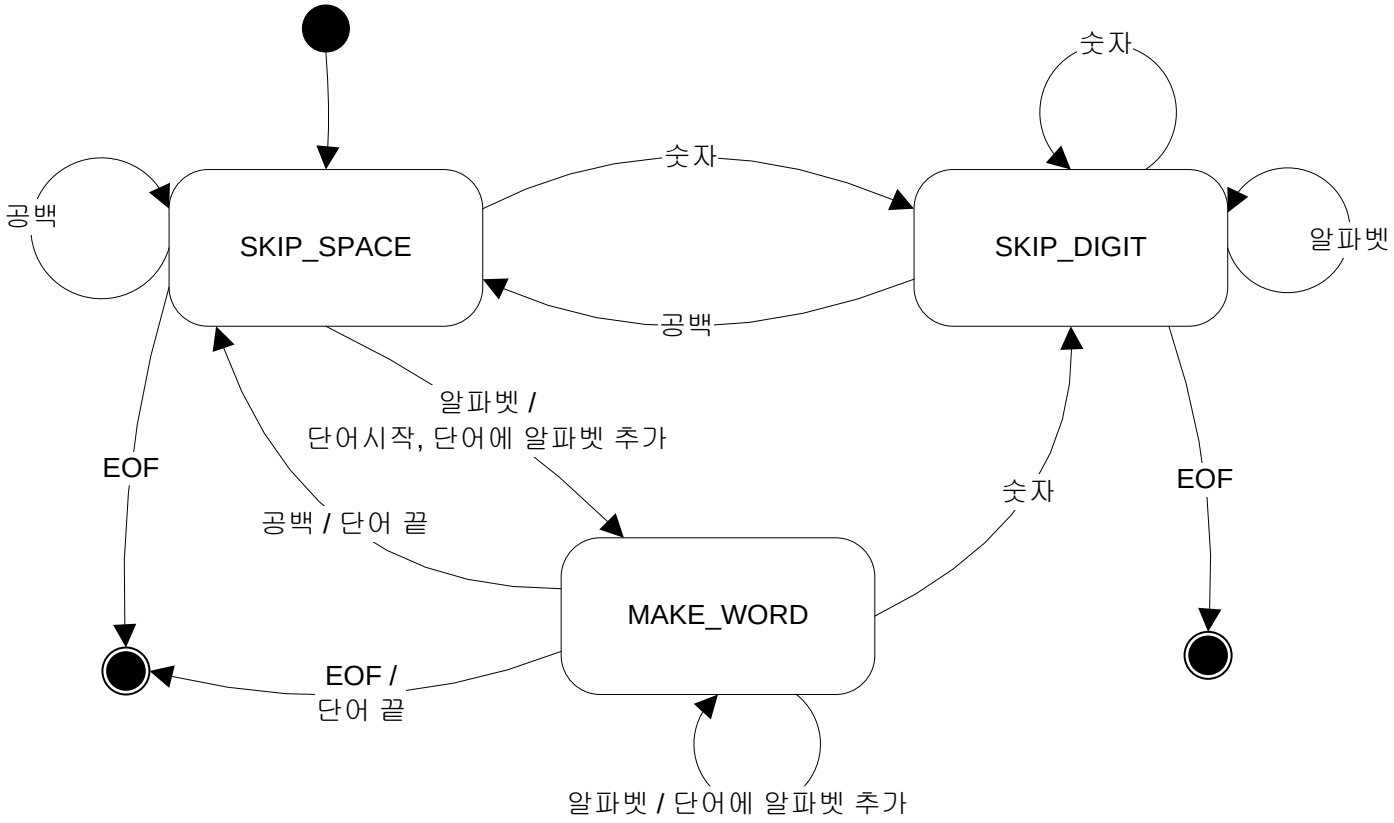
1) 개요


숫자
숫자
공백
SKIP_SPACE
SKIP_DIGIT
알파벳
공백
알파벳 /
단어시작, 단어에 알파벳 추가
EOF
숫자
EOF
공백 / 단어 끝
MAKE_WORD
EOF /
단어 끝
알파벳 / 단어에 알파벳 추가

2) Example3.java

```
1   package state.e3;
2
3   import java.util.ArrayList;
4   import java.util.Iterator;
5   import java.util.Scanner;
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      @Override
19      public String toString() { return sb.toString(); }
20  }
21
22  class WordList {
23      ArrayList<WordInfo> wordList = new ArrayList<WordInfo>();
24
25      public void Add(String word) {
26          for (WordInfo wordInfo : wordList)
27              if (word.equals(wordInfo.word)) {
28                  wordInfo.count++;
29                  return;
30              }
31          wordList.add( new WordInfo(word, 1) );
32      }
33
34      public Iterator<WordInfo> getIterator() { return wordList.iterator(); }
35  }
36
37  enum State { SKIP_SPACE, SKIP_DIGIT, MAKE_WORD, END };
38
39  class WordCounter {
40      WordList wordList = new WordList();
41
42      void run(String s) {
43          Word currentWord = new Word();
44          State state = State.SKIP_SPACE;
45          int index = 0;
46          char ch = 0;
47
48          while (state != State.END){
49              while (state == State.SKIP_SPACE) {
50                  if (index >= s.length()) { state = State.END; break; }
51                  ch = s.charAt(index++);
52                  if (Character.isAlphabetic(ch)) { state = State.MAKE_WORD; break; }
53                  else if (Character.isDigit(ch)) { state = State.SKIP_DIGIT; break; }
54                  else { state = State.SKIP_SPACE; break; }
55              }
56              while (state == State.SKIP_DIGIT) {
57                  if (index >= s.length()) { state = State.END; break; }
58                  ch = s.charAt(index++);
59                  if (Character.isAlphabetic(ch)) ;
60                  else if (Character.isDigit(ch)) ;
61                  else { state = State.SKIP_SPACE; break; }
62              }
63              while (state == State.MAKE_WORD) {
64                  currentWord.AddChar( Character.toLowerCase(ch) );
65                  if (index >= s.length()) {
66                      wordList.Add(currentWord.toString());
67                      state = State.END; break;
68                  }
```

```
                ch = s.charAt(index++);
                if (Character.isAlphabetic(ch)) ;
                else if (Character.isDigit(ch)) {
                    currentWord.Clear();
                    state = State.SKIP_DIGIT; break;
                }
                else {
                    wordList.Add(currentWord.toString());
                    currentWord.Clear();
                    state = State.SKIP_SPACE; break;
                }
            }
        }
    }
}

/////

public class Example3 {

public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);
    System.out.print("입력문자열? ");
    String s = scanner.nextLine();

    WordCounter wc = new WordCounter();
    wc.run(s);

    Iterator<WordInfo> it = wc.wordList.getIterator();
    while (it.hasNext()) {
        WordInfo w = it.next();
        System.out.printf("%4d %s₩n", w.count, w.word);
    }
}
}
```