Join and Unions Lab Answers

Lab 1: Inner Join (Query Syntax)

```
songGenres = (from row in songs
              join genreRow in genres
              on row.GenreId equals genreRow.GenreId
              select new SongGenre {
                SongId = row.SongId,
                SongName = row.SongName,
                Artist = row.Artist,
                Album = row.Album,
                GenreId = row.GenreId,
                GenreName = genreRow.Genre
              }).OrderBy(row => row.GenreId).ToList();
```

Lab 1: Inner Join (Method Syntax)

```
songGenres = songs.Join(genres,
              row => row.GenreId,
              genreRow => genreRow.GenreId,
              (row, genreRow) => new SongGenre {
                SongId = row.SongId,
                SongName = row.SongName,
                Artist = row.Artist,
                Album = row.Album,
                GenreId = row.GenreId,
                GenreName = genreRow.Genre
              }).OrderBy(row => row.GenreId).ToList();
```

Lab 2: One to Many (Query Syntax)

```
genreSongs = (from row in genres
              orderby row.GenreId
              join songRow in songs
              on row.GenreId equals songRow.GenreId
              into songsByGenre
              select new GenreSongs {
                GenreId = row.GenreId,
                GenreName = row.Genre,
                Songs = songsByGenre.OrderBy(song =>
                          song.SongName).ToList()
              }).ToList();
```

Lab 2: One to Many (Method Syntax)

```
genreSongs = genres
   .OrderBy(row => row.GenreId)
   .GroupJoin(songs,
              row => row.GenreId,
              songRow => songRow.GenreId,
              (row, songsByGenre) => new GenreSongs {
                GenreId = row.GenreId,
                GenreName = row.Genre,
                Songs = songsByGenre.OrderBy(song =>
                          song.SongName).ToList()
   }).ToList();
```

Lab 3: Union using Comparer (Query Syntax)

```
songs = (from row in songs1
         select row)
        .Union(songs2, sc)
        .OrderBy(row => row.SongName).ToList();
```

Lab 3: Union using Comparer (Method Syntax)

```
songs = songs1
        .Union(songs2, sc)
        .OrderBy(row => row.SongName).ToList();
```

Lab 4: UnionBy() Method Query Syntax)

```
songs = (from row in songs1
         select row)
        .UnionBy(songs2, row => row.SongId)
        .OrderBy(row => row.SongName).ToList();
```

Lab 4: UnionBy() Method (Method Syntax)

```
songs = songs1.UnionBy(songs2, row => row.SongId)
        .OrderBy(row => row.SongName).ToList();
```