CSCI 3327 Visual Basic (Fall 2011) Assignment #9

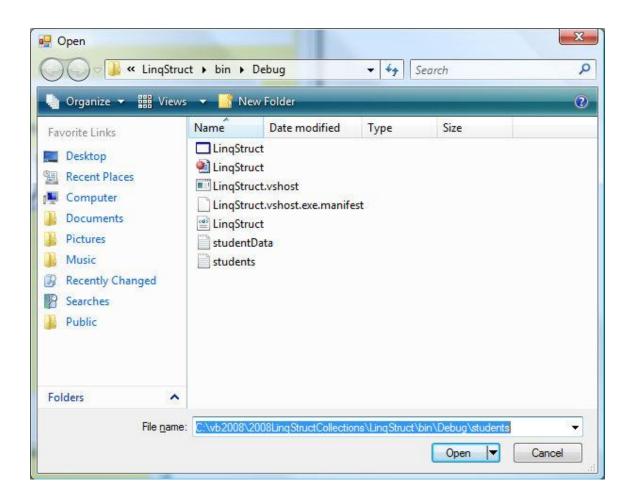
Instructor: Dr. Xiang Lian Due Date: See the course website

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.

LINQ STRUCT Main Data Entry Query Open File Exit	Display
Read File	students.txt
Press	Button to Read or Write Data File
	THE UNIVERSITY OF TEXAS - PAN AMERICAN
	Save File

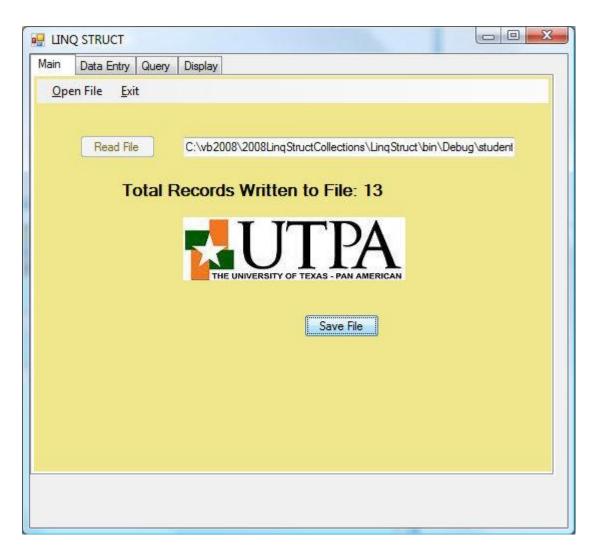


You get this screen the Open File (or Save File) Menu is clicked. Make sure this file name appears in the main form along with any messages. Add exception handling in this sub routine. Also please enable and disables buttons as necessary.



🖳 LINQ STRUCT		
Main Data Entry Query Displa	y	
Gamez	Ricardo	
Student First Name	Last Name	
956-381-3578	3.80	
Telephone Number	GPA	
13	Add to List	
Number of Items in List		

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.

💀 LINQ STRUCT	
Main Data Entry Query Display Display All Display Sorted	Previous Next
John	Abraham
Student First Name	Last Name
956-381-3550	2.00 Save Changes
Telephone Number	GPA
Search Last Name	Binary Search Tele

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
	Fowler
Student First Name	ast Name
Telephone Number 0	βPA
Search Last Name	Binary Search Tele

🖳 LINQ STRUCT		
Main Data Entry Query Display Display All Display Sorted	Previous Next	
Richard	Fowler	
Student First Name	Last Name	
956-381-3552	2.40	
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 956-381-3558 Telephone Number Search Last Name	Last Name GPA Binary Search Tele	

🖳 LINQ STRUCT	
Main Data Entry Query Display Display All Display Sorted	Previous Next
Jeny	Smith
Student First Name	Last Name
956-381-3558	3.20
Telephone Number Search Last Name	GPA 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.

how Sorted by Last Name Prir	Show all above GPA of: 2.0
ohn Abraham	956-381-3550 2.00
earl Brazier	956-381-3551 2.20
loria Caballero	956-381-3574 4.00
rtem Chebotko	956-381-3557 3.10
niziang Chen	956-381-3553 2.60
ndrea Clark	956-381-3571 3.75
aul Deitel	956-381-3572 2.00
ichard Fowler	956-381-3552 2.40
andy Hernandez	956-381-3570 2.00
ang Liu	956-381-3554 2.80
ajive Nambiar	956-381-3556 3.00
erry Smith	956-381-3558 3.20
ose Torres	956-381-7789 3.21

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

how Sorted by Last Name	Print Show a	I above GPA of: 2.0
now Solied by Last Name	I THIL SHOW &	
arl Brazier	956-381-3551	2.20
loria Caballero	956-381-3574	4.00
tem Chebotko	956-381-3557	3.10
niziang Chen	956-381-3553	2.60
ndrea Clark	956-381-3571	3.75
ichard Fowler	956-381-3552	2.40
ang Liu	956-381-3554	2.80
ajive Nambiar	956-381-3556	3.00
erry Smith	956-381-3558	3.20
ose Torres	956-381-7789	3.21

Please submit:

- 1. Program listing; and
- 2. The screen captures.
- Your program should begin with a comment section that would include the following:

PROGRAMMERS NAME:_		
STUDENT ID:		
CLASS:	ASSIGNMENT #:	
DATE DUE:	DATE TURNED IN:	

• Note: Please send the files you created to <u>Blackboard</u>.