CS355 Assignment 1: Test Cases

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Case 1	Testing: Constructor		Condition:	Create list and Print
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	9:53:00 AM	Print all items inserted.	Printed all items inserted.	No

Case 2	Testing: Copy Constructor		Condition:	On empty
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	9:06:00 PM	[-10000]	[-10000]	No

Case 3	Testing: Copy Constructor		Condition:	Head only
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	9:17:00 PM	New copy: [4]	4	No

Case 4	Testing: Copy Constructor		Condition:	Left tree only
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	10:36:00 PM	all items copied and original tree unchanged	all items copied original tree unchanged	No

Case 5	Testing: Copy Constructor		Condition:	Right tree only
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	10:48:00 PM	all items copied and original tree unchanged	all items copied original tree unchanged	No

Case 6	Testing: Copy Constructor		Condition:	Left and right tree
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	10:49:00 PM	all items copied and original tree unchanged	all items copied original tree unchanged	No

Case 7	Testing: Destructor		Condition:	On empty
Date	Time	Expected Result	Actual Result	Action Needed
10/10/2014	7:02:00 PM	(Nothing)	(Nothing)	No

Case 8	Testing: Destructor		Condition:	Head only
Date	Time	Expected Result	Actual Result	Action Needed
10/10/2014	7:04:00 PM	(Nothing)	(Nothing)	No

Case 9	Testing: Destructor		Condition:	Left tree only
Date	Time	Expected Result	Actual Result	Action Needed
10/10/2014	7:06:00 PM	(Nothing)	(Nothing)	No

Case 10	Testing: Destructor		Condition:	Right tree only
Date	Time	Expected Result	Actual Result	Action Needed
10/10/2014	7:07:00 PM	(Nothing)	(Nothing)	No

Case 11	Testing: Destructor		Condition:	Call destructor, add items, then Print
Date	Time	Expected Result	Actual Result	Action Needed
10/10/2014	7:09:00 PM	-23 8 [39]	-23 8 [39]	No

Case 12	Testing: Assignment Operator		Condition:	Assign tree with both branches
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	10:58:00 PM	Assign tree to new tree	Assigned correctly, original was untouched	No

Case 13	Testing: Assignment Operator		Condition:	Assign using empty tree
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	11:02:00 PM	New empty tree created	Empty tree created original remained empty after new tree was created	No

Case 14	Testing: Assignment Operator		Condition:	Assign tree with right branch
Date	Time	Expected Result	Actual Result	Action Needed
10/10/2014	3:19:00 PM	New tree created orignial tree unchanged	New tree created orignial tree unchanged	No

Case 15	Testing: Assignment Operator		Condition:	Assign tree with left branch
Date	Time	Expected Result	Actual Result	Action Needed
10/10/2014	3:19:00 PM	New tree created orignial tree unchanged	New tree created orignial tree unchanged	No

Case 16	Testing: Insert		Condition:	Insert empty
Date	Time	Expected Result	Actual Result	Action Needed
10/10/2014	3:22:00 PM	item inserted as head	item inserted as head	No

Case 17	Testing: Insert		Condition:	Insert left of head		Case 18	Testing: Insert		Condition:	Insert right of head
Date	Time	Expected Result	Actual Result	Action Needed		Date	Time	Expected Result	Actual Result	Action Needed
10/10/2014	3:25:00 PM	item inserted to left of head	item inserted to left of head	No		10/10/2014	3:26:00 PM	Item inserted to right of head	Item inserted to right of head	No

Case 19	Testing: Remove		Condition:	Remove empty twice.		Case 20	Testing: Remove		Condition:	Remove root (only item in tree).
Date	Time	Expected Result	Actual Result	Action Needed		Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	11:24:00 AM	Nothing happens.	Nothing happened.	No		10/9/2014	11:27:00 AM	Empy list.	Empty list.	No

Case 21	Testing: Remove		Condition:	Remove root, no left children.		Case 22	Testing: Remove		Condition:	Remove root, no right children
Date	Time	Expected Result	Actual Result	Action Needed		Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	11:29:00 AM	Immediate right child becomes root.	Immediate right child became root.	No		10/9/2014	11:46:00 AM	Immediate left child becomes root.	Immediate left child became root.	No

Case 23	Testing: Remove		Condition:	Remove leaf		Case 24	Testing: Remove		Condition:	Remove non-leaf with right child
Date	Time	Expected Result	Actual Result	Action Needed		Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	11:51:00 AM	Leaf is removed.	Leaf was removed.	No		10/9/2014	11:52:00 AM	Item is removed, item's children are kept.	Item was removed, item's children were kept.	No

Case 25	Testing: Remove		Condition:	Remove non-leaf with left child		Case 26	Testing: Remove		Condition:	Remove non-leaf with 2 children
Date	Time	Expected Result	Actual Result	Action Needed		Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	11:55:00 AM	Item is removed, item's children are kept.	Item was removed, item's children were kept.	No		10/9/2014	12:07:00 PM	Smallest in right takes its place.	Smallest right child took its place.	No

