

**Assignment #5: Binary Search Trees**

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Course: Comp2230-02

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| BinarySearchTree |
|  |
| Array[]: int  Currentindex: int  X: int  Insert(int element): void  Insert(int in, int element):void  toString : String |

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| --- |
| Tester |
|  |
| +main(arg:String[]) |

***BinarySearchTree Class***

public class BinarySearchTree  
{  
 *//set size of array is 100* static final int *array*[] = new int[100];  
 static int *currentindex*=-1;  
 static int *x*;  
 public static void insert( int element)  
 {  
 *insert*(0, element);  
 }  
 private static void insert(int in, int element)  
 {  
 *//if root is null so place element as root* if(*array*[in] ==0)  
 {  
 *array*[in] = element;  
 }  
 *//if element is less than root so place element as left child of root* else if(element > *array*[in])  
 {  
 *insert*(2\*in+1 , element);  
 }  
 *//if element is greater than root so place element as right child of root* else  
 {  
 *insert*(2\*(in+1),element);  
 }  
  
 }  
  
 *//toString method. element in the tree* public String toString()  
 {

System.*out*.print("Index are: ");

for(int i=0; i <100; i++)  
 {  
 if(*array*[i] != 0)  
 {  
 System.*out*.print(*array*[i] + " ");  
 }  
 }  
 return *array*.toString();  
 }  
}

***Tester Class***

public class Tester {  
 public static void main(String args[])  
 {  
 BinarySearchTree list = new BinarySearchTree();  
 list.*insert*(6);  
 list.*insert*(9);  
 list.*insert*(31);  
 list.*insert*(3);  
 list.*insert*(7);  
 list.*insert*(8);  
 list.*insert*(12);  
 list.*insert*(14);  
 list.toString();  
  
 }  
}

***Print out***

"C:\Program Files\Java\jdk-14.0.1\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2020.1.2\lib\idea\_rt.jar=52300:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2020.1.2\bin" -Dfile.encoding=UTF-8 -classpath "D:\comp 2230 \BinaryTree\out\production\BinaryTree" Tester

Index are: 6 9 3 31 7 12 8 14 -1 not in correct order.

Process finished with exit code 0