18.01 Assignment Instructions

Instructions: For this assignment, you will create several sequential search methods and perform the searches using a collection of music.

1. Create a new project called **18.01 Assignment** in your Module 18 assignment folder.
2. Download the **`Music.java`** file to the newly-created folder.
    a. Observe the instance variables `year`, `title`, and `artist`.
    b. A constructor is provided.
    c. Getter and setter methods provided, as well as a `toString` method.
3. For this project, you will create a tester class that declares an array of `Music` objects to use with the search methods. Decide on a class name and then append V1 to the end to help organize your classes.
4. Declare an array of at least 10 `Music` objects. For each, you will need a song title, year, and artist name. At least one year needs to have multiple entries in the array. Same with one of the artists. Of course, be sure to use school-appropriate songs.
   For example: Livin' on a Prayer, 1986, Bon Jovi
5. Design a static method that traverses through the array and prints each element.
6. Create the following static methods in the tester class. Utilize the sequential search algorithm. Each method will take two arguments, the array and the value to find.
    a. a method that searches the array for a particular song `title`
    b. a method that searches the array for `year` released (the output should list all songs found from that year)
    c. a method that searches the array for the name of the `artist` (the output should list all songs performed by that artist)
7. Test your search methods by calling each and displaying the results. Start by showing the original array. Then demonstrate searching for a title, showing results when a title is found and when not found. Do the same for year and artist. Include searches that should find more than one match. Be sure to clearly label your output so someone looking at it knows which search criterion was applied each time.

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