Case 27	Testing: PrintIn		Condition:	Empty		Case 28	Testing: PrintIn		Condition:	Head only
Date	Time	Expected Result	Actual Result	Action Needed		Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:16:00 PM	Print empty line.	Printed empty line.	No		10/9/2014	12:17:00 PM	Print Root.	Printed root.	No

Case 29	Testing: PrintIn		Condition:	Left tree		Case 30	Testing: PrintIn		Condition:	Right tree
Date	Time	Expected Result	Actual Result	Action Needed		Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:19:00 PM	Print everything in order.	Printed everything in order.	No		10/9/2014	12:19:00 PM	Print everything in order.	Printed everything in order.	No

Case 31	Testing: PrintIn		Condition:	Left and right tree		Case 32	Testing: PrintPre		Condition:	Empty
Date	Time	Expected Result	Actual Result	Action Needed		Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:20:00 PM	Print everything in order.	Printed everything in order.	No		10/9/2014	12:21:00 PM	Print nothing.	Printed nothing.	No

CS355 Assignment 1: Test Cases

Case 33   Condition: PrintPre   Condition: Head only

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:22:00 PM	Print root	Printed root.	No

Case 34   Testing: PrintPre   Condition: Left tree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:23:00 PM	Print in preorder	printed in preorder	No

Case 35   Testing: PrintPre   Condition: Right tree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:27:00 PM	print in preorder	printed in preorder	No

Case 36   Testing: PrintPre   Condition: Left and right tree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:29:00 PM	print in preorder	printed in preorder	No

Case 37   Testing: PrintPost   Condition: Empty

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:31:00 PM	print nothing	nothing	No

Case 38   Testing: PrintPost   Condition: Head only

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:32:00 PM	print root	printed root	No

Case 39   Testing: PrintPost   Condition: Left tree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:33:00 PM	print postorder	printed postorder	No

Case 40   Testing: PrintPost   Condition: Right tree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:35:00 PM	print postorder	printed postorder	No

Case 41   Testing: PrintPost   Condition: Left and right tree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:36:00 PM	print postorder	printed postorder	No

Case 42   Testing: Find   Condition: On empty

Date	Time	Expected Result	Actual Result	Action Needed
10/92014	12:41:00 PM	Nothing found	Segmentation fault (core dumped)	Fix GoToBeginning() function to handle empty lists.
10/13/2014	5:47:00 PM	Not found	Not found	No

Case 43   Testing: Find   Condition: Item not in tree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:45:00 PM	Nothing found	nothing found	No

Case 44   Testing: Find   Condition: Item is the root

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:45:00 PM	found	found	No

Case 45   Testing: Find   Condition: Item is in left subtree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:47:00 PM	found	found	No

Case 46   Testing: Find   Condition: Item is in right subtree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:48:00 PM	round	found	No

Case 47   Testing: AtCursor   Condition: Empty

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	2:08:00 AM	Return "Null Pointer"	Worked as expected	No

Case 48   Testing: AtCursor   Condition: Head

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	2:09:00 AM	Returns data located in the root	Worked as expected	No

Case 49   Testing: AtCursor   Condition: Left child

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	2:11:00 AM	Returns data at the cursor location when the cursor's node has a left child	Worked as expected	No

Case 50   Testing: AtCursor   Condition: Right child

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	2:12:00 AM	Returns data at the cursor location when the cursor's node has a right child	Worked as expected	No

CS355 Assignment 1: Test Cases

Case 51	Testing: AtCursor		Condition: Current cursor node removed

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	2:14:00 AM	Cursor moves to following item in list	Cursor dissapears	Yes
10/13/2014	5:51:00 AM	Cursor moves to following item in list	Cursor moves to following item in list	No

Case 52	Testing: AtCursor		Condition: Cursor node when root removed

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	2:22:00 AM	Cursor stays at the same node	Cursor dissapears	Yes
10/13/2014	5:52:00 AM	Cursor stays at the same node	Cursor stays at the same node	No

Case 53	Testing: GoToBeginning	Condition:	Empty

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:37:00 AM	List is empty - Nothing happens	Program crashed	Yes
10/13/2014	5:53:00 PM	List is empty - Nothing happens	List is empty - Nothing happens	No

Case 54	Testing: GoToBeginning	Condition:	Head only

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:40:00 AM	Cursor remains at root	Worked as expected	No

Case 55	Testing: GoToBeginning	Condition:	No left subtree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:42:00 AM	Cursor moves from current location back to the root	Worked as expected	No

Case 56	Testing: GoToBeginning	Condition:	Left subtree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:44:00 AM	Cursor moves from current location to smallest item in left subtree	Worked as expected	No

Case 57	Testing: GoToEnd	Condition:	Empty

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:37:00 AM	List is empty - Nothing happens	Program crashed	Yes
10/13/2014	5:55:00 PM	List is empty - Nothing happens	List is empty - Nothing happens	No

Case 58	Testing: GoToEnd	Condition:	Head only

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:48:00 AM	Cursor remains at root	Worked as expected	No

Case 59	Testing: GoToEnd	Condition:	No right subtree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:50:00 AM	Cursor moves from its current location back to the root	Worked as expected	No

