/* Problem 1--Double Sorting */
I just broke the input into two lists and sorted them both.

import java.io.*;
import java.util.*;

public class prob1 {

private static Scanner in = null;
private static PrintWriter out = null;
private static int cs=0;
private static char[] C = null;

public static void main (String[] args) throws Exception {
in = new Scanner (new File("prob1.in"));
out = new PrintWriter ("prob1.out");
while (true) {
    int sz = in.nextInt ();
    if (sz==0) break;
    String[] M = new String[sz]; //stores the male names
    int mct = 0;
    String[] F = new String[sz]; //stores the female names
    int fct = 0;
    C = new char[sz]; //stores the sex
    for (int i=0; i < sz; i++) {
        char c = in.next().charAt(0); //get the sex
        C[i] = c;
        if (c=='M') M[mct++] = in.next(); //store name in proper array
        else F[fct++] = in.next();
    }
sort (M,mct); //sort arrays
    sort (F,fct);
    out.print ("Case "+(++cs)+"\n\n");
    int i=0, j = fct;
    for (int k=0; k < sz; k++)
        if (C[k]==='M') //male strings print forward
            out.print ("M "+M[i++]+"\n");
        else //female strings print backward
            out.print ("F "+F[--j]+"\n");
    out.println ("");
in.close ();
out.close ();
}

/* Shell sorts the array of strings */
public static void sort (String[] s, int ct) throws Exception {
int d = ct;
while (d > 1) {
    d = d==2?1:d%2==1?(d+1)/2:d%4==0?d/2+1:d/2+2;
    for (int i=d; i < ct; i++)
        for (int j=i-d; j >= 0; j -= d) {
            if (s[j].compareTo (s[j+d]) <= 0) break;
            String t = s[j];
            s[j] = s[j+d];
            s[j+d] = t;
        }
}
}