

```

1  package assembler;
2
3  import java.io.*;
4
5  public class Pass1 {
6      public static void main(String[] args) throws IOException {
7          String[][] a = {
8              {"", "START", "101", ""},
9              {"", "MOVER", "BREG", "ONE"},
10             {"AGAIN", "MULT", "BREG", "TERM"},
11             {"", "MOVER", "CREG", "TERM"},
12             {"", "ADD", "CREG", "N"},
13             {"", "MOVEM", "CREG", "TERM"},
14             {"N", "DS", "2", ""},
15             {"RESULT", "DS", "2", ""},
16             {"ONE", "DC", "1", ""},
17             {"TERM", "DS", "1", ""},
18             {"", "END", "", ""}
19         };
20
21         int lc = Integer.parseInt(a[0][2]);
22
23         // Symbol table
24         String[][] st = new String[10][2];
25         int symCnt = 0;
26
27         BufferedWriter symtab = new BufferedWriter(new FileWriter("symtab.txt"));
28         BufferedWriter inter = new BufferedWriter(new
29             FileWriter("intermediate.txt"));
30
31         for (int i = 1; i < a.length; i++) {
32             if (!a[i][0].equals("")) {
33                 st[symCnt][0] = a[i][0];
34                 st[symCnt][1] = Integer.toString(lc);
35                 symtab.write(a[i][0] + "\t" + lc + "\n");
36                 symCnt++;
37             }
38
39             inter.write(lc + "\t" + a[i][1] + "\t" + a[i][2] + "\t" + a[i][3] +
40                 "\n");
41
42             if (a[i][1].equals("DS")) {
43                 lc += Integer.parseInt(a[i][2]);
44             } else {
45                 lc++;
46             }
47         }
48
49         symtab.close();

```

```
48         inter.close();
49
50         System.out.println("Pass-I complete. Symbol Table and Intermediate Code
generated.");
51     }
52 }
```