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// Macro Guard
#ifndef HUFFMANNODE_H
#define HUFFMANNODE_H

#include <ostream> // Provides std::ostream. To overload '<<' operator
#include <string>   // Provides std::string

// To avoid using 'std'
using std::string;
using std::ostream;

class HuffmanNode
{
    // fields
private:
    char letter;           // The character the node corresponds to
    int frequency;         // Number of times has thw character occurred (i.e. KEY value)
    string code;           // Encoded Huffman Code
    HuffmanNode* left;     // Pointer to its left child
    HuffmanNode* right;    // Pointer to its right child

    // functions
public:
    // Default Constructor
    HuffmanNode();

    // Constructors
    HuffmanNode(char, int);
    HuffmanNode(HuffmanNode*, HuffmanNode*);
    HuffmanNode(const HuffmanNode&);

    // Destructor
    ~HuffmanNode();

    // Accessor methods
    int getFrequency()      {return frequency;};
    char getLetter()        {return letter;};
    string getCode()        {return code;};
    HuffmanNode* getLeft()  {return left;};
    HuffmanNode* getRight() {return right;};

    // Mutator methods
    void setHuffmanCode(string s) {code = s;};

    //Overloaded methods
    friend ostream& operator<<(ostream&, const HuffmanNode&);
    HuffmanNode& operator=(const HuffmanNode&);
};

#endif
```