//Expt 2 Literal Table

import java.io.\*;

import java.util.\*;

class exp2c

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

int n,i,j,lc=-4;

int match;

System.out.print("Enter the no. of lines: ");

n=sc.nextInt();

String a[][]=new String[n+1][4];

System.out.println("Enter your code:");

a[0][0]="Label";

a[0][1]="Opcode";

a[0][2]="op1";

a[0][3]="op2";

for( i=1 ; i<=n ; i++)

{

for( j=0; j<4 ; j++)

a[i][j]=sc.next();

}

/\*System.out.println("\nToken Table\n");

for( i=0 ; i<=n ; i++)

{

for( j=0 ; j<4 ; j++)

System.out.print("\t"+a[i][j]);

System.out.println();

}\*/

String st[][] = new String[15][3];

String m=".";

int top=0;

st[0][0]="Symbol";

st[0][1]="Value";

st[0][2]="Address";

for(i=1 ; i<=n ; i++)

{

if(!m.equals(a[i][0]))

{

j=top;

while( j>0)

{

if(a[i][0].equals(st[j][0]))

break;

j--;

}

if( j==0 )

continue;

else

{

if( a[i][1].equals("DC"))

st[j][1] = a[i][2];

}

}

if( a[i][1] == "START")

continue;

if (!m.equals(a[i][3]))

{ top++; st[top][0]=a[i][3]; }

}

System.out.println("\nLiteral table:\n");

for( i=0 ; i<=top ; i++)

System.out.println("\t"+st[i][0]+"\t"+st[i][1]);

}

}

/\*

OUTPUT

Enter the no. of lines: 9

Enter your code:

TEST START 0 .

. L 1 FIVE

. M 1 SIX

. ST 1 TEMP

. PRINT TEMP .

FIVE DC F'2' .

SIX DC F'3' .

TEMP DS 1F .

. END . .

Token Table

Label Opcode op1 op2

TEST START 0 .

. L 1 FIVE

. M 1 SIX

. ST 1 TEMP

. PRINT TEMP .

FIVE DC F'2' .

SIX DC F'3' .

TEMP DS 1F .

. END . .

Literal table:

Symbol Value

FIVE F'2'

SIX F'3'

TEMP null

\*/