Program –

*#include* <iostream>

*#include* <cstdlib>

*#include* <string.h>

*using* *namespace* std;

*//Node Declaration*

*struct* node

{

*char* label[10];

*int* ch\_count;

*struct* node *\**child[10];

} *\** root;

*// Class Declaration*

*class* BookT

{

*public:*

*void* create\_tree();

*void* display(node *\*r1*);

    BookT()

    {

        root *=* NULL;

    }

};

*void* BookT::create\_tree()

{

*int* tbooks, tchapters, i, j, k;

    root *=* *new* node();

    cout *<<* "\nEnter name of book: ";

    cin *>>* root->label;

    cout *<<* "\nEnter number of chapters in book: ";

    cin *>>* tchapters;

    root->ch\_count *=* tchapters;

*for* (i *=* 0; i *<* tchapters; i*++*)

    {

        root->child[i] *=* *new* node;

        cout *<<* "\nEnter Chapter name: ";

        cin *>>* root->child[i]->label;

        cout *<<* "\nEnter number of sections in Chapter: " *<<* root->child[i]->label *<<* ": ";

        cin *>>* root->child[i]->ch\_count;

*for* (j *=* 0; j *<* root->child[i]->ch\_count; j*++*)

        {

            root->child[i]->child[j] *=* *new* node;

            cout *<<* "\nEnter Section: " *<<* j *+* 1 *<<* " name: ";

            cin *>>* root->child[i]->child[j]->label;

        }

    }

}

*void* BookT::display(node *\*r1*)

{

*int* i, j, k, tchapters;

*if* (*r1* *!=* NULL)

    {

        cout *<<* "\n\*\*\*\*Book Hierarchy\*\*\*\*";

        cout *<<* "\n Book Title : " *<<* *r1*->label;

        tchapters *=* *r1*->ch\_count;

*for* (i *=* 0; i *<* tchapters; i*++*)

        {

            cout *<<* "\n Chapter: " *<<* i *+* 1;

            cout *<<* " " *<<* *r1*->child[i]->label;

            cout *<<* "\n Sections: ";

*for* (j *=* 0; j *<* *r1*->child[i]->ch\_count; j*++*)

            {

                cout *<<* " \n " *<<* *r1*->child[i]->child[j]->label;

            }

        }

    }

}

*//Main Contains Menu*

*int* main()

{

*int* choice;

    BookT BookT;

*while* (1)

    {

        cout *<<* "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n";

        cout *<<* "Book Tree Creation";

        cout *<<* "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n";

        cout *<<* "1.Create" *<<* endl;

        cout *<<* "2.Display" *<<* endl;

        cout *<<* "3.Quit" *<<* endl;

        cout *<<* "Enter your choice : \n";

        cin *>>* choice;

*switch* (choice)

        {

*case* 1:

            BookT.create\_tree();

*case* 2:

            BookT.display(root);

*break*;

*case* 3:

            exit(1);

*default*:

            cout *<<* "Wrong choice" *<<* endl;

        }

    }

}

Output-

