**CECS - 475 SoftwareDevelopement and Frameworks**

**Lab - 4 JoinQueries of Books and Authors with MVVM and WPF and LINQ**

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* Connected MainWindow With ModelViewLocator and created a text box for display and data binding to the path TextArea in MainViewModel.cs

xmlns:local="clr-namespace:BooksWPF.ViewModel"

mc:Ignorable="d"

Title="MainWindow" Height="450" Width="800"

DataContext="{Binding Source={StaticResource Locator}, Path=Main}">

<Grid>

<ScrollViewer Margin="20,20,20,20">

<TextBlock Text="{Binding TextArea, UpdateSourceTrigger=PropertyChanged}">

</TextBlock>

</ScrollViewer>

</Grid>

* Defined the Main in ViewModelLocator

public MainViewModel Main

{ get

{ return ServiceLocator.Current.GetInstance<MainViewModel>(); }

}

* Defined a String Variable and method to run Queries to store in the string variable in MainViewModel

string textArea;

public string TextArea

{

get { return textArea; }

set { textArea = value;

RaisePropertyChanged("TextArea"); }

}

public MainViewModel()

{

QueryCommandMethod();

}

* Query for part A: Get a list of all the titles and the authors who wrote them. Sort the result by title.

var AuthorAndTitlesA =

from author in db.Authors

from book in author.Titles

orderby book.Title1

select new

{

book.Title1,

author.FirstName,

author.LastName

};

* Query for part B: Get a list of all the titles and the authors who wrote them. Sort the result by title. For each title sort the authors alphabetically by last name, then first name.

var authorsAndTitlesB =

(from book in db.Titles

from author in book.Authors

orderby book.Title1, author.LastName, author.FirstName

select new

{ book.Title1,

author.FirstName,

author.LastName,

});

* Query for Part C: Get a list of all the authors grouped by title, sorted by title; for a given title sort the author names alphabetically by last name first then first name.

var titlesByAuthor =

from author in db.Titles

orderby author.Title1

select new

{ BookTitles = author.Title1 ,

AuthorNames = from book in author.Authors

orderby book.LastName, book.FirstName

select new { book.FirstName, book.LastName }

};