

Given an array `arr[]` of the positive integers of size `N`, the task is to find the largest element on the left side of each index which is smaller than the element present at that index. Note: If no such element is found then print -1.

```
import java.util.*;

class GFG{

//Function to find the
//Largest element before
//every element of an array
static void findMaximumBefore(int arr[], int n){

    // Loop to iterate over every
    // element of the array
    for (int i = 0; i<n; i++) {

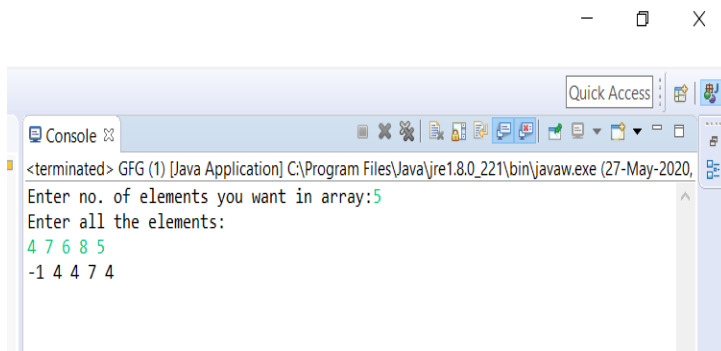
        int currAns = -1;

        // Loop to find the maximum smallest
        // number before the element arr[i]
        for (int j = i - 1; j>= 0; j--) {
            if (arr[j] >currAns&&
                arr[j] <arr[i]) {
                currAns = arr[j];
            }
        }
        System.out.print(currAns+" ");
    }
}

public static void main(String[] args)
{
    int n;
    Scanner s = new Scanner(System.in);
    System.out.print("Enter no. of elements you want in array:");
    n = s.nextInt();
    int arr[] = newint[n];
    System.out.println("Enter all the elements:");
    for(int i = 0; i<n; i++)
    {
        arr[i] = s.nextInt();
    }
    int n1 = arr.length;

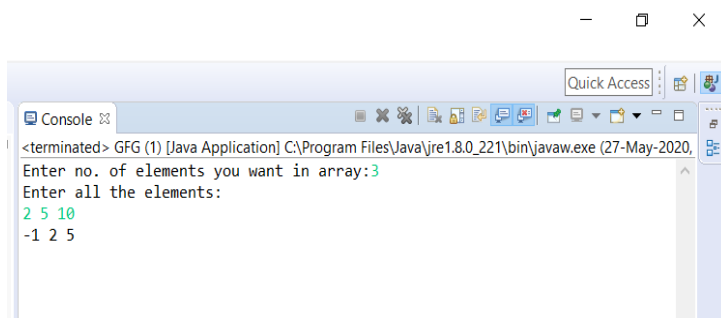
    // Function Call
    findMaximumBefore(arr, n1);
}
}
```

OUTPUT:



A screenshot of a Java application console window. The title bar shows the application name and path: "GFG (1) [Java Application] C:\Program Files\Java\jre1.8.0_221\bin\javaw.exe (27-May-2020)". The console output shows the program asking for the number of elements and then the elements themselves. The input "5" is highlighted in green, and the input "-1 4 4 7 4" is also highlighted in green.

```
<terminated> GFG (1) [Java Application] C:\Program Files\Java\jre1.8.0_221\bin\javaw.exe (27-May-2020,
Enter no. of elements you want in array:5
Enter all the elements:
4 7 6 8 5
-1 4 4 7 4
```



A screenshot of a Java application console window. The title bar shows the application name and path: "GFG (1) [Java Application] C:\Program Files\Java\jre1.8.0_221\bin\javaw.exe (27-May-2020)". The console output shows the program asking for the number of elements and then the elements themselves. The input "3" is highlighted in green, and the input "-1 2 5" is also highlighted in green.

```
<terminated> GFG (1) [Java Application] C:\Program Files\Java\jre1.8.0_221\bin\javaw.exe (27-May-2020,
Enter no. of elements you want in array:3
Enter all the elements:
2 5 10
-1 2 5
```

Write a Java program to implement Binary Tree using the Linked List

```
import java.util.LinkedList;
import java.util.Queue;
public class BinaryTree {
    //Represent a node of binary tree
    public static class Node{
        int data;
        Node left;
        Node right;

        public Node(int data){
            //Assign data to the new node, set left and right children to null
            this.data = data;
            this.left = null;
            this.right = null;
        }
    }

    //Represent the root of binary tree
    public Node root;

    public BinaryTree(){
        root = null;
    }

    //insertNode() will add new node to the binary tree
    public void insertNode(int data) {
        //Create a new node
        Node newNode = new Node(data);

        //Check whether tree is empty
        if(root == null){
            root = newNode;
            return;
        }
        else {
            Queue<Node>queue = new LinkedList<Node>();
            //Add root to the queue
            queue.add(root);

            while(true) {

                Node node = queue.remove();
                //If node has both left and right child, add both the child to queue
                if(node.left != null && node.right != null) {
                    queue.add(node.left);
                    queue.add(node.right);
                }
                else {
                    //If node has no left child, make newNode as left child
                    if(node.left == null) {
                        node.left = newNode;
                        queue.add(node.left);
                    }
                }
            }
        }
    }
}
```

```

}
//If node has left child but no right child, make newNode as right child
else {
node.right = newNode;
queue.add(node.right);
}
break;
}
}
}
}
}

```

//inorder() will perform inorder traversal on binary search tree

```

public void inorderTraversal(Node node) {

```

```

//Check whether tree is empty
if(root == null){
System.out.println("Tree is empty");
return;
}
else {

if(node.left!= null)
inorderTraversal(node.left);
System.out.print(node.data + " ");
if(node.right!= null)
inorderTraversal(node.right);

}
}
}

```

```

public static void main(String[] args) {

```

```

BinaryTreebt = newBinaryTree();
//Add nodes to the binary tree

bt.insertNode(1);
//1 will become root node of the tree
System.out.println("Binary tree after insertion");
//Binary after inserting nodes
bt.inorderTraversal(bt.root);

bt.insertNode(2);
bt.insertNode(3);
//2 will become left child and 3 will become right child of root node 1
System.out.println("\nBinary tree after insertion");
//Binary after inserting nodes
bt.inorderTraversal(bt.root);

bt.insertNode(4);
bt.insertNode(5);
//4 will become left child and 5 will become right child of node 2
System.out.println("\nBinary tree after insertion");
//Binary after inserting nodes
bt.inorderTraversal(bt.root);

```

```

    bt.insertNode(6);
    bt.insertNode(7);
    //6 will become left child and 7 will become right child of node 3
    System.out.println("\nBinary tree after insertion");
    //Binary after inserting nodes
    bt.inorderTraversal(bt.root);
}
}

```

OUTPUT:

```

p - pranava/src/pppp/BinaryTree.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
<terminated> BinaryTree [Java Application] C:\Program Files\Java\jre1.8.0_221\bin\javaw.exe (27-May-2020, 11:24:35 AM)
Binary tree after insertion
1
Binary tree after insertion
2 1 3
Binary tree after insertion
4 2 5 1 3
Binary tree after insertion
4| 2 5 1 6 3 7

```