

```

1  package Macroprocessor;
2
3  import java.io.*;
4  import java.util.*;
5
6  public class Pass1 {
7      public static void main(String[] args) throws IOException {
8          // Sample macro code (can be replaced with file input)
9          String[] code = {
10             "MACRO",
11             "INCR &ARG1",
12             "A 1,&ARG1",
13             "MEND",
14             "START 101",
15             "INCR TERM",
16             "MOVEM AREG,TERM",
17             "END"
18         };
19
20         List<String[]> MNT = new ArrayList<>();
21         List<String> MDT = new ArrayList<>();
22         BufferedWriter inter = new BufferedWriter(new
FileWriter("intermediate.txt"));
23         BufferedWriter mntFile = new BufferedWriter(new FileWriter("mnt.txt"));
24         BufferedWriter mdtFile = new BufferedWriter(new FileWriter("mdt.txt"));
25
26         boolean isMacro = false;
27         int mdtIndex = 0;
28
29         for (int i = 0; i < code.length; i++) {
30             String line = code[i];
31             String[] parts = line.trim().split("\\s+", 2);
32
33             if (parts[0].equals("MACRO")) {
34                 isMacro = true;
35                 String[] defParts = code[i + 1].trim().split("\\s+", 2);
36                 String macroName = defParts[0];
37                 MNT.add(new String[]{macroName, String.valueOf(mdtIndex)});
38                 i++; // skip macro name line
39                 continue;
40             }
41
42             if (parts[0].equals("MEND")) {
43                 MDT.add("MEND");
44                 mdtIndex++;
45                 isMacro = false;
46                 continue;
47             }
48

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49         if (isMacro) {
50             MDT.add(line);
51             mdtIndex++;
52         } else {
53             inter.write(line + "\n");
54         }
55     }
56
57     // Writing MNT
58     for (String[] entry : MNT) {
59         mntFile.write(entry[0] + "\t" + entry[1] + "\n");
60     }
61
62     // Writing MDT
63     for (int i = 0; i < MDT.size(); i++) {
64         mdtFile.write(i + "\t" + MDT.get(i) + "\n");
65     }
66
67     inter.close();
68     mntFile.close();
69     mdtFile.close();
70
71     System.out.println("Macro Pass-I complete. MNT, MDT and Intermediate Code
generated.");
72     }
73 }
```