

```

1  /* Problem 1--Double Sorting
2     I just broke the input into two lists and sorted them both. */
3
4  import java.io.*;
5  import java.util.*;
6
7  public class probl {
8
9     private static Scanner in = null;
10    private static PrintWriter out = null;
11    private static int cs=0;
12    private static char[] C = null;
13
14    public static void main (String[] args) throws Exception {
15
16        in = new Scanner (new File ("probl.in"));
17        out = new PrintWriter ("probl.out");
18        while (true) {
19            int sz = in.nextInt ();
20            if (sz==0) break;
21            String[] M = new String[sz]; //stores the male names
22            int mct = 0;
23            String[] F = new String[sz]; //stores the female names
24            int fct = 0;
25            C = new char[sz]; //stores the sex
26            for (int i=0; i < sz; i++) {
27                char c = in.next().charAt(0); //get the sex
28                C[i] = c;
29                if (c=='M') M[mct++] = in.next(); //store name in proper array
30                else F[fct++] = in.next();
31            }
32            sort (M,mct); //sort arrays
33            sort (F,fct);
34            out.print ("Case "+(++cs)+"\r\n\r\n");
35            int i=0, j = fct;
36            for (int k=0; k < sz; k++)
37                if (C[k]=='M') //male strings print forward
38                    out.print ("M "+M[i++]+"\r\n");
39                else //female strings print backward
40                    out.print ("F "+F[--j)+"\r\n");
41            out.print ("\r\n");
42        }
43        in.close ();
44        out.close ();
45    }
46
47    /* Shell sorts the array of strings */
48    public static void sort (String[] s, int ct) throws Exception {
49
50        int d = ct;
51        while (d > 1) {
52            d = d==2?1:d%2==1?(d+1)/2:d%4==0?d/2+1:d/2+2;
53            for (int i=d; i < ct; i++)
54                for (int j=i-d; j >= 0; j -= d) {
55                    if (s[j].compareTo (s[j+d]) <= 0) break;
56                    String t = s[j];
57                    s[j] = s[j+d];
58                    s[j+d] = t;
59                }
60        }
61    }
62 }
63
64

```