickSort(arr,s,q-1);

quickSort(arr,q+1,e);

}

}

static int partition(String arr[], int s, int pivot){

String x = arr[pivot];

int i=s-1,j=s;

String temp;

for(;j<pivot;j++)

{

if(arr[j].compareTo(x)<=0){ //arr[j] <= arr[pivot] the switch

i++;

temp = arr[i];

arr[i] = arr[j];

arr[j] = temp;

}

}

temp = arr[i+1];

arr[i+1]=arr[pivot];

arr[pivot] = temp;

return i+1;

}

public static void main(String args[]){

String[] arr = new String[100];

int i = 0;

Scanner sc = new Scanner(System.in);

System.out.print("Enter the number of elements: ");

int n = sc.nextInt();

sc.nextLine();

System.out.print("\nEnter the names to be sorted: ");

while(i<n && sc.hasNextLine()){

arr[i++] = sc.nextLine();

}

quickSort(arr,0,i-1);

System.out.print("The sorted array is : ");

for(int x=0;x<i;x++){

System.out.print(arr[x]+" ");

}

System.out.println("");

}

}

**Program output:**

