https://course.acciojob.com/idle?question=3a25fd86-4629-49a4-ae39-abb4978e4a4d

- MEDIUM
- Max Score: 40 Points

Search a node in BST

You are given the root of a binary search tree (BST) and an integer val.

Find the node in the BST that the node's value equals val and return true. If such a node does not exist, return false.

Input Format

The first line inputs `N`, the number of nodes and `x`, value of the node to find.

The second line inputs the value of `N` nodes of the BST.

Output Format

Print "YES" if node is present else "NO" in a new line.

Example 1

Input

```
7 87
2 81 42 87 90 42 45 66
```

Output

```
YES
```

Explaination

```
  2
```

```
    \
    81
   /  \
  42   87
 /  \   \
45  66   90

As 87 is present in the given nodes , so the output will be YES.
```

Example 2

Input

```
7 69
2 81 42 87 90 42 45 66
```

Output

```
NO
```

Explaination

```
  2
    \
    81
   /  \
  42   87
 /  \   \
45  66   90

As 69 is not present in the given nodes , so the output will be NO.
```

Constraints

1 <= N <= 1000

1000 <= val[node] <= 1000

Topic Tags

- **Recursion**

- **Trees**
- **BST**

My code

```
// n java
import java.util.*;
import java.lang.*;
import java.io.*;

class Node
{
    int data;
    Node next ,prev;

    Node(int data, Node next,Node prev)
    {
        this.data = data;
        this.next = next;
        this.prev = prev;
    }

    Node() {}
}

public class Main
{
  static Node insert(Node root,int n)
  {
    if(root==null)
    {
      root=new Node(n,null,null);
    return root;
    }
   else if(n< root.data)
      root.prev= insert( root.prev, n);
    else   if(n>root.data)
      root.next= insert( root.next, n);
    return root;
  }
 static void seartch(Node root,int n)
  {
    if(root==null)
    {
  System.out.print("NO");
      return;
    }
   else if(n< root.data)
     seartch( root.prev, n);
    else   if(n>root.data)
       seartch( root.next, n);
  else if(n==root.data)
  {
    System.out.print("YES");
      return;
  }
  }
```

```
        public static void main (String[] args) throws
java.lang.Exception
        {
                //your code here
        Scanner s=new Scanner(System.in);
      int n=s.nextInt();
       int k=s.nextInt();
      //int arr[]=new int[n];
      Node root=null;
      for(int i=0;i<n;i++)
      {
      int m=s.nextInt();
        root=insert( root, m);
      }
        seartch(root,k);
        }
}
```