1. Bubble Sort

package Test;

public class BubbleSort {

static void print(int a[])

{

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

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

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

}

public static void main(String[] args) {

// TODO Auto-generated method stub

int a[] = {25, 57, 48, 37, 12, 92, 86, 33, 23, 15};

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

{

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

{

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

{

int temp = a[j];

a[j] = a[j+1];

a[j+1] = temp;

}

}

if(i==3)

print(a);

}

}

}

Output :

12 25 37 33 23 15 48 57 86 92

1. Insertion sort

package Test;

public class InsertionSort {

public static void main(String[] args) {

int a[] = {4,2,9,6,23,12,34,0,1}, j;

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

{

j=i-1;

int temp = a[i];

while(j>=0&&a[j]>temp)

{

a[j+1]=a[j];

j--;

}

a[j+1]=temp;

}

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

{

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

}

}

}

Output:

0 1 2 4 6 9 12 23 s34

1. Binary Search

package Test;

import java.util.Scanner;

public class BinarySearch {

static int binarysearch(int a[], int key, int begin, int end)

{

{

if (end>=begin)

{

int mid = begin+(end -begin)/2;

if (a[mid] == key)

return mid;

if (a[mid] > key)

return binarysearch(a, begin, mid-1, key);

return binarysearch(a, mid+1, end, key);

}

return -1;

}

}

public static void main(String[] args) {

// TODO Auto-generated method stub

Scanner scan = new Scanner(System.in);

int a[] = {10, 20, 30, 40, 50};

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

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

int key =30;

int flag=binarysearch(a, key, 0, a.length-1);

if(flag!=-1)

System.out.println("\nElement "+key+" is found at "+flag);

else

System.out.println("\nElement "+key+" is not found");

scan.close();

}

}

Output:

10 20 30 40 50

Element 30 is found at 2

1. Linear Search

package Test;

import java.util.Scanner;

public class LinearSearch {

public static void main(String[] args) {

// TODO Auto-generated method stub

int a[] = {23,45,21,55,234,1,34,90}, flag=0, i;

Scanner scan = new Scanner(System.in);

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

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

//System.out.println("\nEnter the key to search:");

//int key = scan.nextInt();

int key=34;

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

if(key==a[i])

{

flag=1;

break;

}

if(flag==1)

System.out.println("\nElement "+key+" is found at "+i);

else

System.out.println("\nElement "+key+" is not found");

scan.close();

}

}

Output:

23 45 21 55 234 1 34 90

Element 34 is found at 6