**Lab Assignment 4 – Sarveshwaran Sampathkumar**

**Query for Option A, B and C:**

private void button\_OptionA(object sender, EventArgs e)

{

textBoxResultText.Clear();

BooksEntities beDBContent = new BooksEntities();

//Option A - List of all the titles and the authors who wrote them. Result sorted by title.

var optionA =

from author in beDBContent.Authors

from title in author.Titles

orderby title.Title1

select new { title.Title1, author.FirstName, author.LastName };

textBoxResultText.AppendText("Titles and Authors who wrote them:");

textBoxResultText.AppendText("\n");

textBoxResultText.AppendText("\n");

foreach (var item in optionA)

textBoxResultText.AppendText(item.Title1 + " " + item.FirstName + " " + item.LastName + "\n");

}

private void button\_OptionB(object sender, EventArgs e)

{

textBoxResultText.Clear();

BooksEntities beDBContent = new BooksEntities();

//Option B - List of all the titles and the authors who wrote them. Result sorted by title.

//For each title, the authors are sorted alphabetically by last name, then first name.

var optionB =

from author in beDBContent.Authors

from title in author.Titles

orderby title.Title1, author.LastName, author.FirstName

select new { title.Title1, author.FirstName, author.LastName };

textBoxResultText.AppendText("Titles and Authors sorted by title with each title sorted by authors name:");

textBoxResultText.AppendText("\n");

textBoxResultText.AppendText("\n");

foreach (var item in optionB)

textBoxResultText.AppendText(item.Title1 + " " + item.FirstName + " " + item.LastName + "\n");

}

private void button\_OptionC(object sender, EventArgs e)

{

textBoxResultText.Clear();

BooksEntities beDBContent = new BooksEntities();

//Option C - List of all the authors grouped by title, sorted by title.

//For a given title the author names are sorted alphabetically by last name first then first name.

var optionC =

from title in beDBContent.Titles

orderby title.Title1

select new {

Name = title.Title1,

authorNames =

from author in title.Authors

orderby author.LastName, author.FirstName

select new { author.FirstName, author.LastName }

};

textBoxResultText.AppendText("Authors grouped by title, sorted by title and with each title sorted by authors name:");

textBoxResultText.AppendText("\n");

textBoxResultText.AppendText("\n");

foreach (var title in optionC)

{

textBoxResultText.AppendText(title.Name + ":\n");

foreach (var author in title.authorNames)

textBoxResultText.AppendText(author.FirstName + " " + author.LastName + "\n");

}

}