//Output File

**********CREATION OF BINARY TREE**********

Enter the data you want to enter in root node : 100

Current Node Data -> 100

Do you want to enter data in the left child of the current node : [Press 0 - No /
Press 1 - Yes]
1
Enter the data you want to enter in left node : 90

Current Node Data -> 90

Do you want to enter data in the left child of the current node : [Press 0 - No /
Press 1 - Yes]
1
Enter the data you want to enter in left node : 80

Current Node Data -> 80

Do you want to enter data in the left child of the current node : [Press 0 - No /
Press 1 - Yes]
0
Current Node Data -> 80

Do you want to enter data in the right child of the current node : [Press 0 - No /
Press 1 - Yes]
0
Current Node Data -> 90

Do you want to enter data in the right child of the current node : [Press 0 - No /
Press 1 - Yes]
1
Enter the data you want to enter in right node : 70

Current Node Data -> 70

Do you want to enter data in the left child of the current node : [Press 0 - No /
Press 1 - Yes]
0
Current Node Data -> 70

Do you want to enter data in the right child of the current node : [Press 0 - No /
Press 1 - Yes]
0
Current Node Data -> 100

Do you want to enter data in the right child of the current node : [Press 0 - No /
Press 1 - Yes]
1
Enter the data you want to enter in right node : 120

Current Node Data -> 120

Do you want to enter data in the left child of the current node : [Press 0 - No /
Press 1 - Yes]
1
Enter the data you want to enter in left node : 130

Current Node Data -> 130

Do you want to enter data in the left child of the current node : [Press 0 - No /
Press 1 - Yes]
0

Current Node Data -> 130

Do you want to enter data in the right child of the current node : [Press 0 - No /
Press 1 - Yes]
0
Current Node Data -> 120

Do you want to enter data in the right child of the current node : [Press 0 - No /
Press 1 - Yes]
1
Enter the data you want to enter in right node : 150

Current Node Data -> 150

Do you want to enter data in the left child of the current node : [Press 0 - No /
Press 1 - Yes]
0
Current Node Data -> 150

Do you want to enter data in the right child of the current node : [Press 0 - No /
Press 1 - Yes]
0

**********WELCOME TO THE MENU**********
 Which operation do you want to perform :
                1)Recursive Display
                2)Non-Recursive Display
                3)Breadth-Wise Display
                4)Insert Tree
                5)Copy Tree
                6)Display Leaf Nodes
                7)Height of Tree
Choice : 1

***** RECURSIVE DISPLAY *****

In Order Traversal : 80 90 70 100 130 120 150

Pre Order Traversal : 100 90 80 70 120 130 150

Post Order Traversal : 80 70 90 130 150 120 100

Do you want to continue [Y - Press 1/N - Press 0] :
Choice : 1

**********WELCOME TO THE MENU**********
 Which operation do you want to perform :
                1)Recursive Display
                2)Non-Recursive Display
                3)Breadth-Wise Display
                4)Insert Tree
                5)Copy Tree
                6)Display Leaf Nodes
                7)Height of Tree
Choice : 2

***** NON-RECURSIVE DISPLAY *****

```
--------------------------------------------------
In Order Non-Recursive Traversal : 80  90  70  100  130  120  150
--------------------------------------------------


--------------------------------------------------
Pre Order Non-Recursive Traversal : 100  90  80  70  120  130  150
--------------------------------------------------


--------------------------------------------------
Post Order Non-Recursive Traversal : 80  70  90  130  150  120  100
--------------------------------------------------

Do you want to continue [Y - Press 1/N - Press 0] :
Choice : 1

**********WELCOME TO THE MENU**********
 Which operation do you want to perform :
                1)Recursive Display
                2)Non-Recursive Display
                3)Breadth-Wise Display
                4)Insert Tree
                5)Copy Tree
                6)Display Leaf Nodes
                7)Height of Tree
Choice : 3

--------------------------------------------------
Breadth-Wise Traversal : 100  90  120  80  70  130  150
--------------------------------------------------

Do you want to continue [Y - Press 1/N - Press 0] :
Choice : 1

**********WELCOME TO THE MENU**********
 Which operation do you want to perform :
                1)Recursive Display
                2)Non-Recursive Display
                3)Breadth-Wise Display
                4)Insert Tree
                5)Copy Tree
                6)Display Leaf Nodes
                7)Height of Tree
Choice : 4

--------------------------------------------------
Enter the data you want to insert in the tree : 67

Available Nodes : 80 90 70 100 130 120 150
--------------------------------------------------
Enter the data of Parent Node : 150
Do you want to enter the new data as left child or right child of the parent node
[L-Press 1/R-Press 2] : 1
In Order Traversal : 80 90 70 100 130 120 67 150
--------------------------------------------------

Do you want to continue [Y - Press 1/N - Press 0] :
Choice : 1

**********WELCOME TO THE MENU**********
 Which operation do you want to perform :
                1)Recursive Display
                2)Non-Recursive Display
                3)Breadth-Wise Display
                4)Insert Tree
                5)Copy Tree
                6)Display Leaf Nodes
```

```
                    7)Height of Tree
Choice : 5


-------------------------------------------------

Tree Copied Successfully!
Enter the data you want to insert in the tree : 45

Available Nodes : 80 90 70 100 130 120 67 150
-------------------------------------------------
Enter the data of Parent Node : 150


-------------------------------------------------
Original Tree In Order Non-Recursive Traversal : 80 90 70 100 130 120 67 150
-------------------------------------------------
Copy Tree In Order Non-Recursive Traversal : 80 90 70 100 130 120 67 150 45
-------------------------------------------------

Do you want to continue [Y - Press 1/N - Press 0] :
Choice : 1

**********WELCOME TO THE MENU**********
 Which operation do you want to perform :
                    1)Recursive Display
                    2)Non-Recursive Display
                    3)Breadth-Wise Display
                    4)Insert Tree
                    5)Copy Tree
                    6)Display Leaf Nodes
                    7)Height of Tree
Choice : 6


-------------------------------------------------
Leaf Nodes : 80  70  130  67
-------------------------------------------------

Do you want to continue [Y - Press 1/N - Press 0] :
Choice : 1

**********WELCOME TO THE MENU**********
 Which operation do you want to perform :
                    1)Recursive Display
                    2)Non-Recursive Display
                    3)Breadth-Wise Display
                    4)Insert Tree
                    5)Copy Tree
                    6)Display Leaf Nodes
                    7)Height of Tree
Choice : 7


-------------------------------------------------
Height : 4
-------------------------------------------------

Do you want to continue [Y - Press 1/N - Press 0] :
Choice : 0
```