**Java program to perform binary search – Example**

**Example Program to perform binary search on a list of integer numbers**

This program uses [binary search algorithm](http://en.wikipedia.org/wiki/Binary_search_algorithm) to search an element in given list of elements.

/\* Program: Binary Search Example

\* Input: Number of elements, element's values, value to be searched

\* Output:Position of the number input by user among other numbers\*/

import java.util.Scanner;

class BinarySearchExample

{

public static void main(String args[])

{

int counter, num, item, array[], first, last, middle;

//To capture user input

Scanner input = new Scanner(System.in);

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

num = input.nextInt();

//Creating array to store the all the numbers

array = new int[num];

System.out.println("Enter " + num + " integers");

//Loop to store each numbers in array

for (counter = 0; counter < num; counter++)

array[counter] = input.nextInt();

System.out.println("Enter the search value:");

item = input.nextInt();

first = 0;

last = num - 1;

middle = (first + last)/2;

while( first <= last )

{

if ( array[middle] < item )

first = middle + 1;

else if ( array[middle] == item )

{

System.out.println(item + " found at location " + (middle + 1) + ".");

break;

}

else

{

last = middle - 1;

}

middle = (first + last)/2;

}

if ( first > last )

System.out.println(item + " is not found.\n");

}

}

Output 1:

Enter number of elements:

7

Enter 7 integers

4

5

66

77

8

99

0

Enter the search value:

77

77 found at location 4.

Output 2:

Enter number of elements:

5

Enter 5 integers

12

3

77

890

23

Enter the search value:

99

99 is not found.