

Code:

```
import java.io.BufferedReader;
import java.io.FileReader;
import java.io.FileWriter;
import java.io.IOException;
import java.util.HashMap;

public class pass2 {

    public static void main(String[] Args) throws IOException {

        BufferedReader b1 = new BufferedReader(new
FileReader("/home/student/Downloads/intermediate.txt.txt"));
        BufferedReader b2 = new BufferedReader(new
FileReader("/home/student/Downloads/symtab.txt.txt"));
        BufferedReader b3 = new BufferedReader(new
FileReader("/home/student/Downloads/littab.txt.txt"));
        FileWriter f1 = new FileWriter("/home/student/Desktop/p2_7.txt");
        HashMap<Integer, String> symSymbol = new HashMap<Integer, String>();
        HashMap<Integer, String> litSymbol = new HashMap<Integer, String>();
        HashMap<Integer, String> litAddr = new HashMap<Integer, String>();
        String s;
        int symtabPointer = 1, littabPointer = 1, offset;
        while ((s = b2.readLine()) != null) {
            String word[] = s.split("\\t\\t\\t");
            symSymbol.put(symtabPointer++, word[0]);
        }
        while ((s = b3.readLine()) != null) {
            String word[] = s.split("\\t\\t");
            litSymbol.put(littabPointer, word[0]);
            litAddr.put(littabPointer++, word[1]);
        }
        while ((s = b1.readLine()) != null) {
            if (s.substring(1, 6).compareToIgnoreCase("IS,00") == 0) {
                f1.write("+ 00 0 000\\n");
            } else if (s.substring(1, 3).compareToIgnoreCase("IS") == 0) {
                f1.write("+ " + s.substring(4, 6) + " ");
                if (s.charAt(9) == ')') {
                    f1.write(s.charAt(8) + " ");
                    offset = 3;
                } else {
                    f1.write("0 ");
                    offset = 0;
                }
                if (s.charAt(8 + offset) == 'S')
                    f1.write(symSymbol.get(Integer.parseInt(s.substring(10
+ offset, s.length() - 1))) + "\\n");
                else
                    f1.write(litAddr.get(Integer.parseInt(s.substring(10 +
offset, s.length() - 1))) + "\\n");
            } else if (s.substring(1, 6).compareToIgnoreCase("DL,01") == 0) {
                String s1 = s.substring(10, s.length() - 1), s2 = "";
                for (int i = 0; i < 3 - s1.length(); i++)
                    s2 += "0";
                s2 += s1;
                f1.write("+ 00 0 " + s2 + "\\n");
            } else {
                f1.write("\\n");
            }
        }
        f1.close();
        b1.close();
        b2.close();
        b3.close();
    }
}
```

Data of symtab.txt.txt:-

A	211	1
LOOP	202	1
B	212	1
NEXT	208	1
BACK	202	1
LAST	210	1

Data of intermediate.txt.txt:-

(AD,01)(C,200)
(IS,04)(1)(L,1)
(IS,05)(1)(S,1)
(IS,04)(1)(S,1)
(IS,04)(3)(S,3)
(IS,01)(3)(L,2)
(IS,07)(6)(S,4)
(DL,01)(C,5)
(DL,01)(C,1)
(IS,02)(1)(L,3)
(IS,07)(1)(S,5)
(IS,00)
(AD,03)(S,2)+2
(IS,03)(3)(S,3)
(AD,03)(S,6)+1
(DL,02)(C,1)
(DL,02)(C,1)
(AD,02)
(DL,01)(C,1)

Data of littab.txt.txt:-

5	206
1	207
1	213

Output:

```
+ 04 1 206
+ 05 1 A
+ 04 1 A
+ 04 3 B
+ 01 3 207
+ 07 6 NEXT
+ 00 0 005
+ 00 0 001
+ 02 1 213
+ 07 1 BACK
+ 00 0 000
```

```
+ 03 3 B
```

```
+ 00 0 001
```