**Weeks 9 – 10 Assignment #1**

1. Enter Number of Nodes you want to insert into Tree: 1000

preOrderTraverse Tree:

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Time taken to Traverse: 1146250 nanoseconds (0.001146250 seconds)

inOrderTraverse Tree:

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Time taken to Traverse: 252375 nanoseconds (0.000252375 seconds)

postOrderTraverse Tree:

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Time taken to Traverse: 227875 nanoseconds (0.002278750 seconds)

1. Enter Number of Nodes you want to insert into Tree: 10000

preOrderTraverse Tree:

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Time taken to Traverse: 2908334 nanoseconds (0.002908334 seconds)

inOrderTraverse Tree:

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Time taken to Traverse: 1374500 nanoseconds (0.001374500 seconds)

postOrderTraverse Tree:

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Time taken to Traverse: 1213625 nanoseconds (0.012136250 seconds)

1. Enter Number of Nodes you want to insert into Tree: 100000

preOrderTraverse Tree:

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Time taken to Traverse: 7886083 nanoseconds (0.007886083 seconds)

inOrderTraverse Tree:

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Time taken to Traverse: 6324500 nanoseconds (0.006324500 seconds)

postOrderTraverse Tree:

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Time taken to Traverse: 5669000 nanoseconds (0.056690000 seconds)

1. Enter Number of Nodes you want to insert into Tree: 1000000

preOrderTraverse Tree:

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Time taken to Traverse: 45252583 nanoseconds (0.045252583 seconds)

inOrderTraverse Tree:

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Time taken to Traverse: 44493875 nanoseconds (0.044493875 seconds)

postOrderTraverse Tree:

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Time taken to Traverse: 44756083 nanoseconds (0.447560830 seconds)

1. Enter Number of Nodes you want to insert into Tree: 10000000

preOrderTraverse Tree:

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Time taken to Traverse: 677448041 nanoseconds (0.677448041 seconds)

inOrderTraverse Tree:

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Time taken to Traverse: 684994084 nanoseconds (0.684994084 seconds)

postOrderTraverse Tree:

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Time taken to Traverse: 684274875 nanoseconds (6.842748750 seconds)

1. Enter Number of Nodes you want to insert into Tree: 100000000

Exception in thread "main" java.lang.OutOfMemoryError: Java heap space

at BinaryTree.BinarySearchTree.insertIterative(BinarySearchTree.java:50)

at BinaryTree.BSTDemo.main(BSTDemo.java:47)