**Q1**

package sorting;

import java.util.Arrays;

public class BubbleSort

{

// sorting algorithm

public static void sort(int arr[])

{

System.out.println("sort using the bubble: ");

// loop for sorting to swap adjucent elements

for(int i=0;i<arr.length;i++)

{

boolean loop=false;

for(int j=0;j<arr.length-i-1; j++)

{

if(arr[j]>arr[j+1])

{

int temp=arr[j];

arr[j]=arr[j+1];

arr[j+1]=temp;

loop=true;

}

}

// braking loop after iteration

if(!loop)

{

System.out.println("\n\nsorting complete after "+i+" loop iteration \n ");

break;

}

}

}

// printing array

public static void display(int arr[])

{

for(int i=0;i<arr.length;i++)

{

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

}

}

// sort using array.sort

public static void main(String[] args)

{

// creating array

int arr[]= {8,7,4,3,9,2,1,10,12};

// displaying array

System.out.print("original array: ");

display(arr);

// call sorting algorithm

// using bubble sort

System.out.print("\nusing Bubble sort:");

sort(arr);

display(arr);

// printing sorted array

System.out.print("sorted using Arrays.Sort() :");

Arrays.sort(arr);

display(arr);

}

}

**Output:**

**original array: 8 7 4 3 9 2 1 10 12**

**using Bubble sort:sort using the bubble:**

**sorting complete after 6 loop iteration : 1 2 3 4 7 8 9 10 12**

**sorted using Arrays.Sort() :1 2 3 4 7 8 9 10 12**

**Q2.**

package sorting;

import java.util.Arrays;

public class BubbleSortAlphabate

{

// sorting algorithm

public static void sort(String arr[])

{

int n = arr.length;

for (int i = 0; i < n - 1; i++)

{

for (int j = 0; j < n - i - 1; j++)

{

if (arr[j].compareTo(arr[j + 1]) > 0)

{

String temp = arr[j];

arr[j] = arr[j + 1];

arr[j + 1] = temp;

}

}

}

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

}

// printing array

public static void display(String arr[])

{

for(int i=0;i<arr.length;i++)

{

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

}

}

// sort using array.sort

public static void main(String[] args)

{

// creating array

String[] arr = {"banana", "apple", "grape", "orange", "kiwi"};

// displaying array

System.out.print("original array: ");

display(arr);

// call sorting algorithm

// using bubble sort

System.out.print("\nusing Bubble sort:");

sort(arr);

// printing sorted array

System.out.print("\n sorted using Arrays.Sort() :");

Arrays.sort(arr);

display(arr);

}

}

**Output**

**original array: banana apple grape orange kiwi mango**

**using Bubble sort:[apple, banana, grape, kiwi, mango, orange]**

**sorted using Arrays.Sort() :apple banana grape kiwi mango orange**