Lab 2 (Sorting Techniques)

**Selection Sort**

int[]arr={1,3,7,19,5,20,2};

System.out.println("Array before Sort");

for(int n:arr){

System.out.println(n+" ");

}

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

{

int min=i;

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

{

if(arr[min]>arr[j])

{

min=j;

}

}

int temp=arr[min];

arr[min]=arr[i];

arr[i]=temp;

}

System.out.println("\nArray after Sort");

for(int n:arr){

System.out.println(n+" ");

}

**Bubble Sort**

int[]arr={1,3,7,19,5,20,2};

System.out.println("Array before Sort");

for(int n:arr){

System.out.print(n+" ");

}

boolean chk=false;

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

{

chk=false;

int min=i;

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

{

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

{

chk=true;

int temp=arr[j];

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

arr[j+1]=temp;

}

}

if(chk==false)

{

break;

}

}

System.out.println("\nArray after Sort");

for(int n:arr){

System.out.print(n+" ");

}

**Insertion Sort**

int[]arr={1,3,7,19,5,20,2};

System.out.println("Array before Sort");

for(int n:arr){

System.out.print(n+" ");

}

for (int i = 1; i < arr.length; ++i) {

int key = arr[i];

int j = i - 1;

while (j >= 0 && arr[j] > key) {

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

j = j - 1;

}

arr[j + 1] = key;

}

System.out.println("\nArray after Sort");

for(int n:arr){

System.out.print(n+" ");

}

}