

## Module 7 Lab Assignment.

In this lab assignment, you will develop a simple application where the instructor can move students between section 1 and section 2. You will use **the guided source code** file prepared for this assignment. Please **DO NOT** create a new project. Instead, please download the zip file attached to the assignment in OdtuClass. This zip file contains the project with the guided source code.

## Guided Source Code

Below is a small snapshot from the source code file that you will use in this assignment. This file will already have some codes written for your convenience and it will contain detailed instructions to guide your coding. These instructions are provided as comments. Make sure you read each comment line carefully.

```
public Form1()
{
    InitializeComponent();
}

//Initialize a string array called section1_array with values Ahmet, David, Sara, Rodrigo, Fatma, Ilkem
//DELETE THIS AND WRITE YOUR CODE

//Initialize a string array called section2_array with values Onur, Nehir, "Gustavo, Ahmet", "Sara, "Fatma",
//DELETE THIS AND WRITE YOUR CODE

//Create two string List objects, named section1 and section2
//DELETE THIS AND WRITE YOUR CODE

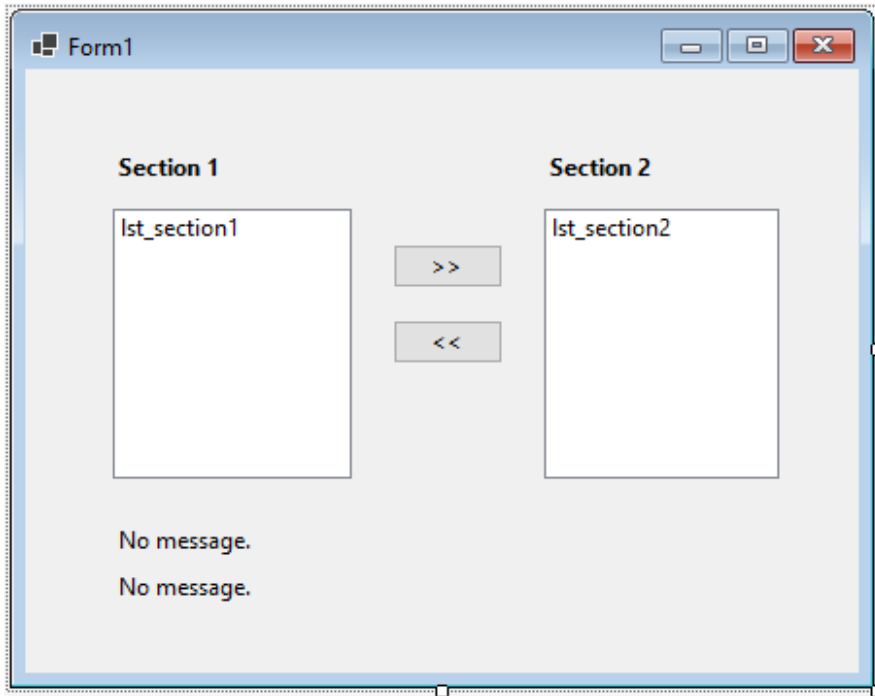
//This method copy the contents of the arrays into the list objects
private void CopyArraysToLists()
{
    //UNCOMMENT AND REVISE THE FOLLOWING CODE
    //foreach ()
    //{
    //    section1.Add();
    //}

    //foreach ()
    //{
    //    section2.Add();
    //}
}
```

The parts where you need to write code are indicated explicitly.

## The Interface

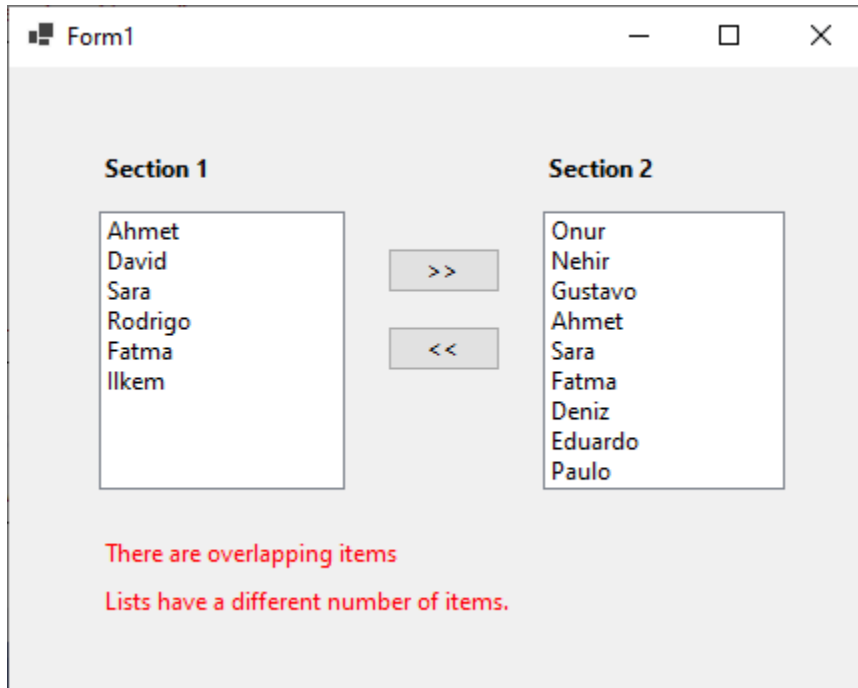
The project also has the form designed for your convenience as seen below. You should NOT change anything in the interface.



