Java program to implement Binary Trees

//class to create nodes

class Node {

int data;

Node left, right;

public Node(int item) {

data = item;

left = right = null;

}

}

public class BinaryTree

{

Node root;

// Preorder Traversal

void preorderTraversal(Node node) {

if (node == null) {

return;

}

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

preorderTraversal(node.left);

preorderTraversal(node.right);

}

// Inorder Traversal

void inorderTraversal(Node node) {

if (node == null) {

return;

}

inorderTraversal(node.left);

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

inorderTraversal(node.right);

}

// Postorder Traversal

void postorderTraversal(Node node) {

if (node == null) {

return;

}

postorderTraversal(node.left);

postorderTraversal(node.right);

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

}

public static void main(String[] args) {

// create an object of BinaryTree

BinaryTree tree = new BinaryTree();

// create nodes of the tree

tree.root = new Node(1);

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

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

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

System.out.print("\nBinary Tree: ");

//Inorder Traversal

System.out.println("Inorder traversal:");

tree.inorderTraversal(tree.root);

System.out.println("\n\n");

// Preorder Traversal

System.out.println("Preorder traversal:");

tree.preorderTraversal(tree.root);

System.out.println("\n\n");

// Postorder Traversal

System.out.println("Postorder traversal:");

tree.postorderTraversal(tree.root);

}

}