

Sample Assignment 3B, Discussed  
on 2020-09-28, *Not graded*

```
n2.addChild(&n6);  
n2.addChild(&n7);  
n1.printPreorder();
```

**Question 1 (Sets/Vectors with Custom Classes)**

The code below does the task of EX02: it reads student data from STDIN; outputs the smallest and the largest student compared by age; or by height (if ages are equal).

Source file **File1.cpp**:

```
1  #include <iostream>  
2  #include <vector>  
3  #include <string>  
4  using namespace std;  
5  
6  struct Folder {  
7      string name;  
8      vector<Folder> children;  
9      Folder(string nn) {name = nn;}  
10     void makeSub(Folder ff) {  
11         children.push_back(ff);  
12     }  
13 };  
14  
15 int main() {  
16     Folder f1("f1");  
17     Folder f2("f2");  
18     Folder f3("f3");  
19  
20     f2.makeSub(f3);  
21     f1.makeSub(f2);  
22     cout << f2.children.size() << endl;  
23 }
```

Write short answers to these questions: ... ..

...

```
Node n1(1);  
Node n2(2);  
Node n3(3);  
Node n4(4);  
Node n5(5);  
Node n6(6);  
Node n7(7);
```

```
nodeMap.insert(pair<int, Node>(1, n1));  
n1.addChild(&n2);  
n1.addChild(&n3);  
n1.addChild(&n4);  
n1.addChild(&n5);  
nodeMap.insert(pair<int, Node>(1, n2));
```