

```

1  import java.util.ArrayList;
2
3  class ChannelSet{
4      /**
5       * This is a list of Channels that have the same Frequency
6       */
7
8      private List<Channels> channels;
9      private int totalNumberOfChannelsAfterOrdering = -1; // If this value is -1
10     there has been a problem in algorithm.
11     private int frequencyOfSet = -1;
12     private int[] ticks;
13
14     public ChannelSet(){
15         channels = new ArrayList<>();
16     }
17
18     public void add(Channel channel){
19         channels.add(channel);
20     }
21
22     /**
23     * After this function is run the array ticks contains the t values of all
24     ticks that have a data read out for this
25     * Frequency
26     */
27     public void calculateOrderedTotal(){
28         if(totalNumberOfChannelsAfterOrdering == -1){
29             totalNumberOfChannelsAfterOrdering = channels.size();
30         }
31         if(totalNumberOfChannelsAfterOrdering > 0){
32             frequencyOfSet = channels.get(0).getFrequency();
33             ticks = new int[1/frequencyOfSet]; // calculates the number of ticks in
34             a second thats fired by this frequency set
35             // The fiddle factor offset here is to account for the fact that all
36             frequencies are multiples of 1000
37             // but they tick at t=0 not t=1000
38             ticks[0] = 1;
39             for(int i=0;i<ticks.length-1;i++){
40                 ticks[i+1] = (i*1000)/frequencyOfSet;
41             }
42         }
43     }
44
45     public int getFrequencyOfSet(){
46         return frequencyOfSet;
47     }
48
49     public int[] getTicks(){
50         return ticks;
51     }
52
53     public boolean doesTickAppearInThisSet(int tick){
54         for(int t : ticks){
55             if(t == tick){
56                 return true;
57             }
58         }
59         return false;
60     }
61
62     public List<Channel> getChannelList(){
63         return channels;
64     }
65 }

```