

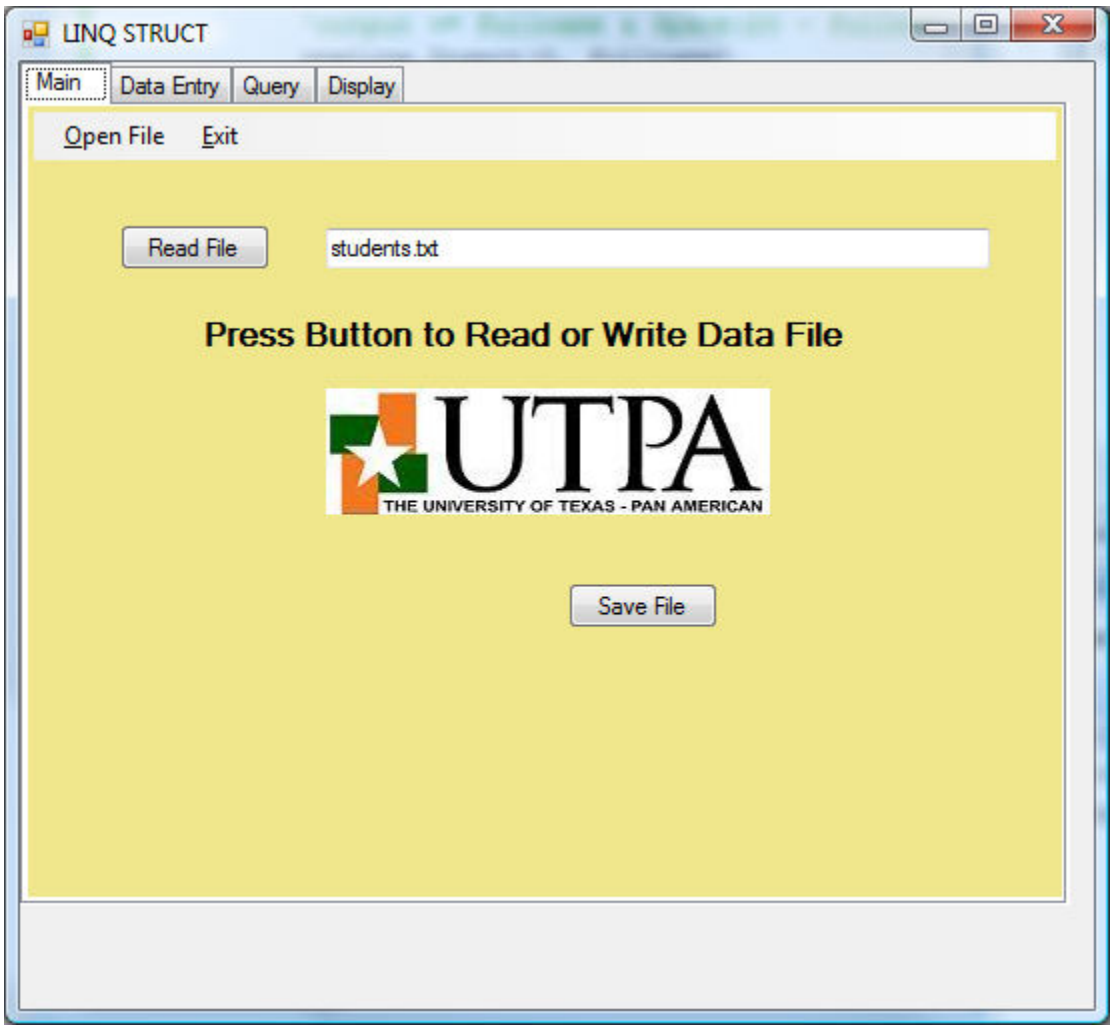
CSCI 3327 Advanced VB
Lab Assignment # 10
Dr. Abraham
Due in one week on Nov 25 2009.

