**Q1.**

package Search;

import java.util.Scanner;

public class LinearSearch

{

// static method for search element

public static int Search()

{

Scanner sc=new Scanner(System.in);

// creating the array for linear search

int arr[]={1,5,6,4,3,2,8,9,7};

// printing array elements

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

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

{

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

}

// taking input for search elements in array

System.out.print("\nenter no to search:");

int se=sc.nextInt();

// checking element in array

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

{

if(arr[i]==se)

{

return i;

}

}

return -1;

}

public static void main(String[] args)

{

// calling search method

int re=Search();

// printing the element if present

if(re!=-1)

{

System.out.println("element found at index :"+re);

}

else

{

System.out.println("element not present in array");

}

}

}

**Output**

**array elements:1,5,6,4,3,2,8,9,7,**

**enter no to search:6**

**element found at index :2**

**Q2.**

package Search;

import java.util.Scanner;

public class BinarySearch

{

// static method for search element

public static int Search()

{

Scanner sc=new Scanner(System.in);

// creating the array for linear search

int arr[]={1,2,3,4,5,6,7,8,9};

// printing array elements

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

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

{

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

}

// taking input for search elements in array

System.out.print("\nenter no to search:");

int se=sc.nextInt();

int low=0;

int high=arr.length-1;

while(low<=high)

{

int mid=low+(high-low)/2;

if (arr[mid]==se)

{

return mid;

}

else if (arr[mid]<se)

{

low=mid+1;

}

else

{

high=mid-1;

}

}

return -1;

}

public static void main(String[] args)

{

// calling search method

int re=Search();

// printing the element if present

if(re!=-1)

{

System.out.println("element found at index :"+re);

}

else

{

System.out.println("element not present in array");

}

}

}

**Output**

**array elements:1,2,3,4,5,6,7,8,9,**

**enter no to search: 7**

**element found at index :6**