CMP-4008Y Assignment 1 - Offline Movie Database (OMDB)

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Contents

Movie.java

```java
package omdb;

public class Movie
{
    //creates all the variables about the movie
    private final String title;
    private final String certificate;
    private final int year;
    private final int runtime;
    private final int rating;
    private final String[] genre;
    //constructor
    public Movie(String title,int year,String certificate,String[] genre,int
        runtime,int rating)
    {
        //sets all the peices of information to the information specified
        this.title = title;
        this.year = year;
        this.certificate = certificate;
        this.genre = genre;
        this.runtime = runtime;
        this.rating = rating;
    }
    //accessors
    public String getTitle()
    {
        return title;
    }
    public int getYear()
    {
        return year;
    }
    public String getCertificate()
    {
        return certificate;
    }
     public String[] getGenre()
    {
        return genre;
    }
     public int getRuntime()
    {
        return runtime;
    }
      public int getRating()
    {
        return rating;
    }
    //toString
    @Override
    public String toString()
    {
        String subGenre = genre[0];//adds all the genres into a string
        if (genre.length > 0);//if there is more than 1 genre
        {
            //goes through all the genres
            for (int i = 1; i < genre.length; ++i)
            {
                subGenre += "/" + genre[i];//adds the genres together
            }
        }
```

```java
61          String str = "Title: " + title + "\nYear of release: " + Integer.toString
               (year) + "\nCertifiicate: " + certificate + "\nGenres: " + subGenre +
                "\nRuntime: " + Integer.toString(runtime) + "\nRating " + Integer.
               toString(rating)+"\n";//all information about a movie displayed
               together
           return str;
63      }
       public String toLine()
65      {
           String subGenre = genre[0];
67          if (genre.length > 0);
           {
69              for (int i = 1; i < genre.length; ++i)
               {
71                  subGenre += "/" + genre[i];
               }
73          }
           String str = '"' + title + "\"," + Integer.toString(year) + ",\"" +
               certificate + "\",\"" + subGenre + "\"," + Integer.toString(runtime)
               + "," + Integer.toString(rating);
75          return str;
       }
77      //comparable
       public int compareTo(final Movie other,String entity)
79      {
           switch (entity) {
               case "year":
81                  return Integer.compare(this.year, other.year);
               case "runtime":
83                  return Integer.compare(this.runtime, other.runtime);
               case "titlelength":
85                  if (this.title.length() < other.title.length())
                   {
87                      return 1;
                   }
89                  else if (this.title.length() > other.title.length())
                   {
91                      return -1;
                   }
93                  else
                   {
95                      return 0;
                   }
97              default:
                   return Integer.compare(this.rating, other.rating);
99          }
       }
101     }
   }
```

MovieDatabase.java

```java
package omdb;
import java.util.*;
import java.nio.charset.StandardCharsets;
import java.nio.file.*;
import java.io.*;
public class MovieDatabase
{
    public ArrayList<Movie> movieArr;//creates the arraylist that stores all the
        movie objects in
    //constructors
    public MovieDatabase()
    {
        String[] movies = readIn("films.txt");//reads in the film.txt and then
            puts all the lines into an array

        movieArr = createObj(movies);//creates all the objects from the array from
            the file
    }
    //secondary constructor
    public MovieDatabase(ArrayList<Movie> array)
    {
        //creates a new class from a ArrayList<Movie>
        movieArr = array;
    }
    //reads in all the lines from a file into a string[]
    private String[] readIn(String fileName)
    {
        List<String> lines = Collections.emptyList();//creates an empty ArrayList
        try
        {
          lines = Files.readAllLines(Paths.get(fileName), StandardCharsets.UTF_8)
              ;//reads in all the lines from the file into an arraylist
        }
        catch (IOException e)
        {
            System.out.println(e);
        }
        //converts an arraylist to an array
        String[] linesArr = new String[lines.size()];
        linesArr = lines.toArray(linesArr);
        return linesArr;
    }
    //creates objects from the array of lines
    public static ArrayList<Movie> createObj(String[] lines)
    {
        ArrayList<Movie> movieArr;//creates arraylist of movie objects
        movieArr = new ArrayList<>();
        //loops through every element in the array
        for (int i = 0; i < lines.length; ++i)
        {
            String[] linesone = lines[i].split("\"");//splits on "
            String linetwo = "";
            //creates new string that will be the rest of the line other than
                title
            for (int o = 2; o < linesone.length; ++o)
            {
                linetwo += linesone[o];
            }
            String[] linethree = linetwo.split(",");//splits line other than
                title by ,
            movieArr.add(new Movie(linesone[1], Integer.parseInt(linethree[1]),
```

