Overview

Exercise\_17\_4 allows users to enter student data to be serialized and deserialized to and from memory.

### PROCESSING LOGIC

App Logic:

1. Open File
   1. Prompts dialog box to find Student class file to open.
   2. Enables Next Record button
   3. Serializes data from user selected file to be viewed.
2. Next Record
   1. Allows users to view data from the Opened File
   2. Pressing Next Record displays the next information in the textboxes.
   3. One there are no more records to view in the Opened File, a dialog box will inform the user.
3. New File
   1. Allows the user to view or create a new file.
4. Save As
   1. Allows the user to choose a save location to create a new Student file.
   2. Enables Enter button.
   3. Sets textboxes to not ReadOnly.
5. Enter
   1. Deserializes the data into the selected file the user created when using the Save As button.
   2. Resets textboxes.

### DATA (INPUT/OUTPUT)

Input: Student file

Output: Student file

### COMPONENTS (SOURCE CODE NAMES, CLASSES, METHODS)

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| **Exercise\_17\_4** |
| -reader: BinaryFormatter  -input: FileStream  -formatter: BinaryFormatter:  -output: FileStream  -TextBoxCount: int  -TextBoxIndices: enum |
| +ClearTextBoxes(): void  +SetTextBoxValues(string[]): void  +GetTextBoxValues(): string[]  -toolStripButton1\_Click(object, EventArgs): void  -nextButton\_Click(object, EventArgs): void  -enterButton\_Click(object, EventArgs): void  -saveButton\_Click(object, EventArgs): void  -exitButton\_Click(object, EventArgs): void  +SetTextBoxesToReadOnly(): void  +SetTextBoxesToNotReadOnly(): void  -newButton\_Click(object, EventArgs): void |

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| **StudentData** |
| +LastName: string{get;set;}  +FirstName: string{get;set;}  +ID: string{get;set;}  +StudentClass: string{get;set;}  +Grade: string{get;set;} |
| +StudentData(): constructor  +StudentData(string, string, string, string, string): constructor |

### TESTING

Scenario 1 – Deserialization Test

Steps to test:

1. Start program
2. Press Open File
3. Select “Test6” from the bin (“Test7” has Star Wars spoilers, don’t open)
4. Scroll through the Valerian actors student data
5. Exit program

Expected reaction:

To display the records

Actual result:

Expected reaction was actual result. Program works.

Scenario 2 – Serialization Test

Steps to test:

1. Start program
2. Press Save As
3. Enter student data based off the cast of Fresh Prince of Belair
4. Press enter to add student data to the file.
5. Exit program
6. Start program
7. Press Open File to pull up the just saved testing data
8. Read data
9. Exit program

Expected reaction:

To make the textboxes not ReadOnly when the Save As button is pressed and to then to Deserialize the data into a file. Then the program should serialize the data when the file is opened and display the testing data.

Actual result:

Expected reaction was actual result. Program works.

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