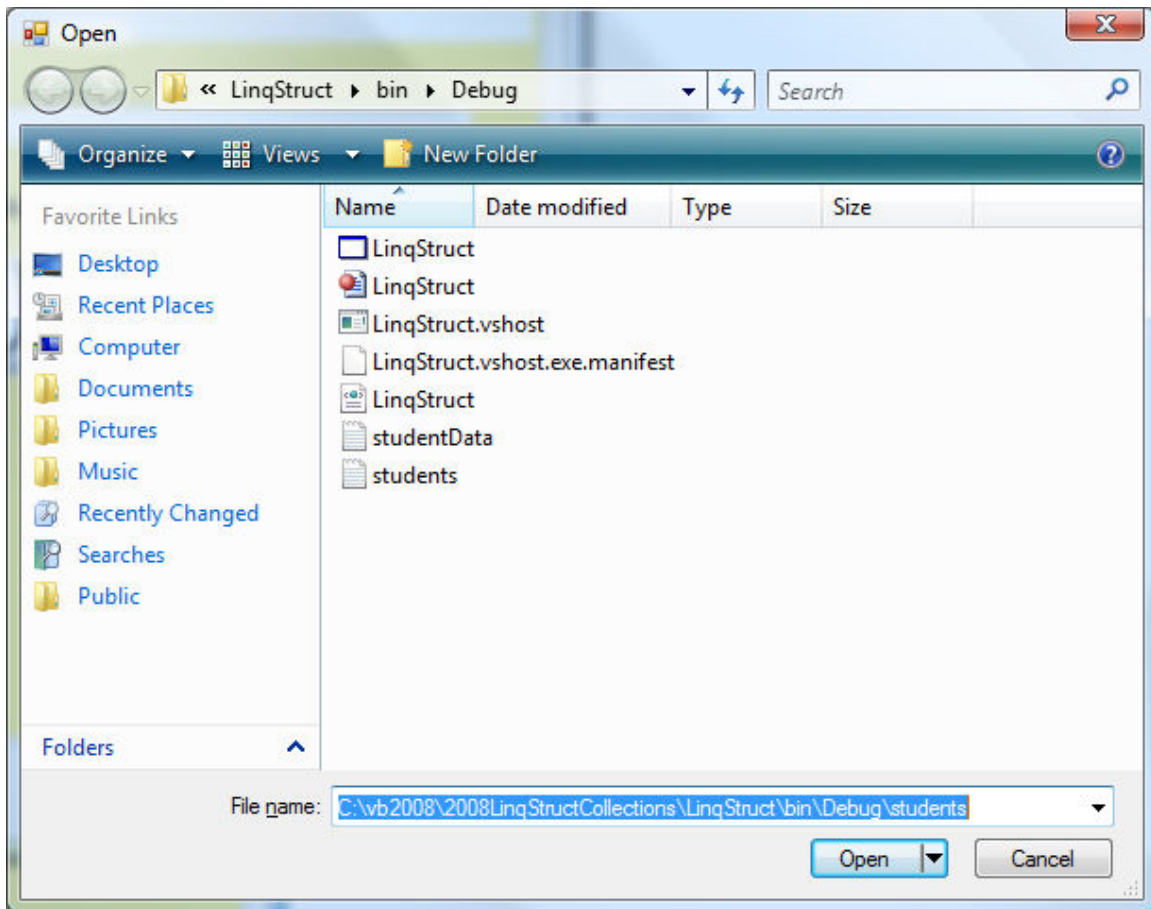
This is a pretty long assignment, so please start early. Instructional objectives of this assignment are:

Files and Streams
String Builder class
Arrays of Struct
Error Handling
Collections
LINQ
Sorting and Binary Search

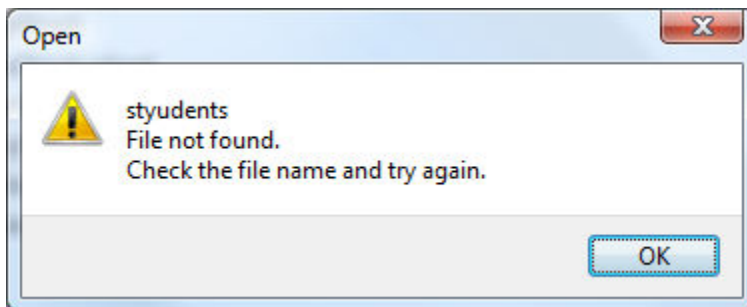
Create a form with four tabs, name the tabs appropriately, add Menu Strips to handle files and whatever else you want to do, add records for several students and save them to a file.

