/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* file : QuickSort.java

\* Author : Alwin J Thomas

\* version : 1.0

\* description : Program to implement quick sort for sorting a list of names in ascending order

\* date : 05/12/2023

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

PROGRAM

import java.util.Scanner;

public class QuickSort {

public static void swap(String[] arr, int i, int j) {

String temp = arr[i];

arr[i] = arr[j];

arr[j] = temp;

}

public static int partition(String[] arr, int first, int last) {

String pivot = arr[first]; // Select the first element as the pivot

int i = first;

for (int j = first + 1; j <= last; j++) {

if (arr[j].compareTo(pivot) < 0) {

i++;

swap(arr, i, j);

}

}

swap(arr, first, i); // Swaping

return i;

}

public static void quickSort(String[] arr, int first, int last) {

if (first < last) {

int pi = partition(arr, first, last);

quickSort(arr, first, pi - 1);

quickSort(arr, pi + 1, last);

}

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter the limit: ");

int limit = sc.nextInt();

sc.nextLine();

String[] strings = new String[limit];

System.out.println("Enter the string elements to be sorted:");

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

strings[i] = sc.nextLine();

}

quickSort(strings, 0, limit - 1);

System.out.println("The string , after quick sorting:");

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

System.out.println(strings[i]);

}

}

}

OUTPUT

Enter the limit: 3

Enter the string elements to be sorted:

Zayn

Brian

Ajay

The string , after quick sorting:

Ajay

Brian

Zayn