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```java
                        linethree[2], linethree[3].split("/"),Integer.parseInt(linethree
                        [4]),Integer.parseInt(linethree[5])));//creates new movie object
                        and adds it to the arraylist
56          }
            return movieArr;//returns the arraylist populated with movie objects
58      }
        //returns a array of indexs in movieArr of all the movies with the required
            genre
60      public int[] genreQuery(String requiredGenre)
        {
62          ArrayList<Integer> list=new ArrayList<>();//creates an arraylist for all
                the indexs
            //for each object in movieArr
64          for (int i = 0; i < movieArr.size(); ++i)
            {
66              String Genre[] = movieArr.get(i).getGenre();//gets an array full of
                    all the genres
                //goes through the array full of genres
68              for (int o = 0; o < Genre.length; ++o)
                {
70                  if (requiredGenre.equals(Genre[o]))//if the movie has that genre
                    {
72                      list.add(i);//add the index to the list
                        break;//exits for loop as it has been found
74                  }
                }
76          }
            return convertAl2A(list);//returns array of the indexs of all movies with
                the specified genre
78      }
        //returns a array of indexs in movieArr of all the movies with the required
            certificate
80      public int[] certificateQuery(String requiredCertificate)
        {
82          ArrayList<Integer> list = new ArrayList<>();//creates a new arraylist
            //for each object in movieArr
84          for (int i = 0; i < movieArr.size(); ++i)
            {
86              if (requiredCertificate.equals(movieArr.get(i).getCertificate()))//if
                    the certificate is the required certificate
                {
88                  list.add(i);//add the index to the list
                }
90          }
        return convertAl2A(list); //returns array of the indexs of all movies with
            the specified certificate
92      }
        //converts an integer ArrayList to an integer array
94      private int[] convertAl2A(ArrayList<Integer> list)
        {
96          int[] arr = new int[list.size()];//creates the array
            //loops through the arraylist
98          for (int i = 0; i < list.size(); i++)
            {
100             arr[i] = list.get(i);//sets the array[i] to the arraylist[i]
            }
102         return arr;//returns the array
        }
104 }
```

OMDB.java

```java
package omdb;

import java.util.ArrayList;

public class OMDB
{
    public static void main(String[] args)
    {
        MovieDatabase wholeMovieDatabase = new MovieDatabase();//creates new
            movie database class
        System.out.println("All in chronological order: \n");
        bubbleSort("year",wholeMovieDatabase);//sorts the movie array into order
            by year
        printall(wholeMovieDatabase);//prints all

        System.out.println("Third longest Noir film: \n");
        bubbleSort("runtime",wholeMovieDatabase);//sorts the movie array into
            order by runtime
        int returnedNoirQuery[] = wholeMovieDatabase.genreQuery("Film-Noir");//
            gets the index of each element that has a film noir genre
        System.out.println(wholeMovieDatabase.movieArr.get(returnedNoirQuery[
            returnedNoirQuery.length - 3]).toString());//prints the third element
             out of the indexs in the array

        System.out.println("Eighth most recent unrated films: \n");
        bubbleSort("year",wholeMovieDatabase);//sorts the whole array by year
        int returnedUnratedQuery[] = wholeMovieDatabase.certificateQuery("UNRATED
            ");//gets the indexs of all the elements that are "unrated"
        System.out.println(wholeMovieDatabase.movieArr.get(returnedUnratedQuery[
            returnedUnratedQuery.length - 8]).toString());//prints the eigth
            element out of the indexs in the array

        System.out.println("Longest title: \n");
        bubbleSort("titlelength", wholeMovieDatabase);//sorts by title length
        System.out.println(wholeMovieDatabase.movieArr.get(0).toString());//
            prints the first element

    }
    //sorts the movie arraylist via bubble sort
    private static void bubbleSort(String entity, MovieDatabase c)
    {
        for(int i=0; i < c.movieArr.size(); i++)
        {
            for(int j=1; j < (c.movieArr.size()-i); j++)
            {
                if(c.movieArr.get(j-1).compareTo(c.movieArr.get(j),entity)==1)
                {
                    //swap elements
                    String[] templine = {c.movieArr.get(j-1).toLine()};
                    ArrayList<Movie> temp;
                    temp = (MovieDatabase.createObj(templine));
                    c.movieArr.set(j-1,c.movieArr.get(j));
                    c.movieArr.set(j,temp.get(0));
                }
            }
        }
    }
    //prints all the elements in the movie arraylist
    private static void printall(MovieDatabase c)
    {
        for(int i=0; i < c.movieArr.size(); i++)
```