Here are some screen shots:





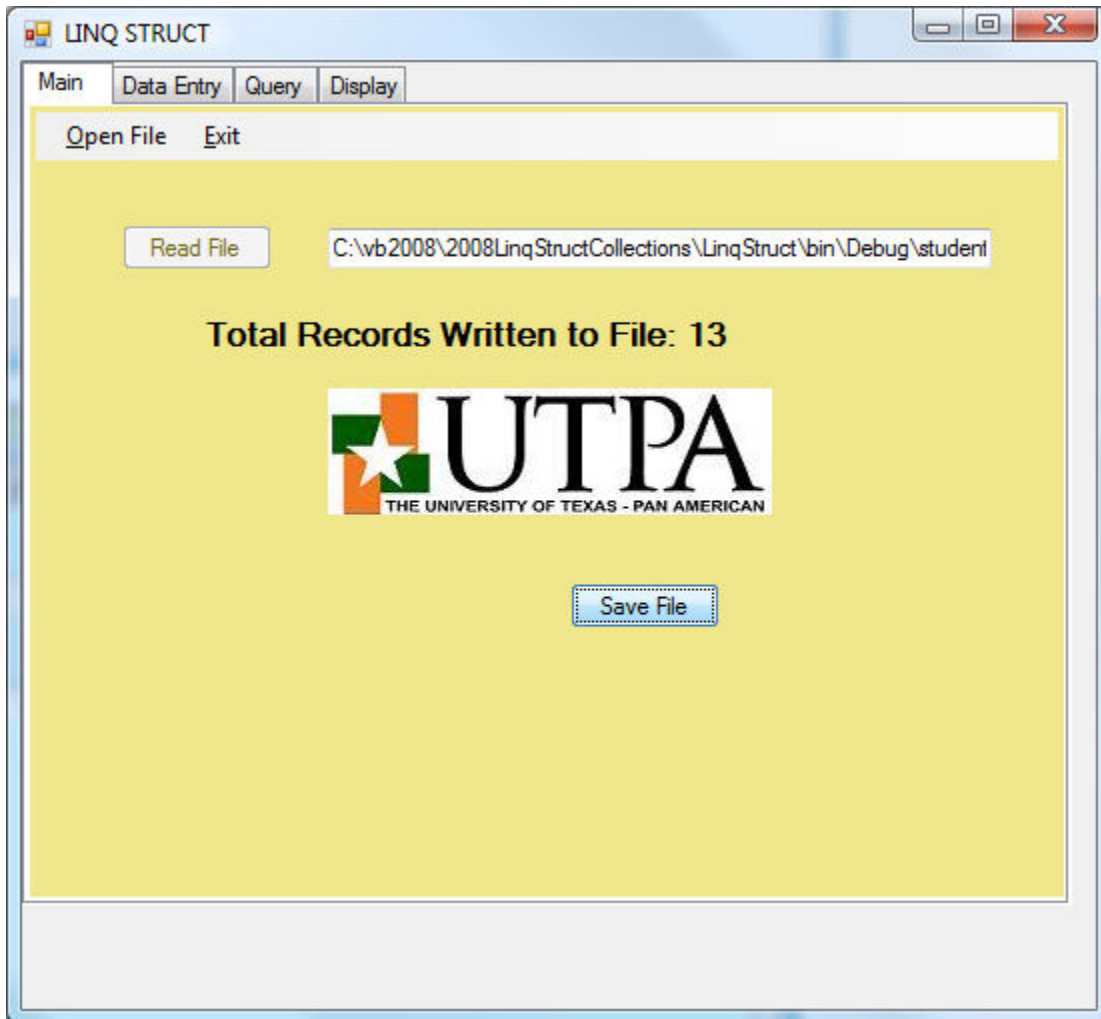
You get this screen the Open File (or Save File) Menu is clicked. Make sure this file name appears in the main form along with any messages. Add exception handling in this sub routine. Also please enable and disables buttons as necessary.



