

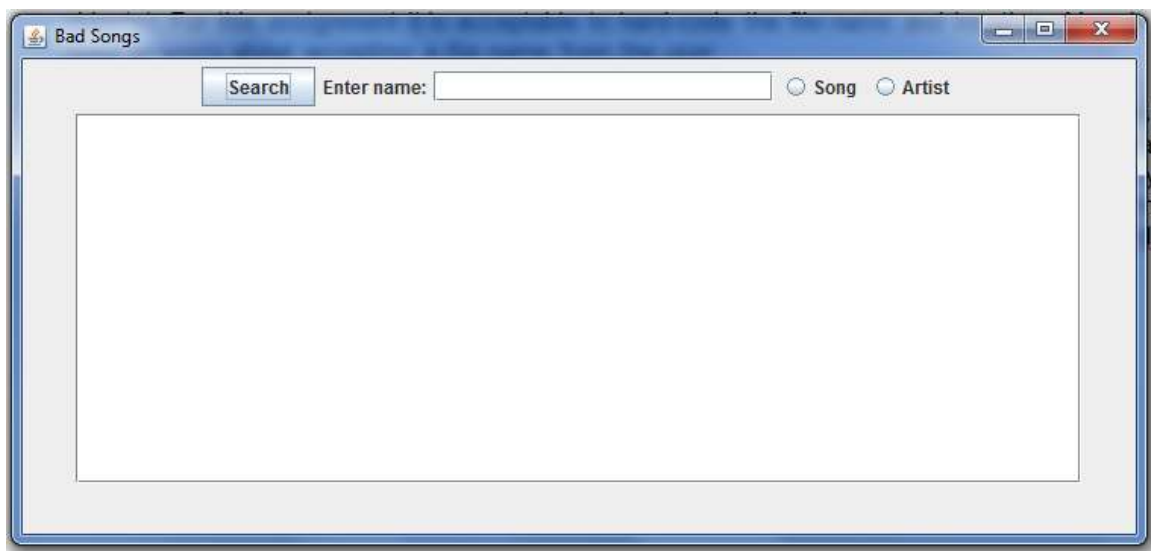
# The Worst Songs Swing Application

50 points

This assignment combines concepts from the entire semester, such as exceptions, reading files, looping, conditions, and collections, into a Swing application.

The New York Daily News once published a list of the Worst 100 Singles of the Last 25 Years by Davids Browne & Hinckley. For this assignment you will create a Swing application which reads these songs on the list from a text file. The application will allow a user to search on a complete or partial song title or artist. The ranking, song title, artist and year that the song was released will be displayed for all of the songs matching the search criteria.

Below is an example user interface. Your program does not have to look exactly like the example, but it must provide a way for the user to enter a text string and select whether to search within the song title or artist and have an area to display the search results.



The text file `hundred-worst.txt` is provided for you to use with your program. The song listing is formatted as a tab delimited text file. A tab character separates each data element. The four data elements, in order, are Ranking, Song Title, Artist, and Year Released. The file format is as follows:

```
1      (You're) Having My Baby Paul Anka/Odia Coates    1974
```

In the above example, Ranking = 1, Song Title = (You're) Having My Baby, Artist = Paul Anka/Odia Coates, and Year Released = 1974.

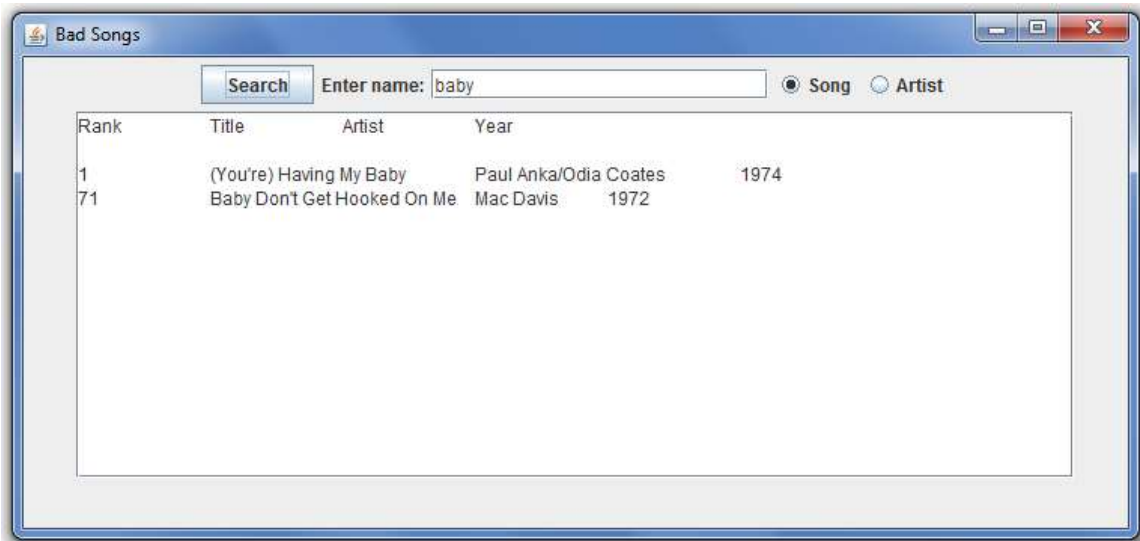
At a minimum, your program should have two classes.

1. `WorstEverFrame.java` – this is the main class which will contain the main method and present the GUI user interface.
2. `SongRecord.java` – this is the data model class. It will store the ranking, song title, artist and year released. The class should include the following methods:
  - a. The constructor should take a String parameter. You will pass each line of the text file to the constructor which will setup the data in the `SongRecord` object.
  - b. Getter methods for the class members.

Your program will read the supplied data file and initialize the program data (SongRecord objects). For this assignment it is acceptable to hard-code the file name and location. You do not need to worry about accepting a file name from the user.

WorstEverFrame.java will provide a method to search for a substring entered by the user within either the song title or artist field, as selected by the user. Using the string supplied by the user, search through all of the SongRecords for any that contain the substring (not case-sensitive) in the user selected field (title or artist.) For this assignment, don't worry about the efficiency of the search you implement. Just use the simplest way, loop through the collection of SongRecord objects and check if the selected data field contains the substring. The ranking, song title, artist and year that the song was released will be displayed for all of the songs matching the search criteria. If no records were found, display the message "No songs found"

An example execution of the program with matching records:



An example execution of the program with no matching records:



## What to Submit

Submit a zip file containing all of the source files and directories if necessary. Your application must compile and run when unzipped.