Pasm labels are symbols for nonnegative integer values. For example, consider the following trivial program:

```
L00001    ent       sp        L00002
          ent       ep        L00003
          rtn       p
#define   L00002    4
#define   L00003    4
          mst       0
          cup       0         L00001
          stp
```

There are three labels in the program, L00001, L00002, and L00003.

Label L00001 is a symbol for an instruction position called the program counter and abbreviated, PC. Label L00001 is defined on the first line of the program. Label L00001 has a value of zero (0), the position of the first instruction in the program.

Label L00002 is a symbol for the amount the stack pointer register, sp, is to be incremented to account for the stack mark, local variables, and temporary values. The value assigned to label L00002 is four (4) defined on the fourth line of the program.

Label L00003 is a symbol for the amount the extreme pointer register, ep, is to be incremented beyond the stack pointer register, to reserve space for computation on the stack. The value assigned to label L00003 is four (4). Label L00003 is define on line five of the program.

The file below contains a Label Table that shows the values assigned to labels and where labels are referenced. You can see that operand 2 of the first two instructions has been assigned the values given to their respective labels. Likewise, operand 2 of the cup instruction has been assigned the value given to its referenced label, L00000.

```
String Constants
Index   Constant


Set Constants
Index Constant

Integer Constants
Index   Constant

Real Constants
Index   Constant

P-Code Instruction Array
  PC OP       R1         R2
   0 ent(02)  sp(00)     4(0004)
   1 ent(02)  ep(01)     4(0004)
```

```
        2 rtn(04)   p(07)     0(0000)
        3 mst(03)   0(00)     0(0000)
        4 cup(00)   0(00)     0(0000)
        5 stp(30)   0(00)     0(0000)

    Label Table
      Label  Address Resolved Reference List
      L00001        0     true    4
      L00002        4     true    0
      L00003        4     true    1
```

Pasm labels can have multiple references to labels that have been defined as shown by the following example.

```
L00001    ent       sp        L00002
          ent       ep        L00003
L00004    lvi       0         5
          lvi       0         6
          equ       i
          fjp                 L00004
          ujp                 L00004
          tjp                 L00004
          rtn       p
#define   L00002    4
#define   L00003    4
          mst       0
          cup       0         L00001
```

Label L00004 is referenced three times in instructions on the fifth, sixth, and seventh lines of the program. Note that the label table, in the assembly listing file for this program, clearly identifies and resolves the references to label L00004 and assigns to operand 2 of the referencing instructions the value given to the label.

```
String Constants
Index   Constant


Set Constants
Index Constant

Integer Constants
Index   Constant

Real Constants
Index   Constant

P-Code Instruction Array
  PC OP       R1         R2
   0 ent(02)  sp(00)     4(0004)
   1 ent(02)  ep(01)     4(0004)
   2 lvi(37)   0(00)     5(0005)
```

```
     3 lvi(37)   0(00)     6(0006)
     4 equ(05)   i(03)     0(0000)
     5 fjp(28)   0(00)     2(0002)
     6 ujp(26)   0(00)     2(0002)
     7 tjp(29)   0(00)     2(0002)
     8 rtn(04)   p(07)     0(0000)
     9 mst(03)   0(00)     0(0000)
    10 cup(00)   0(00)     0(0000)
    11 stp(30)   0(00)     0(0000)

Label Table
  Label  Address Resolved Reference List
  L00001        0     true    9
  L00002        4     true    0
  L00003        4     true    1
  L00004        2     true    5   6   7
```

Pasm labels can have multiple references to labels that have yet to be defined as shown by the following example.

```
L00001    ent       sp        L00002
          ent       ep        L00003
          lvi       0         5
          lvi       0         6
          equ       i
          fjp                 L00004
          ujp                 L00004
          tjp                 L00004
L00004    rtn       p
#define   L00002    4
#define   L00003    4
          mst       0
          cup       0         L00001
          stp
```

Label L00004 is referenced three times in instructions on the fifth, sixth, and seventh lines of the program. Note that the label table, in the assembly listing file for this program, clearly identifies and resolves the references to label L00004 and assigns to operand 2 of the referencing instructions the value given to the label.

```
String Constants
Index   Constant


Set Constants
Index Constant

Integer Constants
Index   Constant

Real Constants
```

```
Index   Constant

P-Code Instruction Array
  PC OP       R1         R2
   0 ent(02)  sp(00)     4(0004)
   1 ent(02)  ep(01)     4(0004)
   2 lvi(37)   0(00)     5(0005)
   3 lvi(37)   0(00)     6(0006)
   4 equ(05)   i(03)     0(0000)
   5 fjp(28)   0(00)     8(0008)
   6 ujp(26)   0(00)     8(0008)
   7 tjp(29)   0(00)     8(0008)
   8 rtn(04)   p(07)     0(0000)
   9 mst(03)   0(00)     0(0000)
  10 cup(00)   0(00)     0(0000)
  11 stp(30)   0(00)     0(0000)

Label Table
  Label  Address Resolved Reference List
  L00001        0     true    9
  L00002        4     true    0
  L00003        4     true    1
  L00004        8     true    5   6   7
```