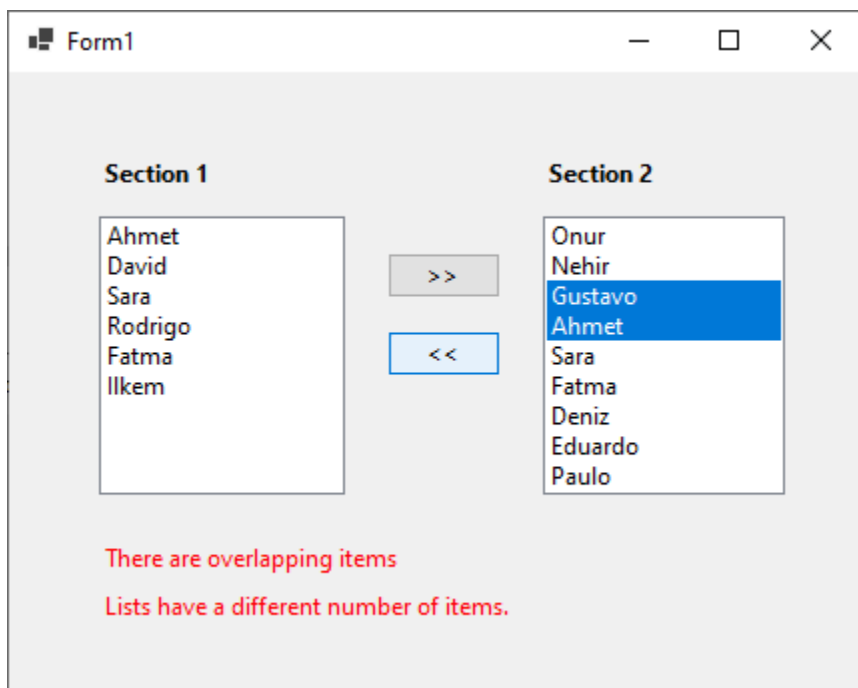
The image shows a screenshot of a Windows application window titled "Form1". The window has a standard Windows title bar with minimize, maximize, and close buttons. The main content area is light gray and contains two sections, "Section 1" and "Section 2", positioned side-by-side. Each section has a white rectangular area below its title, labeled "lst\_section1" and "lst\_section2" respectively. Between these two sections are two buttons: the top one is labeled ">>" and the bottom one is labeled "<<". Below the sections, there are two lines of text, both reading "No message.", one under each section.

## Testing your project

After writing the complete code, when you run your application first time you should get the following screen:



Next, you can choose two items from the listbox on the right-hand side as shown below.



Once you click on the << button, Gustavo moves to left while Ahmet does not since it is already in Section 1. In this case, however, Ahmet is removed from Section 2 to prevent overlapping.

The screenshot shows a Windows form titled "Form1" with two sections, "Section 1" and "Section 2". Section 1 contains a list of names: Gustavo, Ahmet, David, Sara, Rodrigo, Fatma, and Ilkem. Section 2 contains a list of names: Onur, Nehir, Sara, Fatma, Deniz, Eduardo, and Paulo. Between the sections are two buttons: ">>" and "<<". The "<<" button is highlighted with a blue border. Below the sections, there are two lines of text: "There are overlapping items" in red and "Lists contain the same number of items." in blue.

Next, you can choose Sara and Fatma from the list on the right.

The screenshot shows the same Windows form "Form1" as above. In this state, the names "Sara" and "Fatma" in the list of Section 2 are highlighted with a blue background. The "<<" button is now highlighted with a blue border. The text below the sections remains the same: "There are overlapping items" in red and "Lists contain the same number of items." in blue.

Then, you can click on << button. Since Sara and Fatma already exist in Section 1, they will be removed from Section 2 list. Since, there will be no overlapping between Section 1 and Section 2, the message on the bottom is updated accordingly. The sections still have different number of students.

Form1

**Section 1**

- Gustavo
- Ahmet
- David
- Sara
- Rodrigo
- Fatma
- Ilkem

>>

<<

**Section 2**

- Onur
- Nehir
- Deniz
- Eduardo
- Paulo

No overlapping items.

Lists have a different number of items.

Now, select Gustavo (or any other item) from the list on the left.

Form1

**Section 1**

- Gustavo
- Ahmet
- David
- Sara
- Rodrigo
- Fatma
- Ilkem

>>

<<

**Section 2**

- Onur
- Nehir
- Deniz
- Eduardo
- Paulo

No overlapping items.

Lists have a different number of items.

Once you click >> to move Gustavo to the right, it will move to Section 2 and the sections will have the equal number of students, which should be indicated in the label at the bottom of the form.

The screenshot shows a Windows application window titled "Form1". Inside the window, there are two sections, "Section 1" and "Section 2", each containing a list of student names. Section 1 lists: Ahmet, David, Sara, Rodrigo, Fatma, and Ilkem. Section 2 lists: Gustavo, Onur, Nehir, Deniz, Eduardo, and Paulo. Between the two sections are two buttons: a blue button with ">>" and a grey button with "<<". Below the sections, there are two lines of blue text: "No overlapping items." and "Lists contain the same number of items."

Section 1	Section 2
Ahmet	Gustavo
David	Onur
Sara	Nehir
Rodrigo	Deniz
Fatma	Eduardo
Ilkem	Paulo

No overlapping items.  
Lists contain the same number of items.