**DATA STRUCTURES AND**

**ALGORITHMS**

**LAB ASSIGNMENT - 9**

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Q – Create a binary tree. Insert 7 elements and traverse them.

CODE:

public class Tree {

Node root;

// Tree Node

static class Node {

int data;

Node left, right;

Node(int data)

{

this.data = data;

this.left = null;

this.right = null;

}

}

// Function to insert nodes in level order

public Node insertLevelOrder(int[] arr, int i)

{

Node root = null;

// Base case for recursion

if (i < arr.length) {

root = new Node(arr[i]);

// insert left child

root.left = insertLevelOrder(arr, 2 \* i + 1);

// insert right child

root.right = insertLevelOrder(arr, 2 \* i + 2);

}

return root;

}

// Function to print tree nodes in InOrder fashion

public void inOrder(Node root)

{

if (root != null) {

inOrder(root.left);

System.out.print(root.data + " ");

inOrder(root.right);

}

}

// Driver program to test above function

public static void main(String args[])

{

Tree t2 = new Tree();

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

t2.root = t2.insertLevelOrder(arr, 0);

t2.inOrder(t2.root);

}

}

OUTPUT:

