

## Index.java

```

1 package problem5;
2
3 import java.util.*;
4 import java.io.*;
5
6 class Index {
7     Map<String, TreeSet<Integer>> posn;
8
9     public Index() {
10         posn = new TreeMap<>();
11     }
12
13     public void indexing() throws IOException {
14         // Accept name of file
15         File f;
16         boolean flag;
17         do {
18             flag = true;
19             System.out.println("Enter name of file to read");
20             Scanner sc = new Scanner(System.in);
21             String book = sc.nextLine();
22
23             f = new File(book);
24             if (!f.isFile()) {
25                 System.out.println("Invalid file");
26                 flag = false;
27             }
28         } while (!flag);
29
30         String wordList[];
31         int i = 1;
32         // Read from file
33         Scanner scf = new Scanner(f);
34         while (scf.hasNextLine()) {
35             String line = scf.nextLine();
36             line = line.replace(".", "");
37             line = line.replace(",", "");
38             line = line.replace(";", "");
39             wordList = line.split(" ");
40
41             // Insert into HashMap
42             for (String w : wordList) {
43
44                 if (!posn.containsKey(w.toLowerCase())) {
45                     // Insert the key
46                     Integer lineNo = new Integer(i);
47                     TreeSet<Integer> lno = new TreeSet<>();
48                     lno.add(lineNo);
49                     posn.put(w.toLowerCase(), lno);
50
51                 } else {
52                     Integer lineNo1 = new Integer(i);
53                     TreeSet<Integer> lno1 = posn.get(w.toLowerCase());
54                     lno1.add(lineNo1);
55                     posn.put(w.toLowerCase(), lno1);
56
57                 }
58
59             }
60             i++;
61         }
62     }

```

## Index.java

```
63
64 // Function to display
65 public void display() {
66     for (Map.Entry m : posn.entrySet()) {
67         System.out.println(m.getKey() + ": " + m.getValue());
68     }
69 }
70 }
```