Threaded Binary Tree

A threaded binary tree is a binary tree variant that allows fast traversal: given a pointer to a node in a threaded tree, it is possible to cheaply find its in-order successor (and/or predecessor). Binary trees have a lot of wasted space: the leaf nodes each have 2 null pointers We can use these pointers to help us in inorder traversals We have the pointers reference the next node in an inorder traversal; called threads We need to know if a pointer is an actual link or a thread, so we keep a boolean flag for each pointer.

Classes used

a Node class which holds the data
a ThreadedBinaryTree class which implements the insertion in the ThreadedBinaryTree style
a BinaryTree which implements various traversals like inorder,reverse-inorder,preorder and postorder
a Assignment class which is the main class which contains the main method

Methods used

The various traversal are performed in different functions.
(inorder/reverseinorder/preorder/postorder).
Functions to perform delete and insertion of elements
a Constructor for BinaryTree which assigns the value of the root node.

OOPS Concepts used

Inheritance :
The class BinaryTree is inherited from ThreadedBinaryTree .Here is-a relatonship is show by exending the class and BinaryTree also inherits Node class by Has-a relation since the BinaryTree has a node

Modularity : various operations are wrapped and made as functions