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/* BST.h
*
* Binary Search Tree class Interface.
*/

//file guards
#ifndef _BST_H_
#define _BST_H_

#include "listT.cpp"

class BinarySearchTree
{
private:
    typedef struct BSTreeNode
    {
        string showName; // title of TV show
        int startDate; // year of TV show release
        int endDate; // year that TV show ended
        string genre; // genre of TV show
        string url; // url that links to find TV show info
        LinkedList L; // list object that stores actor names for each TV show

        BSTreeNode *leftPtr; // pointer to left subtree
        BSTreeNode *rightPtr; // pointer to right subtree
    } *TreePtr;
    TreePtr rootPtr; // root of the BST

    // if no BST, declare the root NULL
    void InitBSTree()
    { rootPtr = NULL; }

    // search BST by TV show name, print out actors per show
    void SearchNodeInBST( TreePtr treePtr,
                        string newShowName );

    // search BST by actor name, prints out each actor in
    void ActorSearchNodeInBST( TreePtr treePtr,
                        string newActorName );

    // search BST, prints shows by decade TV show released in
    void DecadeSearchNodeInBST( TreePtr treePtr,
                        int releaseDate,
                        int stopDate );

    // print TV show names in alphabetical (but only by first letter) order
    void PrintBST_InOrder( TreePtr treePtr );

public:
    BinarySearchTree() { InitBSTree(); }

    // reads in an external TV show file
    void readFile();

    // adds in new node to BST
    void AddNode( int newStartDate2,
                string showName2,
                int endDate2,
                string genre2,
                string url2,

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        LinkedList L12 );

// public versions of above functs
void SearchNode( string newShowName );
void ActorSearchNode( string newActorName );
void DecadeSearchNode( int releaseDate,
                      int stopDate );

void PrintInOrder();
};
#endif
```