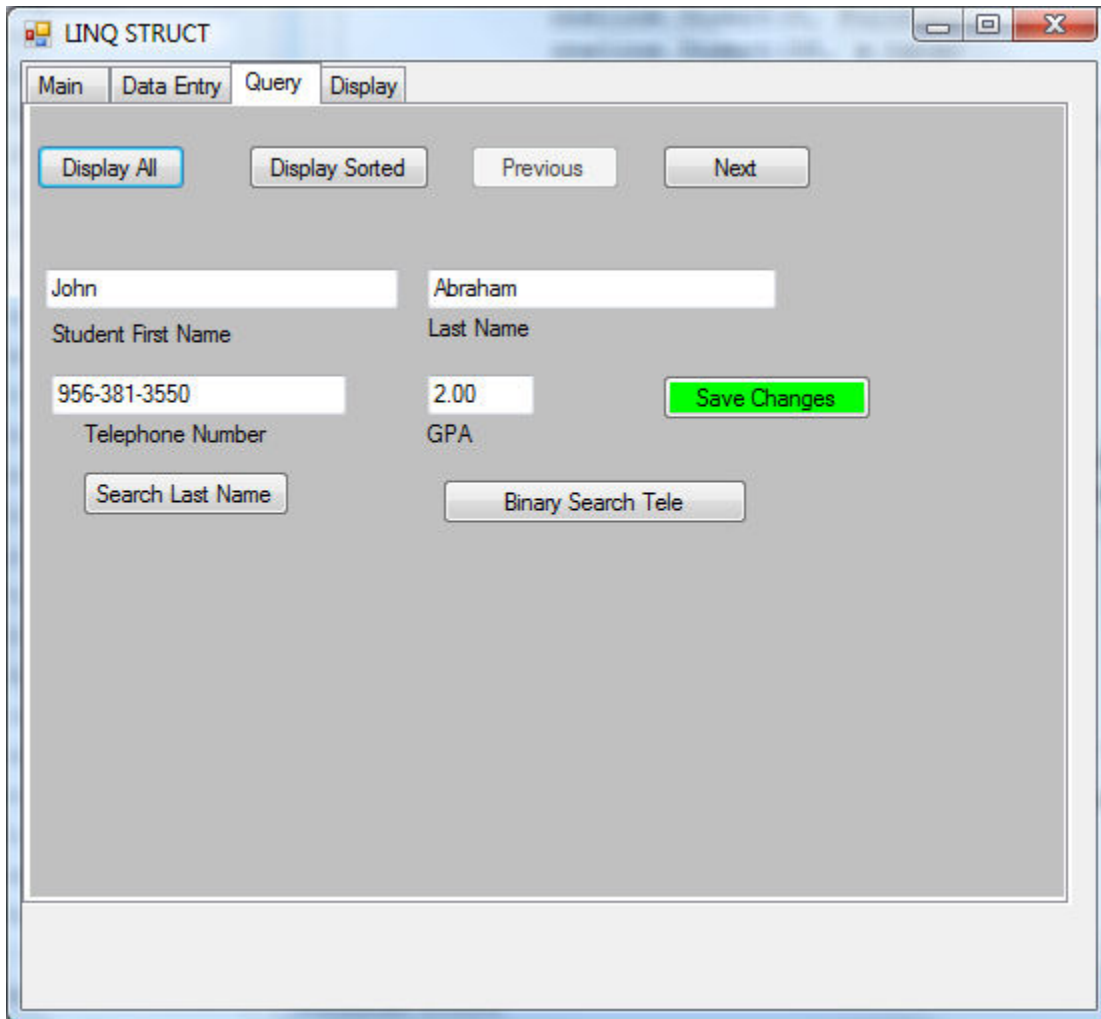
The screenshot shows a Windows application window titled "LINQ STRUCT". The window has a menu bar with four tabs: "Main", "Data Entry", "Query", and "Display". The "Data Entry" tab is currently selected. The main area of the window is light blue and contains a form with the following fields and controls:

- Student First Name:** A text box containing the value "Gamez".
- Last Name:** A text box containing the value "Ricardo".
- Telephone Number:** A text box containing the value "956-381-3578".
- GPA:** A text box containing the value "3.80".
- Number of Items in List:** A text box containing the value "13".
- Add to List:** A button located to the right of the "Number of Items in List" field.

