```java
/*Used Map/HashMap for the first time. Similarly Set/HashSet can also be used for unique
 * elements in a list
*/
import java.util.*;

public class Address {
   static String direction = "";

   static void setDirection(String s,String turn){
       int dir = -1;
       Map <Integer,String> gets = new HashMap<Integer,String>();
       gets.put(1,"east");
       gets.put(2,"north");
       gets.put(3,"west");
       gets.put(4,"south");

       Map <String,Integer> geti = new HashMap<String,Integer>();
       geti.put("east",1);
       geti.put("north",2);
       geti.put("west",3);
       geti.put("south",4);
       dir = geti.get(s);

       if(turn.equalsIgnoreCase("right")){
           dir += 3;
           if(dir>4)
               dir%=4;
       }
        if(turn.equalsIgnoreCase("left")){
           dir += 1;
           if(dir>4)
               dir%=4;
       }
       direction = gets.get(dir);

       System.out.println(dir);
       System.out.println(direction);
```

```
38    }
39
40    public static void main(String[] args){
41        Scanner scan = new Scanner(System.in);
42        int n;
43        String s ;
44        List<String[]> list = new ArrayList<String[]>();
45
46        n = Integer.parseInt(scan.nextLine().trim());
47        scan.useDelimiter("\n");
48        for(int i =0;i<n;i++){
49
50            s = scan.next();
51            list.add(s.split(" "));
52        }
53        for(int i =0;i<n;i++){
54             System.out.println(Arrays.toString(list.get(i)));
55        }
56//         setDirection("south","right");
57        String[] temp = list.get(0);
58        direction = temp[1];
59
60        for(int i = 1;i<list.size();i++){
61            temp = list.get(i);
62            if(temp[1].equalsIgnoreCase("right")){
63                System.out.println(direction);
64                setDirection(direction,"right");
65            }
66            if(temp[1].equalsIgnoreCase("left")){
67                System.out.println(direction);
68                setDirection(direction,"left");
69            }
70        }
71        String best = "";
72        System.out.println(direction);
73        for(int j = list.size()-1;j>-1;j--){
74             String[] t = list.get(j);
75
76            if(j==list.size()-1){
77                best += "Head ";
```

```
78                  best += direction;
79                  best += " from ";
80                  for(int i = 2;i<list.get(j).length;i++){
81                      best += t[i];
82                  }
83                  System.out.println(best);
84              }
85              if(j==0){
86                  best += "Arrive ";
87                  best += " at ";
88                  for(int i = 2;i<list.get(j).length;i++){
89                      best += t[i];
90                  }
91                  System.out.println(best);
92              }
93              if(t.equals("on")){
94                  best += "Continue ";
95                  best += " on ";
96                  for(int i = 2;i<list.get(j).length;i++){
97                      best += t[i];
98                  }
99                  System.out.println(best);
100             }
101         }
102         scan.close();
103
104     }
105
106
107
108 }
109
```