How to run:

Open eclipse.

Create package txp172630

Copy file BinarySearchTree.java and run

Documentation

1. Names of members in team, purpose of class

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Class Purpose: Implementation of Binary Search Tree data structure

2. Purpose of each field

root: Stores root of Binary Search Tree

size: the size of bst

Class Entry: Structure that is used as a node in BST

3. Purpose of each method, its parameters, preconditions, return values, post-conditions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Method | Purpose | Precondition | Return Value | Post Condition |
| Contains | Check is an element is present in BST | None | Boolean | None |
| Get | Check is an element is present in BST | None | Element | None |
| Add | Add element in BST | None | Boolean | Element is added or replaced in BST |
| Remove | Remove Element from BST | None | Element | Element is removed from BST |
| Bypass | Helper method for remove, used to bypass deleted node | Called from delete method | Void | Node is bypassed from BST |
| Min | Returns minimum element from BST | None | Element | None |
| Max | Return maximum element from BST | None | Element | None |
| toArray | Return array with elements in inorder form | None | Array | None |

4. Usage: I/O specifications

Enter a number n:

1: n>0 then n is inserted.

2: n<0 then n is deleted.

0: Current BST is stored in array and printed. Program is terminated.