```java
package oop;


import java.util.*;
interface digitalTree{
abstract int absorbsunlight(int hours);
}
class BinaryTree implements digitalTree{

    public int absorbsunlight(int hours) {

        return 2*hours;
    }

}

class QuantumTree implements digitalTree{

    public int absorbsunlight(int hours) {

        return 3*hours*hours;

    }

}

class NeuralTree implements digitalTree{

    public int absorbsunlight(int hours) {

        return hours*hours*hours;

    }

}

public class DigitalTrees {
    String type;

    int cnt;

    int energy;
    DigitalTrees(String type, int cnt){

        this.type = type;

        this.cnt = cnt;

    }

    static DigitalTrees[] forest = new DigitalTrees[3];


    static int produceenergyforforest(int hours) {

        BinaryTree b1 = new BinaryTree();

        QuantumTree q1 = new QuantumTree();
```

```
60
61          NeuralTree n1 = new NeuralTree();
62
63          int a = forest[0].energy = b1.absorbsunlight(hours);
64
65          int b = forest[1].energy = q1.absorbsunlight(hours);
66
67          int c = forest[2].energy = n1.absorbsunlight(hours);
68
69          return a*forest[0].cnt + b*forest[1].cnt + c*forest[2].cnt;
70
71      }
72
73
74
75      static void forestReport() {
76
77          System.out.println("Tree" + "Count" + "EnergyProduced");
78
79          int sum = 0;
80
81          for(int i=0;i<3;i++) {
82
83              sum+=forest[i].energy;
84
85              System.out.println(forest[i].type + forest[i].cnt + forest[i].energy);
86
87          }
88
89          System.out.println("Total Energy Produced : " + sum);
90
91      }
92
93
94
95      public static void main String[] args) {
96
97
98          Scanner sc = new Scanner(System.in);
99
100         int totalnumberoftrees = sc.nextInt();
101
102         forest[0].type = "Binary";
103         forest[0].energy = 0;
104
105         forest[1].type = "Quantum";
106         forest[1].energy = 0;
107
108         forest[2].type = "Neem";
109         forest[2].energy = 0;
110
111         for(int i=0;i<totalnumberoftrees;i++) {
112
113             String type = sc.next();
114
115             if(type.compareTo("Binary") == 0) {
116
117                 forest[0].cnt++;
118             }
```

```
119
120             else if(type.compareTo("Quantum") == 0) {
121
122                 forest[1].cnt++;
123             }
124
125             else {
126
127                 forest[2].cnt++;
128             }
129
130         }
131
132
133     }
134
135 }
136
137
```