

Test design

Setup BSTTest

Name	Class	Stage
Setup1	BST	bst = new BST<>() indices=new ArrayList <Integer>()

Name	Class	Stage
Setup2	BST	bst = new BST<>() bst.insertE(20, 2) bst.insertE(15, 3) bst.insertE(22, 1)

Name	Class	Stage
Setup3	BST	Setup1() bst.insertE(20, 1) bst.insertE(20, 2) bst.insertE(20, 3) bst.insertE(20, 4) bst.insertE(20, 5)

Name	Class	Stage
Setup4	BST	Setup1() bst.insertE(20, 1) bst.insertE(20, 2) bst.insertE(14, 3) bst.insertE(16, 4) bst.insertE(12, 5)

Name	Class	Stage
Setup5	BST	bst = new BST<>() bst.insertE(6, 6) bst.insertE(5, 5) bst.insertE(4, 4) bst.insertE(3, 3) bst.insertE(2, 2) bst.insertE(1, 1)

Setup AVLTest

Name	Class	Stage
Setup1	AVL	avl = new AVL<>()

Name	Class	Stage
Setup2	AVL	avl = new AVL<>() avl.insert(9,6) avl.insert(10,7) avl.insert(5, 2) avl.insert(7, 4) avl.insert(8, 5) avl.insert(6, 3) avl.insert(1, 1)

Name	Class	Stage
Setup2	AVL	avl = new AVL<>() avl.insert(20, 2) avl.insert(15, 3) avl.insert(22, 1)

Setup RBTest

Name	Class	Stage
Setup1	RBT	rbt = new RBT<>()

Name	Class	Stage
Setup2	RBT	rbt = new RBT<>() rbt.insertNode(26,1) rbt.insertNode(17,2) rbt.insertNode(41,3) rbt.insertNode(14,4) rbt.insertNode(21,5) rbt.insertNode(30,6) rbt.insertNode(47,7) rbt.insertNode(10,8)

Name	Class	Stage
Setup3	RBT	setup1() rbt.insertNode(20, 1) rbt.insertNode(20, 2) rbt.insertNode(20, 3) rbt.insertNode(20, 4) rbt.insertNode(20, 5)

Test BST

Objt: the objective of this test is to verify that node bst has been created and inserted			
Class	Method	Stage	Result
BST	insertE	Setup1	The node has been inserted

Objt:verify that found the nodes in the positions			
Class	Method	Stage	Result
BST	inOrden(less-more),getRoot, getLeft, getRight	Setup2	Verify the root and his son exist and his positions. Also take the inidices in the array from the inOrden method
Objt:verify that found the nodes in the positions with other stage			
Class	Method	Stage	Result
BST	inOrden(less-more),getRoot, getLeft, getRight	Setup3	Verify the root and his son exist and his positions. Also take the inidices in the array from the inOrden method with other stage

Objt:verify thath bst and his nodes exists and indices			
Class	Method	Stage	Result
BST	searchEquals, nodes to indices	Setup4	The nodes value are converted and verify the indices exist

Objt:verify the positions in the bst are correct			
Class	Method	Stage	Result
BST	searchEquals, getRoot	Setup5	The nodes are in the position correct

Test AVL

Objt: the objective of this test is to verify that avl are null			
Class	Method	Stage	Result
AVL	constructor	Setup1	The avl are null

Objt:verify thath avll and his nodes exist and are inserted			
Class	Method	Stage	Result
AVL	Constructor, insert	Setup2	The nodes have been created and inserted

Objt:verify thath avl and his nodes are inserted and in a correct position			
Class	Method	Stage	Result
AVL	Constructor, insert, getRoot,getLeft,GetRight	Setup2	The nodes has been created and inserted and in a correct position

Objt: the objective of this test is to verify the avl indices are in the correct position			
Class	Method	Stage	Result
AVL	Constructor, índices	Setup3	The avl insert the values in the indices

Objt: the objective of this test is to verify the method search in the avl			
Class	Method	Stage	Result
AVL	Constructor, searchEquals	Setup3	The avl found the node

Test RBT

Objt: the objective of this test is to verify that avl insert a node			
Class	Method	Stage	Result
RBT	Constructor, insertNode	Setup1	The avl are not null

Objt:verify the positions in the rbt are correct			
Class	Method	Stage	Result
RBT	getRight, getRoot, getLeft	Setup2	The nodes are in the position correct

Objt: the objective of this test is to verify the rbt indices are in the correct position			
Class	Method	Stage	Result
RBT	Constructor, índices, insertNode	Setup1	The rbt insert the values in the indices

Objt: the objective of this test is to verify the method search in the rbt and verify the positions in the indices			
Class	Method	Stage	Result
RBT	Constructor, searchEquals	Setup3	The avl found the node, and are equals of values