Please write the following C++ WinForm GUI application for Visual Studio 2017:

It consists of a TreeView on the left and a ListView on the right.

The TreeView consists of nodes.

Each node in the TreeView except for the root can have an unlimited number of children.

Each node has a checkbox.

Each node has 3 data elements, namely Name, Age, Year.

When the node’s checkbox is checked its data are displayed in the ListView in 3 columns: Name, Age, Year

When the node’s checkbox is unchecked, its data are removed from the ListView.

Each parent node shall contain the name of a random Hollywood male actor chosen to be the sexiest man of a year since year 2000 along with his age and the year when he was chosen.

Each parent node shall have children nodes that store only the actor’s real-life children, if there are any.

The child node shall store the child’s full name, age and date of birth.

Please create a sample WinForms application in C programming language using Visual Studio. The application implements a TreeView on the left and a ListView on the right. The TreeView has nodes. Nodes can have children nodes. Each node has a checkbox. Each node has a text field that stores node's name and a numeric field that stores node's ID number. Once the node’s checkbox is checked its data are displayed in the ListView in two columns, namely Node Name, Node ID. Once unchecked, the node’s data is removed from the TrieList.

Please create a Windows desktop dialog-based application in C++ using Visual Studio 2022. The application implements a Tree View on the left and a List View on the right. The Tree View has nodes. All nodes but root can have children nodes. Each node has a checkbox. Each node has a text field that stores node's name and a numeric field that stores node's unique ID number. Once a node’s checkbox is checked its data are displayed in the List View in two columns, namely Node Name, Node ID. Once unchecked, the node’s data is removed from the Tree List.

I have an empty Windows desktop C++ project created with Visual Studio 2022. It displays only two standard menu items up in the left corner, namely File and Help. The File menu item has an Exit item as its child that closes the application when pressed and the Help menu item has an About item as its child that opens an About pop-up dialog. Please add a Search menu item that upon being pressed will open a new dialog that implements a Tree View on the left and a List View on the right. The Tree View has nodes. All nodes but the root one can have children nodes. Each node has a checkbox. Each node has a text field that stores node's name and a numeric field that stores node's unique ID number. Once a node’s checkbox is checked its data are displayed in the List View in two columns, namely Node Name, Node ID. Once unchecked, the node’s data is removed from the Tree List.

I have an empty Windows desktop C++ project created with Visual Studio 2022. It displays only two standard menu items up in the left corner, namely File and Help. The File menu item has an Exit item as its child that closes the application when pressed and the Help menu item has an About item as its child that opens an About pop-up dialog. Please add a Search menu item that upon being pressed will open a new dialog that implements a Tree View on the left and a List View on the right. The Tree View has nodes. All nodes but the root one can have children nodes. Each node has a checkbox. Each node has a text field that stores node's name and a numeric field that stores node's unique ID number. Once a node’s checkbox is checked its data are displayed in the List View in two columns, namely Node Name, Node ID. Once unchecked, the node’s data is removed from the Tree List.

I have a CppWinFormsApp, which is a Simple Windows Forms Application Project Template in C++/CLR, created with Visual Studio 2022.

It has a TreeView, namely System::Windows::Forms::TreeView^ treeView1, on the left of the MainForm.

It has a ListView, namely System::Windows::Forms::ListView^ listView1, on the right of the MainForm.

Can you please implement the TreeView and the ListView according to the following specifications?

The TreeView shall have nodes.

All nodes but the root one can have children nodes.

Each node, regardless whether it is a parent node or a child node, has a checkbox.

Each node has a text field that stores the node's name and a numeric field that stores the node's unique ID number.

Once a node’s checkbox is checked its data are displayed in the ListView in two columns, namely Node Name and Node ID.

Once a node’s checkbox is unchecked, the respective node’s data is removed from the ListView.

Please fill out the TreeView with some sample data to test the functionality of the application.

In this example implementation, we first create some sample data to fill the TreeView with. We define a `TreeNode` class to store the node data (name and ID) and attach event handlers to the TreeView's `AfterCheck` event and the ListView's `ItemChecked` event.

The `updateListView` function is a helper function that takes a `TreeNode` object as input and adds or removes its data to/from the ListView depending on its `Checked` property.

The `treeView1\_AfterCheck` event handler is triggered whenever a node's checkbox is checked or unchecked. It updates the node's `Checked` property and propagates the change to its children. It then calls `updateListView` to update the ListView with the node's data.

The `listView1\_ItemChecked` event handler is triggered whenever an item in the ListView is checked or unchecked. It searches for the corresponding node in the TreeView using the node's ID and updates its `Checked` property. It then calls `updateListView` to update the ListView with the node's data.

Note that you'll need to add the event handler functions to the header file and declare them in the constructor as well. Also, make sure to attach the event handlers to the TreeView and ListView objects in the constructor.