

```

// 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("symbol2.txt");
        BufferedReader b3=new BufferedReader(f3);

        FileReader f4=new FileReader("literal2.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]))
            {

```

```

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();

```

```
b4.close();
}
}
```

```
// Input Files:
```

```
// intermedi1.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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