**Assignment 1:**

public class Node {

int data;

Node head ,left, right;

Node(){

data=0;

left = right = null;

}

}

import java.util.Scanner;

public class BinaryTree {

Scanner sc= new Scanner(System.in);

public Node insert(){

Node temp= new Node();

System.out.println("Enter the value");

temp.data=sc.nextInt();

System.out.println("Enetr y if "+temp.data+" has left sub-tree: ");

if(sc.next().charAt(0)== 'y')

temp.left=insert();

else

temp.left= null;

System.out.println("Enetr y if "+temp.data+" has right sub-tree: ");

if(sc.next().charAt(0)== 'y')

temp.right=insert();

else

temp.right= null;

return temp;

}

void preorderTraverse(Node root){

if(root==null)

return;

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

preorderTraverse(root.left);

preorderTraverse(root.right);

}

public static void main(String args[]){

BinaryTree b= new BinaryTree();

Node root= new Node();

root=b.insert();

System.out.println("Preorder traversal of binary tree is: ");

b.preorderTraverse(root);

}

}

**Assignment 2:**

public class Node {

int data;

Node head ,left, right;

Node(){

data=0;

left = right = null;

}

}

import java.util.Scanner;

public class BinaryTree {

Scanner sc= new Scanner(System.in);

public Node insert(){

Node temp= new Node();

System.out.println("Enter the value");

temp.data=sc.nextInt();

System.out.println("Enetr y if "+temp.data+" has left sub-tree: ");

if(sc.next().charAt(0)== 'y')

temp.left=insert();

else

temp.left= null;

System.out.println("Enetr y if "+temp.data+" has right sub-tree: ");

if(sc.next().charAt(0)== 'y')

temp.right=insert();

else

temp.right= null;

return temp;

}

void inorderTraverse(Node root){

if(root==null)

return;

inorderTraverse(root.left);

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

inorderTraverse(root.right);

}

public static void main(String args[]){

BinaryTree b= new BinaryTree();

Node root= new Node();

root=b.insert();

System.out.println("Inorder traversal of binary tree is: ");

b.inorderTraverse(root);

}

}

**Assignment 3:**

public class Node {

int data;

Node head ,left, right;

Node(){

data=0;

left = right = null;

}

}

import java.util.Scanner;

public class BinaryTree {

Scanner sc= new Scanner(System.in);

public Node insert(){

Node temp= new Node();

System.out.println("Enter the value");

temp.data=sc.nextInt();

System.out.println("Enetr y if "+temp.data+" has left sub-tree: ");

if(sc.next().charAt(0)== 'y')

temp.left=insert();

else

temp.left= null;

System.out.println("Enetr y if "+temp.data+" has right sub-tree: ");

if(sc.next().charAt(0)== 'y')

temp.right=insert();

else

temp.right= null;

return temp;

}

void postorderTraverse(Node root){

if(root==null)

return;

postorderTraverse(root.left);

postorderTraverse(root.right);

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

}

public static void main(String args[]){

BinaryTree b= new BinaryTree();

Node root= new Node();

root=b.insert();

System.out.println("Postorder traversal of binary tree is: ");

b.postorderTraverse(root);

}

}