# Overview

In **Project 1**, you created an **MP3** class that will eventually become part of a customized **MP3 Tracker** application. An object of the **MP3** class represented all information we needed about one individual music file. The intent of this project is to expand the first project to maintain and manage a collection of **MP3** objects. You will create a new class named **Playlist** that maintains an **internal List <MP3>** and provides methods that manage the collection to provide the capabilities required by the **specifications** that follow. In addition, you will replace the **Driver** class from **Project 1** with a new **Driver** with expanded capabilities as described below. You will continue to use **Genre** and **MP3** that you developed for **Project 1**.

Be sure to test the new program thoroughly and verify that it does everything required correctly.

# Specifications

The **driver class** should have a **main menu** that includes at least the following choices.

1. **Create** a new **Playlist** for the **MP3 Tracker**
2. **Create** a new **MP3** object and add it to the **playlist**
3. **Edit** an existing **MP3** from the **playlist**
4. **Drop** an **MP3** from the **playlist**
5. **Display** all **MP3s** in the **playlist**
6. Find and display an **MP3** by **song title**
7. **Display** all **MP3s** on the **tracker** of a given **genre**
8. **Display** all **MP3s** on the **tracker** with a given **artist**
9. **Sort** the **MP3s** by **song title**
10. **Sort** the **MP3s** by **song release date**
11. Exit

In order for choice number 10 in the menu above to be effective, the driver must validate the components of the date (month number between 1 and 12, year before or during the current year, etc.)

The **Playlist** class should have at least the following **attributes**, but you may add others as needed.

* **Private List<MP3>** containing all the **MP3s** in the **Playlist**
* **String** containing the name of the **Playlist**
* **String** containing the name of the creator of the **Playlist**
* **Creation date** of the playlist

In addition to the usual **constructors** and **ToString** method, the **Playlist** class must have all of the methods required to support the functionality needed in the driver class (**searching**, **sorting**, **retrieving**, **adding**, **dropping**, **editing**, etc.)

Since the **song list** is a **private** **List** inside **Playlist** class, it can only be accessed by that class. The **driver** class **cannot** directly access any **MP3** on the **Playlist’s song list**. Thus, the **Playlist** class will have to provide methods such as **Get**, **Set**, **Size**, and **Remove** so that the **driver** can work with individual **MP3s** from **Playlist’s song list**.

# Testing the Code

Your **test suite** in your **design document** should contain at least **7** **MP3s** – one for each **Genre** and one other that has an invalid **Genre**. It may contain more than 7 **MP3s**. You should test your program with all the inputs in your design document.

# Other Requirements

Use good object-oriented principles and style.

* Create properties instead of setters and getters where possible.
* Use standard **C#** naming conventions for **classes**, **attributes**, **local** **variables**, **constants**, and **methods**.

# Project Documentation (via Comments)

**Project documentation is NOT optional in this course.** It is absolutely required in **every** programming assignment. See the **Documentation Standards** on D2L for details and for examples of proper documentation.

An otherwise perfect project may still receive a **failing grade** if the required documentation is missing, incomplete, or poorly done. Examples of proper documentation appear in the course **Documentation** **Standards** document

# Submission

Update your **design document** from **Project 1** and include it in your submission.

Submit a single **zipped** file with a name in the format of ***1260-LastFirst-Project3*** containing your **updated design document** and the **project code** to your instructor via the D2L dropbox.