Project 1

**Milestones**

1. Use program arguments to specify a file name

* I did this by setting arg[0] to the variable name filename

1. Use simple File I/O to read a file

* I did this by initiating a FileReader, then passing that to a BufferedReader in order to read fileName

1. Create an abstract data type (ADT) to store information on a single movie

* I created a Movie class to hold Movie objects that are received through the BufferedReader

1. Create an ADT that *abstracts* the use of an array (or list) of movies

* I created a Database class that holds an ArrayList of Movies

1. Implement a program that allows the user to search the list of movies as described below (JOptionPane)

* I achieved this milestone by allowing the user to input a String parameter that would then be passed to the Database object holding all of the movies, and search that ArrayList and matching the parameter with movies that contained it. I then returned that information to the user by printing it out on a JOptionPane.

1. Develop and use a proper design: Complete
2. Use proper documentation and formatting: Complete

**Extra Credit Features**

In order to allow the user to search by different parameters other than title, I created an int variable that I assigned varying “parameters” to depending on its value (i.e. if variable = 1, search by title, if variable = 2, search by year, etc.). This was implemented as a question asked using JOptionPane.showInputDialog asking for the search parameter type. After this, another JOptionPane.showInputDialog prompts the user to input the actual search parameter to look for in the Database containing the list of movies. Once all of this information is acquired, it is sent to the printInfo method in the Database class along with an ArrayList<Movie> object. Then depending on the parameter search type, goes through the database and matches the parameter to the specified title, year, or format, and then inserts those movies into the passed in ArrayList. Once all of this is done, the ArrayList is sent to a JOptionPane.showMessageDialog and shows the user the matched movies, and asking if they wish to continue searching.

It is novel in that it reuses the ArrayList variable, and in that it determines search parameter type by reusing an int variable to determine the type, thus saving memory space.