

<<<< USERNAME:tt FILENAME: maslabel.h >>>>

```
#ifndef maslabel_h
#define maslabel_h 1
//-----
//File maslabel.h defines class Label
//-----
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//-----
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//-----
//C++ Standard include files
//-----
#include <iostream>
#include <fstream>
#include <iomanip>
#include <string>
#include <cstring>
#include <cstdlib>
using namespace std;
//-----
//Application include files
//-----
#include "maslist.h"
//-----
//class Label resolves labels to addresses
//-----
class Label {
    struct Descriptor {
        bool defined;
        string label;
        unsigned short int address;
        List* L;
        Descriptor():defined(false),label(""),address(0),L(0){}
        ~Descriptor(){if (L) delete L;}
    };
    int size;                //Number of available label descriptors
    int count;               //Number of occupied label descriptors
    Descriptor* D;           //Points to an array of label descriptors
public:
    Label(int sz=100);
    ~Label();
    bool IsFull(void);       //Determine if the Label Table is full.
    void Define              //Define label l. If it doesn't exist add it to the
    Label Table              //If it does exists then resolve all reference to th
    e label.
        (string l
        ,unsigned short a
        ,unsigned short M[]
        );
    int Find(string l);       //Find label l in the list of Descriptors
                                //Return a valid index 0<=i<count if label l
                                //is found or -1 if the label is not found
    void DefinedInsert       //Insert defined label l into the table
        (string l
        ,unsigned short adr
        );
    void UndefinedInsert     //Insert a reference to label l into the Label Tabl
    e
        (string l
        ,unsigned short adr
        );
    int Reference            //Find the label and its defined address
        (string l            //or enter the reference address for later
```

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    );  
    void Print(ostream& o);    //Print the Label Table  
  
};  
#endif
```