

```
//=====
// Name      : GeneralTree.cpp
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// Version    : Eclipse 3.8.1
// Date       : 4/26/2016
// Description : Program that allow user to create a tree and perform simple
//              functions to it
//=====
```

Problem: Open the folder, and there should be three files. (GeneralTree.cpp, GeneralTree.h, and main.cpp as the testing program). This program taught us about recursing a tree, and being able to build a tree using simple functions to it. All the functions are commented and labeled, and if compiled, the following results show up.

The screenshot shows the Eclipse IDE with the following components:

- Project Explorer:** Shows a project named 'binaryTree' with subfolders 'bankAcc', 'Binaries', 'Includes', 'src', 'Debug', 'polynomial', 'recursion', 'recursion2', 'recursion3', and 'testing'. The 'src' folder is expanded, showing 'GeneralTree.cpp', 'GeneralTree.h', and 'main.cpp'.
- Editor:** Displays the contents of 'main.cpp'. The code includes comments and function calls for testing the GeneralTree class.
- Console:** Shows the output of the program, including the results of four tests.

```
44 GeneralTree gt;
45 cout << "Test 1: ";
46 gt.print();
47
48 //Test print to test insert functions of a tree
49 //..This should print (c(ab))
50 TreeNode* grandparent = gt.insert('.', NULL);
51 TreeNode* parent1 = gt.insert('c', grandparent);
52 TreeNode* parent2 = gt.insert('.', grandparent);
53 TreeNode* kid1 = gt.insert('a', parent2);
54 TreeNode* kid2 = gt.insert('b', parent2);
55 gt.print();
56 TreeNode* gkid3 = gt.insert('d', kid1);
57 cout << "Test 2: ";
58 gt.print();
59 //TreeNode* kid3 = gt.insert('b', parent2);
60 //gt.print();
61
62 //Test print to test Assignment operations
63 // This should print:
64 // (c(ab))
65 GeneralTree gt3 = gt;
66 //Used to insert into the new tree
67 TreeNode *gt3start = new TreeNode();
68 gt3start = gt3.getStart();
```

Console Output:

```
<terminated> binaryTree [C/C++ Application] /home/kendrick/workspace/binaryTree/Debug/binaryTree (4/27/16 5:50 PM)
Test 1: (c(ab))
Test 2: (c((d)b))
Test 3: (c((d)bd))
Test 4: (abab(cd)d(ef(g(h))))
```