```
52          {
                System.out.println(c.movieArr.get(i).toString());
54          }
        }
56  }
```

Application

Compiler Invocation

```
javac.exe -Xlint:unchecked -Xlint:deprecation -d classes Movie.java MovieDatabase
    .java OMDB.java
```

Compiler Messages

None.

Application Invocation

```
javaw.exe omdb.OMDB
```

Messages to STDOUT

```
All in chronological order:

Title: The Kid
Year of release: 1921
Certifiicate: NOT RATED
Genres: Comedy/Drama/Family
Runtime: 68
Rating 0

Title: The Gold Rush
Year of release: 1925
Certifiicate: NOT RATED
Genres: Adventure/Comedy/Drama
Runtime: 95
Rating 0

Title: The General
Year of release: 1926
Certifiicate: UNRATED
Genres: Action/Adventure/Comedy
Runtime: 67
Rating 0

Title: Metropolis
Year of release: 1927
Certifiicate: NOT RATED
Genres: Drama/Sci-Fi
Runtime: 153
Rating 0

Title: Sunrise
Year of release: 1927
Certifiicate: NOT RATED
Genres: Drama/Romance
Runtime: 94
Rating 0

Title: The Passion of Joan of Arc
Year of release: 1928
Certifiicate: NOT RATED
Genres: Biography/Drama/History
Runtime: 114
Rating 0

Title: City Lights
Year of release: 1931
Certifiicate: PASSED
```

Genres: Comedy/Drama/Romance
Runtime: 87
Rating 0

Title: M
Year of release: 1931
Certifiicate: NOT RATED
Genres: Crime/Drama/Mystery
Runtime: 99
Rating 0

Title: It Happened One Night
Year of release: 1934
Certifiicate: UNRATED
Genres: Comedy/Romance
Runtime: 105
Rating 0

Title: Modern Times
Year of release: 1936
Certifiicate: G
Genres: Comedy/Drama/Family
Runtime: 87
Rating 0

Title: Mr. Smith Goes to Washington
Year of release: 1939
Certifiicate: NOT RATED
Genres: Comedy/Drama
Runtime: 129
Rating 0

Title: Gone with the Wind
Year of release: 1939
Certifiicate: G
Genres: Drama/History/Romance
Runtime: 238
Rating 0

Title: The Great Dictator
Year of release: 1940
Certifiicate: APPROVED
Genres: Comedy/Drama/War
Runtime: 125
Rating 0

Title: Rebecca
Year of release: 1940
Certifiicate: NOT RATED
Genres: Drama/Film-Noir/Mystery
Runtime: 130
Rating 0

Title: The Grapes of Wrath
Year of release: 1940
Certifiicate: NOT RATED
Genres: Drama/History
Runtime: 129
Rating 0

Title: Citizen Kane
Year of release: 1941
Certifiicate: APPROVED

Genres: Drama/Mystery
Runtime: 119
Rating 0

Title: The Maltese Falcon
Year of release: 1941
Certifiicate: NOT RATED
Genres: Film-Noir/Mystery
Runtime: 100
Rating 0

Title: Casablanca
Year of release: 1942
Certifiicate: PG
Genres: Drama/Romance/War
Runtime: 102
Rating 0

Title: Double Indemnity
Year of release: 1944
Certifiicate: PASSED
Genres: Crime/Drama/Film-Noir
Runtime: 107
Rating 0

Title: The Best Years of Our Lives
Year of release: 1946
Certifiicate: NOT RATED
Genres: Drama/Romance/War
Runtime: 172
Rating 0

Title: It's a Wonderful Life
Year of release: 1946
Certifiicate: PG
Genres: Drama/Family/Fantasy
Runtime: 130
Rating 0

Title: The Treasure of the Sierra Madre
Year of release: 1948
Certifiicate: NOT RATED
Genres: Adventure/Drama/Western
Runtime: 126
Rating 0

Title: Bicycle Thieves
Year of release: 1948
Certifiicate: NOT RATED
Genres: Drama
Runtime: 89
Rating 0

Title: Kind Hearts and Coronets
Year of release: 1949
Certifiicate: NOT RATED
Genres: Comedy/Crime
Runtime: 106
Rating 0

Title: The Third Man
Year of release: 1949
Certifiicate: NOT RATED

Genres: Film-Noir/Mystery/Thriller
Runtime: 93
Rating 0

Title: All About Eve
Year of release: 1950
Certifiicate: APPROVED
Genres: Drama
Runtime: 138
Rating 0

Title: Rashomon
Year of release: 1950
Certifiicate: UNRATED
Genres: Crime/Drama/Mystery
Runtime: 88
Rating 0

Title: Sunset Boulevard
Year of release: 1950
Certifiicate: NOT RATED
Genres: Drama/Film-Noir/Romance
Runtime: 110
Rating 0

Title: Strangers on a Train
Year of release: 1951
Certifiicate: PG
Genres: Crime/Film-Noir/Romance
Runtime: 101
Rating 0

Title: Ikiru
Year of release: 1952
Certifiicate: NOT RATED
Genres: Drama
Runtime: 143
Rating 0

Title: Singin' in the Rain
Year of release: 1952
Certifiicate: APPROVED
Genres: Comedy/Musical/Romance
Runtime: 103
Rating 0

Title: Roman Holiday
Year of release: 1953
Certifiicate: NOT RATED
Genres: Comedy/Romance
Runtime: 118
Rating 0

Title: The Wages of Fear
Year of release: 1953
Certifiicate: NOT RATED
Genres: Adventure/Drama/Thriller
Runtime: 131
Rating 0

Title: Tokyo Story
Year of release: 1953
Certifiicate: NOT RATED

