**JAVA PROGRAM 1:**

**Write a Java Program to traverse a binary tree using PreOrder traversal without recursion.**

import java.util.Stack;

class Node

{

int data;

Node left, right;

public Node(int item)

{

data = item;

left = right = null;

}

}

class BinaryTree

{

Node root;

void inorder()

{

if (root == null)

return;

Stack<Node> s = new Stack<Node>();

Node curr = root;

while (curr != null || s.size() > 0)

{

while (curr != null)

{

s.push(curr);

curr = curr.left;

}

curr = s.pop();

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

curr = curr.right;

}

}

public static void main(String args[])

{

BinaryTree tree = new BinaryTree();

tree.root = new Node(1);

tree.root.left = new Node(2);

tree.root.right = new Node(3);

tree.root.left.left = new Node(4);

tree.root.left.right = new Node(5);

tree.inorder();

}

**OUTPUT:**