Each record is added to an array of struct. I used a generic collection called list instead of creating my own array. The list handles automatically re-dimensioning as the list grows or shrinks.



This portion deals with the third tab, Query. When you press the “Display All” button, the following screen is displayed with the first student’s information. Please attention to the fact that the previous button is disabled and a new button “Save Changes” is visible. The later button should only be visible when changes can be made and saved. Clicking the next button should show each record sequentially. When the last record is reached the next button should be disabled and the previous button should be enabled.



To search for a last name enter the last name and press search Last Name. We use a LINQ query to find the name.

LINQ STRUCT

Main Data Entry Query Display

Display All Display Sorted Previous Next

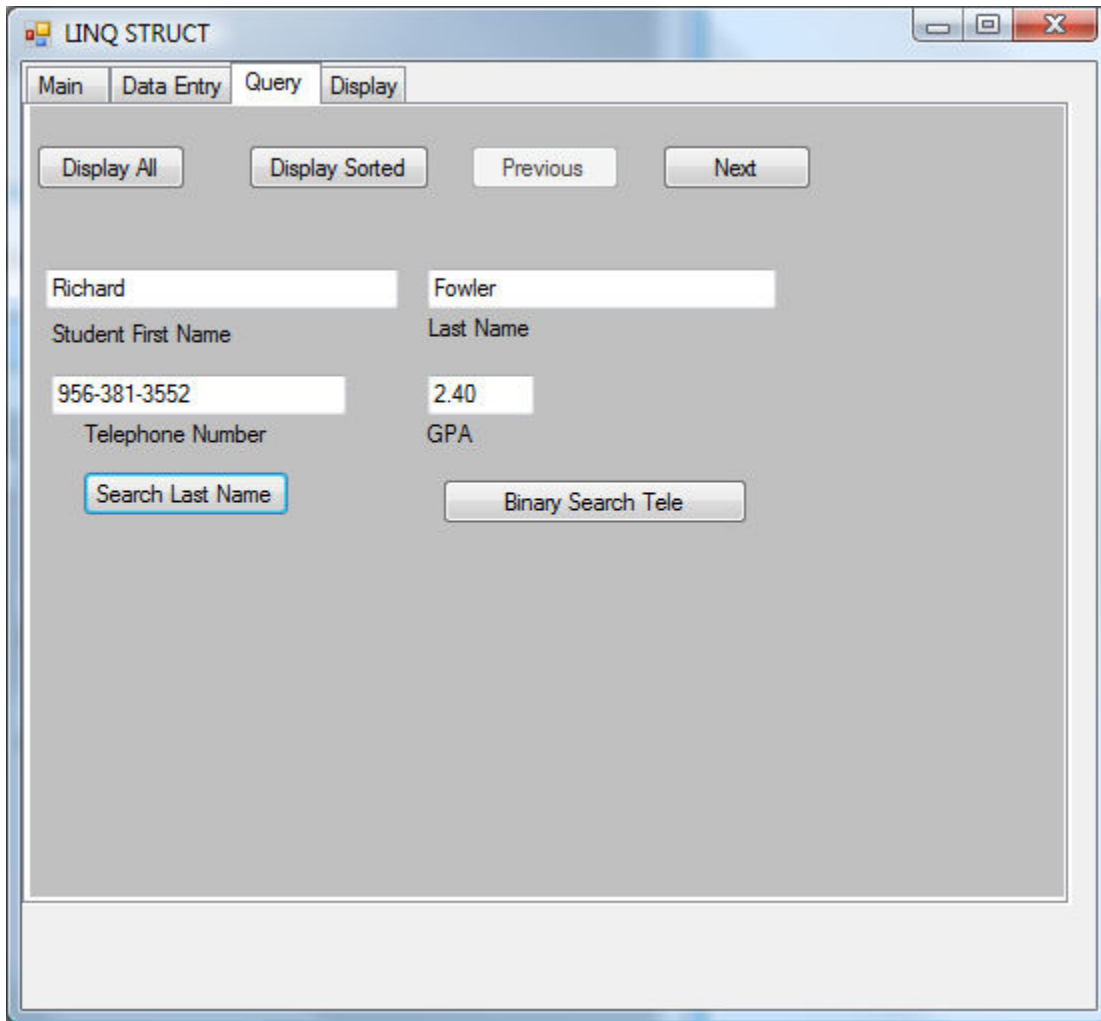
Student First Name

Last Name

Telephone Number

GPA

Search Last Name Binary Search Tele



To do the binary search, the list is first sorted on telephone, and then a binary search is done.