```
Genres: Drama
Runtime: 136
Rating 0

Title: Seven Samurai
Year of release: 1954
Certifiicate: UNRATED
Genres: Action/Adventure/Drama
Runtime: 207
Rating 0

Title: Rear Window
Year of release: 1954
Certifiicate: APPROVED
Genres: Mystery/Thriller
Runtime: 112
Rating 0

Title: On the Waterfront
Year of release: 1954
Certifiicate: NOT RATED
Genres: Crime/Drama/Romance
Runtime: 108
Rating 0

Title: Dial M for Murder
Year of release: 1954
Certifiicate: PG
Genres: Crime/Film-Noir/Romance
Runtime: 105
Rating 0

Title: Diabolique
Year of release: 1955
Certifiicate: UNRATED
Genres: Drama/Horror/Mystery
Runtime: 116
Rating 0

Title: Nights of Cabiria
Year of release: 1957
Certifiicate: NOT RATED
Genres: Drama
Runtime: 110
Rating 0

Title: The Bridge on the River Kwai
Year of release: 1957
Certifiicate: PG
Genres: Adventure/Drama/War
Runtime: 161
Rating 0

Title: Wild Strawberries
Year of release: 1957
Certifiicate: UNRATED
Genres: Drama/Romance
Runtime: 91
Rating 0

