**TASK # 1:**

Write & implement the algorithm of Selection Sort.

ALGORITHM:

**Input** = I, J, MIN, TEMP.

**Output** = Selection Sort in ascending order.

**Step # 1:**(Initialization)

I, J, MIN, TEMP.

**Step # 2:**

Read I, J, MIN, TEMP.

**Step # 3:**

FOR(I=0;I<N-1;I++)

MIN=I

FOR(J=I+1;J<N;J++)

IF(A[J]<A[MIN])

MIN=J

TEMP=A[I]

A[I]=A[MIN]

A[MIN]=TEMP

[End of for loops]

**Step # 4:**

Write A[I].

**Step # 5:**

Exit.

SOURCE CODE:

import java.util.Arrays;

public class SelectionsortINT {

public static void main(String[] args)

{ int i ,j,min,temp;

int a[]={9,8,7,6,5};

for(i=0;i<a.length-1;i++){

min=i;

for(j=i+1;j<a.length;j++){

if(a[j]<a[min]){

min=j;

temp=a[i];

a[i]=a[min];

a[min]=temp;}}}

System.out.println(Arrays.toString(a)); }}

SOURCE CODE:

import java.util.Arrays;

public class selectionsortSTRING {

public static void main(String[] args) { int i ,j,min;

String temp=new String();

String a[]={"i","g","e","c","a"};

for(i=0;i<a.length-1;i++){

min=i;

for(j=i+1;j<a.length;j++){

if(a[j].charAt(0)<a[min].charAt(0)){

min=j;

temp=a[i];

a[i]=a[min];

a[min]=temp; }}}

System.out.println(Arrays.toString(a)); } }

OUTPUT:





**TASK # 2:**

Write & implement the algorithm of Insertion Sort.

ALGORITHM:

**Input** = PTR, K, TEMP.

**Output** = Find the location of derived output.

**Step # 1:**(Initialization)

PTR, K, TEMP=0.

**Step # 2:**

Read PTR, K, TEMP=0.

**Step # 3:**

FOR(K=2;K<N;K++)

TEMP=A[K]

PTR=K-1

WHILE(TEMP<A[PTR])

A[PTR+1]=A[PTR]

PTR=PTR-1

A[PTR+1]=TEMP

[End of while loop]

[End of for loop]

**Step # 4:**

Write A[I].

**Step # 5:**

Exit.

SOURCE CODE:

public class insertionsortINT {

public static void main(String[] args){

int a[]={-1,9,7,5,4,6};

int ptr,k,temp=0;

for(k=2;k<a.length;k++){

temp=a[k];

ptr=k-1;

while(temp<a[ptr]){

a[ptr+1]=a[ptr];

ptr=ptr-1; }

a[ptr+1]=temp; }

System.out.println(Arrays.toString(a)); }}

OUTPUT:

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