

```
1: // $Id: sortlist.java,v 1.3 2014-02-07 17:12:16-08 - - $
2:
3: import java.util.Scanner;
4: import static java.lang.System.*;
5:
6: class sortlist {
7:
8:     static class list_t {
9:         node_t head;
10:    }
11:    static class node_t {
12:        String item;
13:        node_t link;
14:    }
15:
16:    static void insertascending (list_t list, String newitem) {
17:        node_t prev = null;
18:        node_t curr = list.head;
19:
20:        // Find the insertion position.
21:        while (curr != null) {
22:            if (curr.item.compareTo (newitem) > 0) break;
23:            prev = curr;
24:            curr = curr.link;
25:        }
26:
27:        // Do the insertion.
28:        node_t temp = new node_t();
29:        temp.item = newitem;
30:        temp.link = curr;
31:        if (prev == null) list.head = temp;
32:            else prev.link = temp;
33:    }
34:
35:    public static void main (String[] args) {
36:        Scanner stdin = new Scanner (System.in);
37:        list_t list = new list_t();
38:
39:        while (stdin.hasNextLine()) {
40:            String line = stdin.nextLine();
41:            insertascending (list, line);
42:        }
43:
44:        for (node_t curr = list.head; curr != null; curr = curr.link) {
45:            out.printf ("%s\n", curr.item);
46:        }
47:    }
48:
49: }
50:
```

```
51:
52: //TEST// (echo "{{Note the ordering of special characters.}}" \
53: //TEST// ;echo "testing the sort" \
54: //TEST// ;echo "is the output sorted" \
55: //TEST// ;echo "Output should be in lexicographic order." \
56: //TEST// ;echo "from this program, is sorted" \
57: //TEST// ;echo "a last line is given" \
58: //TEST// ;echo "BUT A CAPITAL LINE COMES FIRST" \
59: //TEST// ;echo "//Slashes//" \
60: //TEST// ) | runprog -x sortlist.lis -0- ./sortlist
61: //TEST// mkpspdf sortlist.ps sortlist.j* sortlist.lis*
62:
```

rtlist.class

```

1:
2: .....
3: log: sortlist.log
4: .....
5:
6:     1  Script   : /afs/cats.ucsc.edu/courses/cmcs012b-wm/bin/runprog
7:     2  limit c  :      0 max core file size (KB)
8:     3  limit f  : 4194303 max output file size (KB)
9:     4  limit t  : 4294967295 max CPU time (sec)
10:    5  stdin    : -
11:    6  stdout   : sortlist.out
12:    7  stderr   : sortlist.err
13:    8  log      : sortlist.log
14:    9  listing  : sortlist.lis
15:   10  Command  : ./sortlist
16:   11  starting: pid 22624: 16:43:45.00
17:   12  finished: pid 22624: 16:43:46.00, real 1.00, user 0.09, sys 0.03
18:   13  pstatus: 0x0000 EXIT STATUS = 0
19:
20: .....
21: stdout: sortlist.out
22: .....
23:
24:     1  //Slashes//
25:     2  BUT A CAPITAL LINE COMES FIRST
26:     3  Output should be in lexicographic order.
27:     4  a last line is given
28:     5  from this program, is sorted
29:     6  is the output sorted
30:     7  testing the sort
31:     8  {{Note the ordering of special characters.}}
32:
33: .....
34: stderr: sortlist.err
35: .....
36:

```