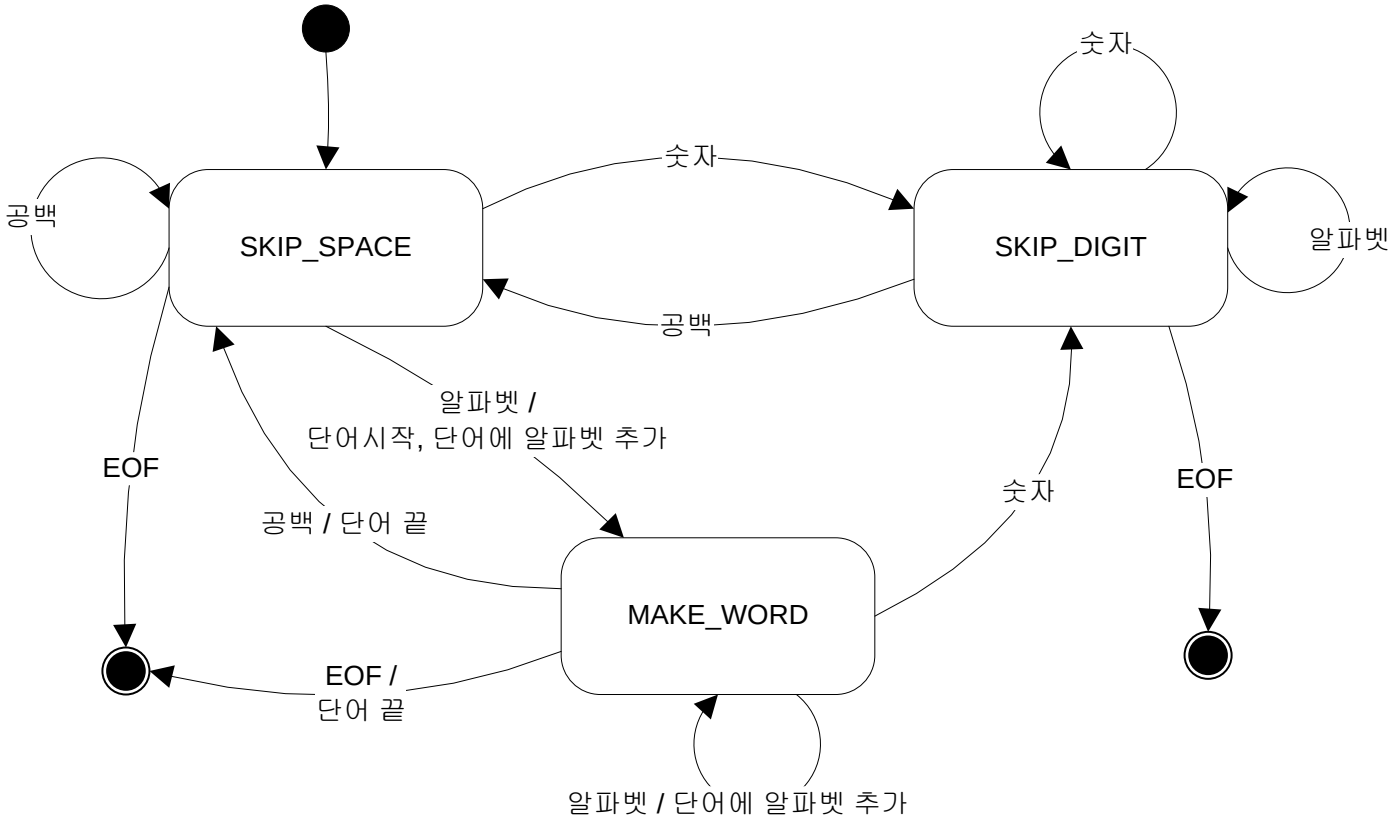
1) 개요



WordCounter
-state : State
+Alphabet(in c : char) +Space() +Digit() +Eof()