LINQ STRUCT

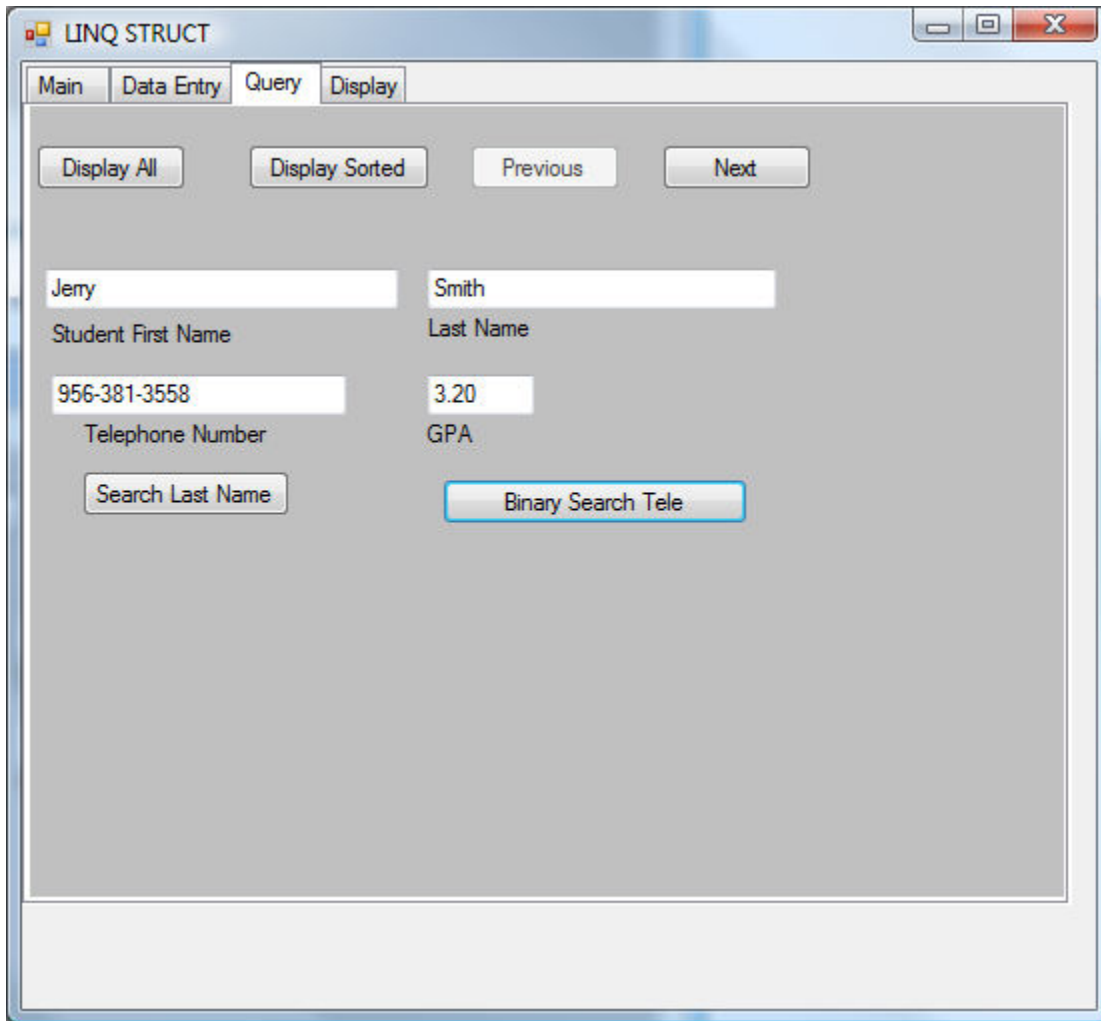
Main Data Entry Query Display

Display All Display Sorted Previous Next

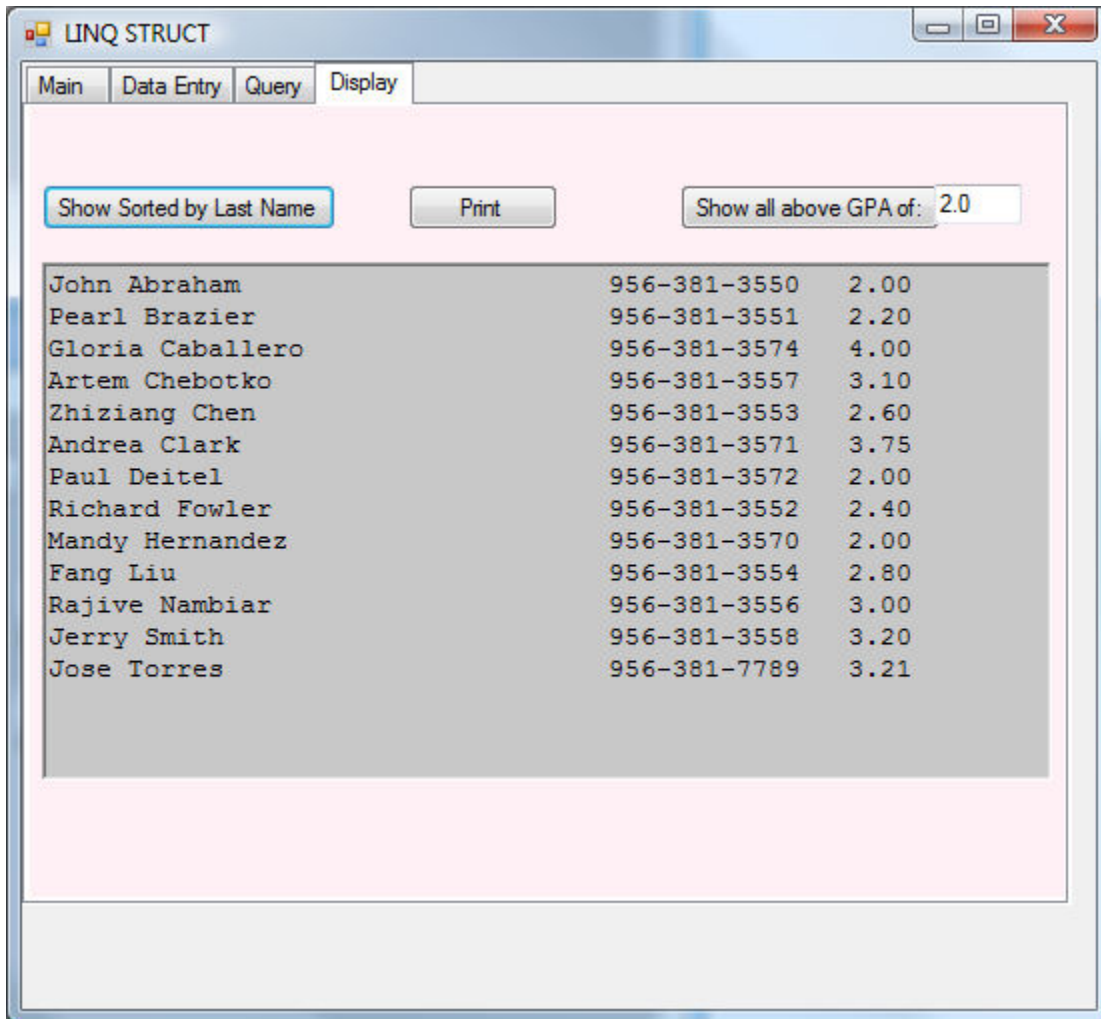
Student First Name Last Name

956-381-3558 Telephone Number GPA

Search Last Name Binary Search Tele



The last tab is to show the entire table. When “show sorted by last name” button is pressed, a sort is done based on last name and the list is displayed in tabular format using the StringBuilder class.



The last button is to show students above a certain GPA.

