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// Program to implement Pass-2 assembler.

import java.io.*;
import java.util.*;

class Pass-2_Assembler
{
public static void main(String args[]) throws Exception
{

String s;
String s1[] = new String[70];
String s2[] = new String[70];
String s3[] = new String[70];

FileWriter f1 = new FileWriter("output3.txt");
BufferedWriter b1 = new BufferedWriter(f1);

FileReader f2 = new FileReader("intermedi1.txt");
BufferedReader b2 = new BufferedReader(f2);

FileReader f3 = new FileReader("symbol12.txt");
BufferedReader b3 = new BufferedReader(f3);

FileReader f4 = new FileReader("literal12.txt");
BufferedReader b4 = new BufferedReader(f4);

int m=0;
while((s=b2.readLine())!=null)
{

 StringTokenizer st=new StringTokenizer(s);
 while(st.hasMoreTokens())
 {
 s1[m]=st.nextToken();
 m++;
 }
}

int m1=0;
while((s=b3.readLine())!=null)
{

 StringTokenizer st=new StringTokenizer(s);
 while(st.hasMoreTokens())
 {
 s2[m1]=st.nextToken();
 m1++;
 }
}

int m2=0;
while((s=b4.readLine())!=null)
{

 StringTokenizer st=new StringTokenizer(s);
 while(st.hasMoreTokens())
 {
 s3[m2]=st.nextToken();
 m2++;
 }
}

for(int i=0;i<m;i++)
{
if("AD".equals(s1[i]) && "01".equals(s1[i+1]))
{
}
}
}

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b1.write("");
}
if("R1".equals(s1[i]) || "R2".equals(s1[i]) || "R3".equals(s1[i]) || "R4".equals(s1[i]))
{
b1.write("\t"+s1[i]);
b1.write(" ");
}

}
if("IS".equals(s1[i]))
{
b1.write(s1[i-1]+\t");
b1.write(s1[i+1]);
}

if("L".equals(s1[i]))
{

for(int j=0;j<m2;j++)
{
    if(s1[i+1].equals(s3[j]))
    {
        b1.write("\t");
        b1.write(s3[j+2]+\n");
    }
}

}
if("S".equals(s1[i]))
{

for(int j=0;j<m1;j++)
{
    if(s1[i+1].equals(s2[j]))
    {
        b1.write("\t");
        b1.write(s2[j+2]+\n");
    }
}

}
if("DL".equals(s1[i]) && "01".equals(s1[i+1]))
{
    b1.write(s1[i-1]+\t");
    b1.write("-"+\t");
    b1.write("-");
    b1.write("\t");
    b1.write("00"+s1[i+3]+\n");
}

}
if(s1[i].equals("AD") && s1[i+1].equals("02"))
{
b1.write(s1[i-1]+\t");
    b1.write("-"+\t");
    b1.write("-");
    b1.write("\t");
b1.write("00"+s1[i+3]+\n");
}

}
b1.close();
b2.close();
b3.close();

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b4.close();
}
}

// Input Files:

// intermed1.txt
// AD 01 C 100
// 100 IS 05 R1 L 1

// 101 IS 06 R2 S 1

// 102 IS 03 R1 L 2

// 103 AD 04 R1 L 2

// 104 IS 06 R1 S 1

// 105

// 106 IS 02

// 107 DL 01

// 108 DL 02

// 109 AD 02 C 1

// 110 AD 02 C 2

// symbol2.txt
// L1 100
// X 107
// Y 108

// literal2.txt
// 1 =7
// 2 =2

// *****OUTPUT*****
// output3.txt
// 100 05 R1 2
// 101 06 R2
// 102 03 R1 null
// R1 null
// 104 06 R1
// 106 02
// 107 - - 00DL
// 109 - - 001
// 110 - - 002

// This code is contributed by Prof. Anand Gharu

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