**AIM:** To write a java program to implement Binary Search using ArrayList.

**PROGRAM:**

import java.util.\*;

class BinSear

{

public static void bSearch(ArrayList<Integer> inp,int left,int right,int key)

{

sort(inp);

//System.out.println("sorted arrList:"+inp);

int mid;

if(left<=right)

{

mid=(left+right)/2;

if(key == inp.get(mid))

{

//System.out.println("first");

System.out.println("FOUND!!!!at "+(mid+1));

System.exit(0);

}

else if(key < inp.get(mid))

{

//System.out.println("second");

bSearch(inp,left,mid-1,key);

}

else

{

bSearch(inp,mid+1,right,key);

}

}

else

return;

}

public static void sort(ArrayList<Integer> inp)

{

int i,j,temp;

for(i=0;i<inp.size();i++)

{

for(j=i+1;j<inp.size();j++)

{

if(inp.get(i)>inp.get(j))

{

temp=inp.get(i);

inp.set(i,inp.get(j));

inp.set(j,temp);

}

}

}

}

public static void main(String args[])

{

ArrayList<Integer> arr=new ArrayList<>();

Scanner s=new Scanner(System.in);

System.out.println("Enter no.of elements:");

int n=s.nextInt();

System.out.println("Enter elements:");

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

{

int g=s.nextInt();

arr.add(g);

}

System.out.println("Enter key:");

int key=s.nextInt();

bSearch(arr,0,arr.size()-1,key);

System.out.println("NotFound");

}

}

**OUTPUT:**