Case 60	Testing: GoToEnd	Condition:	Right subtree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:52:00 AM	Cursor moves from its current location to the end of the list	Worked as expected	No

Case 61	Testing: GoToNext	Condition:	Empty

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:29:00 AM	List remains empty	Worked as expected	No

Case 62	Testing: GoToNext	Condition:	Head only

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:30:00 AM	Cursor remains at root	Worked as expected	No

Case 63	Testing: GoToNext	Condition:	Largest in left subtree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:32:00 AM	Cursor moves from largest in left subtree back to the root	Worked as expected	No

Case 64	Testing: GoToNext	Condition:	Largest in right subtree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:33:00 AM	Cursor loops from the largest item to the smallest	Cursor did not loop back to the smallest item	Yes
10/13/2014	5:57:00 AM	Cursor loops from the largest item to the smallest	Cursor loops from the largest item to the smallest	No

CS355 Assignment 1: Test Cases

Case 65   Testing: GoToPrev   Condition: Empty

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:52:00 PM	List remains empty	Worked as expected	No

Case 66   Testing: GoToPrev   Condition: Head only

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:53:00 PM	Cursor remains at head	Worked as expected	No

Case 67   Testing: GoToPrev   Condition: Smallest in left subtree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:56:00 PM	Cursor should loop from smallest item to largest	Cursor did not loop properly	Yes
10/13/2014	6:00:00 PM	Cursor should loop from smallest item to largest	Cursor loops from smallest item to largest	No

Case 68   Testing: GoToPrev   Condition: Smallest in right subtree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	1:26:00 AM	Cursor moved from the smallest in the right subtree to the root	Worked as expected	No

Case 69   Testing: ClearList   Condition: Clear empty

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:37:00 PM	List is still empty	Worked as expected	No

Case 70   Testing: ClearList   Condition: Clear when there is only a head

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:38:00 PM	Clears the list	Worked as expected	No

Case 71   Testing: ClearList   Condition: Clear with left subtree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:39:00 PM	Clears the list with only a left subtree	Worked as expected	No

Case 72   Testing: ClearList   Condition: Clear with right subtree

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:40:00 PM	Clears the list with only a right subtree	Worked as expected	No

Case 73   Testing: ClearList   Condition: Clear left and right subtrees

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:41:00 PM	Clears the list with both a left and right subtree	Worked as expected	No

Case 74   Testing: ClearList   Condition: Check empty > Insert > Print

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:43:00 PM	Prints a new list without any errors	Worked as expected	No

Case 75   Testing: EmptyList   Condition: Head only

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:34:00 PM	Returns List is Not Empty	Worked as expected	No

Case 76   Testing: EmptyList   Condition: Empty list

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:32:00 PM	Returns List is Empty	Worked as expected	No

Case 77   Testing: EmptyList   Condition: Non-empty list

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:35:00 PM	Returns List is Not Empty	Worked as expected	No

Case 78   Testing: EmptyList   Condition: Non-empty>Clear>Check empty

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:36:00 PM	Returns list is Empty	Worked as expected	No

Case 79   Testing: GetHeight   Condition: Empty list

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:05:00 PM	Returns height of 0	Worked as expected	No

Case 80   Testing: GetHeight   Condition: Root only

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:07:00 PM	Returns height of 1	Worked as expected	No

Case 81   Testing: GetHeight   Condition: Left branch only

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:10:00 PM	Returns a correct height with only left subtree	Worked as expected	No

Case 82   Testing: GetHeight   Condition: Right branch only

Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:10:00 PM	Returns a correct height with only right subtree	Worked as expected	No

CS355 Assignment 1: Test Cases

Case 83	Testing: GetHeight		Condition:	Two branches - Skewed left
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:15:00 PM	Returns a correct height from a tree skewed to the left	Worked as expected	No

Case 84	Testing: GetHeight		Condition:	Two branches - Skewed right
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:16:00 PM	Returns a correct height from a tree skewed to the right	Worked as expected	No

Case 85	Testing: GetHeight		Condition:	Two branches - Equal
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	12:18:00 PM	Returns a correct height from a proportional tree	Worked as expected	No

Case 86	Testing: PrintInfo		Condition:	Empty
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	11:40:00 AM	Info table appears with no data	Worked as expected	No

Case 87	Testing: PrintInfo		Condition:	Head only
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	11:48:00 AM	Info table appears with only one data item marked as the root	Everything worked correctly	No

Case 88	Testing: PrintInfo		Condition:	Left subtree
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	11:51:00 AM	Info table appears and correctly displays info for a BST skewed to the left	Worked as expected	No

Case 89	Testing: PrintInfo		Condition:	Right subtree
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	11:53:00 AM	Info table appears and correctly displays info for a BST skewed to the right	Worked as expected	No

Case 90	Testing: PrintInfo		Condition:	Left and right subtrees
Date	Time	Expected Result	Actual Result	Action Needed
10/9/2014	11:54:00 AM	Info table appears and correctly displays info for a proportional BST	Worked as expected	No