<<enumeration>> **State**
+SKIP_SPACE +SKIP_DIGIT +MAKE_WORD +END

2) Example1.java

```
1   package state.e1;
2
3   import java.util.*;
4
5   enum State { SKIP_SPACE, SKIP_DIGIT, MAKE_WORD, END };
6
7   class WordInfo {
8       public String word;
9       public int count;
10      public WordInfo(String word, int count) { this.word = word; this.count = count; }
11  }
12
13  class Word {
14      StringBuilder sb = new StringBuilder();
15
16      public void AddChar(char ch) { sb.append(ch); }
17      public void Clear() { sb = new StringBuilder(); }
18      public String toString() { return sb.toString(); }
19  }
20
21  class WordList {
22      ArrayList<WordInfo> wordList = new ArrayList<WordInfo>();
23
24      public void Add(String word) {
25          for (WordInfo wordInfo : wordList)
26              if (word.equals(wordInfo.word)) {
27                  wordInfo.count++;
28                  return;
29              }
30          wordList.add( new WordInfo(word, 1) );
31      }
32
33      public Iterator<WordInfo> getIterator() { return wordList.iterator(); }
34  }
35
36  class WordCounter {
37      WordList wordList = new WordList();
38      Word currentWord = new Word();
39      State state = State.SKIP_SPACE;
40
41      public void Alphabet(char c) {
42          switch (state) {
43          case SKIP_SPACE:
44              currentWord.AddChar(Character.toLowerCase(c));
45              state = State.MAKE_WORD;
46              break;
47          case SKIP_DIGIT:
48              break;
49          case MAKE_WORD:
50              currentWord.AddChar(Character.toLowerCase(c));
51              break;
52          case END:
53              break;
54          }
55      }
56
57      public void Space() {
58          switch (state) {
59          case SKIP_SPACE:
60              break;
61          case SKIP_DIGIT:
62              state = State.SKIP_SPACE;
63              break;
64          case MAKE_WORD:
65              wordList.Add(currentWord.toString());
66              currentWord.Clear();
67              state = State.SKIP_SPACE;
68              break;
```

```
69          case END:
70              break;
71          }
72      }
73
74      public void Digit() {
75          switch (state) {
76          case SKIP_SPACE:
77              state = State.SKIP_DIGIT;
78              break;
79          case SKIP_DIGIT:
80              break;
81          case MAKE_WORD:
82              currentWord.Clear();
83              state = State.SKIP_DIGIT;
84              break;
85          case END:
86              break;
87          }
88      }
89      public void Eof() {
90          switch (state) {
91          case SKIP_SPACE:
92              state = State.END;
93              break;
94          case SKIP_DIGIT:
95              state = State.END;
96              break;
97          case MAKE_WORD:
98              wordList.Add(currentWord.toString());
99              currentWord.Clear();
100             state = State.END;
101             break;
102         case END:
103             break;
104         }
105     }
106 }
107
108 public class Example1 {
109
110     public static void main(String[] args) {
111         Scanner scanner = new Scanner(System.in);
112         System.out.print("입력문자열? ");
113         String s = scanner.nextLine();
114
115         WordCounter wc = new WordCounter();
116         for (int i=0; i < s.length(); ++i) {
117             char c = s.charAt(i);
118             if (Character.isLowerCase(c) || Character.isUpperCase(c)) wc.Alphabet(c);
119             else if (Character.isDigit(c)) wc.Digit();
120             else wc.Space();
121         }
122         wc.Eof();
123
124         Iterator<WordInfo> it = wc.wordList.getIterator();
125         while (it.hasNext()) {
126             WordInfo w = it.next();
127             System.out.printf("%4d %sWn", w.count, w.word);
128         }
129     }
130
131 }
```

실행 사례

```
입력문자열? one two three four two three four three four four
   1 one
   2 two
   3 three
   4 four
```