

```
1 #include "bintree.h"
2 #include <iostream>
3
4 #include <cmath>
5 #include <queue>
6 #include <iomanip>
7
8
9 using namespace std;
10
11 template <class T>
12 void MostrarArbol(const bintree<T> &A, typename bintree<T>::node root){
13     queue<typename bintree<T>::node> colaNodos;
14     int totalNodos=A.size();
15     int techo=log2(totalNodos+1);
16     colaNodos.push(root);
17     int pot=0;
18     while(colaNodos.size() > 0){
19         int niveles = colaNodos.size();
20         while(niveles > 0){
21             typename bintree<T>::node nodoAux = colaNodos.front();
22             colaNodos.pop();
23             cout<<setw((niveles==pow(2,pot))?pow(2, (techo-pot)):pow(2, (techo-
24 pot+1)))));
25             cout<<*nodoAux;
26             if(!nodoAux.left().null()) colaNodos.push(nodoAux.left());
27             if(!nodoAux.right().null()) colaNodos.push(nodoAux.right());
28             niveles--;
29         }
30         pot++;
31         cout << endl;
32     }
33 }
34
35 template <class T>
36 void reflexion(bintree<T> &A, typename bintree<T>::node v)
37 {
38     if (!v.null())
39     {
40         bintree<T> aux1;
41         bintree<T> aux2;
42         A.prune_right(v,aux1);
43         A.prune_left(v,aux2);
44         A.insert_left(v,aux1);
45         A.insert_right(v,aux2);
46         reflexion(A,v.right());
47         reflexion(A,v.left());
48     }
49 }
50
51 int main()
52 {
53     bintree<int> arb(0);
54     arb.insert_left(arb.root(),1);
55     arb.insert_right(arb.root(),2);
56
57     bintree<int>::node aux = arb.root().left();
58     arb.insert_left(aux,3);
59     arb.insert_right(aux,4);
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```
60
61     aux = arb.root().right();
62     arb.insert_left(aux,5);
63     arb.insert_right(aux,6);
64
65     cout << "-----ARBOL ORIGINAL-----" << endl;
66     MostrarArbol(arb,arb.root());
67
68     cout << "-----ARBOL NUEVO-----" << endl;
69     reflexion(arb,arb.root());
70     MostrarArbol(arb,arb.root());
71 }
```