Title: The Seventh Seal
Year of release: 1957
Certifiicate: NOT RATED
```

Genres: Drama/Fantasy
Runtime: 96
Rating 0

Title: Paths of Glory
Year of release: 1957
Certifiicate: APPROVED
Genres: Drama/War
Runtime: 88
Rating 0

Title: 12 Angry Men
Year of release: 1957
Certifiicate: APPROVED
Genres: Crime/Drama
Runtime: 96
Rating 0

Title: Throne of Blood
Year of release: 1957
Certifiicate: UNRATED
Genres: Drama
Runtime: 110
Rating 0

Title: Witness for the Prosecution
Year of release: 1957
Certifiicate: APPROVED
Genres: Crime/Drama/Mystery
Runtime: 116
Rating 0

Title: Vertigo
Year of release: 1958
Certifiicate: PG
Genres: Mystery/Romance/Thriller
Runtime: 128
Rating 0

Title: Touch of Evil
Year of release: 1958
Certifiicate: PG-13
Genres: Crime/Drama/Film-Noir
Runtime: 95
Rating 0

Title: Some Like It Hot
Year of release: 1959
Certifiicate: NOT RATED
Genres: Comedy/Romance
Runtime: 120
Rating 0

Title: Ben-Hur
Year of release: 1959
Certifiicate: G
Genres: Adventure/Drama/History
Runtime: 212
Rating 0

Title: The 400 Blows
Year of release: 1959
Certifiicate: NOT RATED

Genres: Crime/Drama
Runtime: 99
Rating 0

Title: North by Northwest
Year of release: 1959
Certifiicate: APPROVED
Genres: Action/Adventure/Crime
Runtime: 136
Rating 0

Title: The Apartment
Year of release: 1960
Certifiicate: APPROVED
Genres: Comedy/Drama/Romance
Runtime: 125
Rating 0

Title: Psycho
Year of release: 1960
Certifiicate: R
Genres: Horror/Mystery/Thriller
Runtime: 109
Rating 0

Title: Judgment at Nuremberg
Year of release: 1961
Certifiicate: NOT RATED
Genres: Drama/War
Runtime: 186
Rating 0

Title: Yojimbo
Year of release: 1961
Certifiicate: UNRATED
Genres: Action/Drama/Thriller
Runtime: 110
Rating 0

Title: To Kill a Mockingbird
Year of release: 1962
Certifiicate: NOT RATED
Genres: Crime/Drama
Runtime: 129
Rating 0

Title: Lawrence of Arabia
Year of release: 1962
Certifiicate: PG
Genres: Adventure/Biography/Drama
Runtime: 216
Rating 0

Title: The Great Escape
Year of release: 1963
Certifiicate: APPROVED
Genres: Adventure/Drama/History
Runtime: 172
Rating 0

Title: A Fistful of Dollars
Year of release: 1964
Certifiicate: R

Genres: Action/Drama/Western
Runtime: 99
Rating 0

Title: Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb
Year of release: 1964
Certifiicate: PG
Genres: Comedy
Runtime: 95
Rating 0

Title: For a Few Dollars More
Year of release: 1965
Certifiicate: APPROVED
Genres: Western
Runtime: 132
Rating 0

Title: The Good, the Bad and the Ugly
Year of release: 1966
Certifiicate: APPROVED
Genres: Western
Runtime: 161
Rating 0

Title: The Battle of Algiers
Year of release: 1966
Certifiicate: NOT RATED
Genres: Drama/War
Runtime: 121
Rating 0

Title: Persona
Year of release: 1966
Certifiicate: NOT RATED
Genres: Drama/Thriller
Runtime: 83
Rating 0

Title: Cool Hand Luke
Year of release: 1967
Certifiicate: PG
Genres: Drama
Runtime: 126
Rating 0

Title: Once Upon a Time in the West
Year of release: 1968
Certifiicate: PG-13
Genres: Romance/Western
Runtime: 175
Rating 0

Title: 2001: A Space Odyssey
Year of release: 1968
Certifiicate: G
Genres: Adventure/Mystery/Sci-Fi
Runtime: 149
Rating 0

Title: Butch Cassidy and the Sundance Kid
Year of release: 1969
Certifiicate: M

```
Genres: Biography/Crime/Drama
Runtime: 110
Rating 0

Title: A Clockwork Orange
Year of release: 1971
Certifiicate: X
Genres: Crime/Drama/Sci-Fi
Runtime: 136
Rating 0

Title: The Godfather
Year of release: 1972
Certifiicate: R
Genres: Crime/Drama
Runtime: 175
Rating 0

Title: The Sting
Year of release: 1973
Certifiicate: PG
Genres: Comedy/Crime/Drama
Runtime: 129
Rating 0

Title: Chinatown
Year of release: 1974
Certifiicate: R
Genres: Drama/Mystery/Thriller
Runtime: 130
Rating 0

Title: The Godfather: Part II
Year of release: 1974
Certifiicate: R
Genres: Crime/Drama
Runtime: 202
Rating 0

Title: Barry Lyndon
Year of release: 1975
Certifiicate: PG
Genres: Adventure/Drama/History
Runtime: 184
Rating 0

Title: Dog Day Afternoon
Year of release: 1975
Certifiicate: R
Genres: Crime/Drama
Runtime: 125
Rating 0

Title: Jaws
Year of release: 1975
Certifiicate: PG
Genres: Adventure/Drama/Thriller
Runtime: 124
Rating 0

Title: Monty Python and the Holy Grail
Year of release: 1975
Certifiicate: PG
```

```
Genres: Adventure/Comedy/Fantasy
Runtime: 91
Rating 0

Title: One Flew Over the Cuckoo's Nest
Year of release: 1975
Certifiicate: R
Genres: Drama
Runtime: 133
Rating 0

Title: The Message
Year of release: 1976
Certifiicate: PG
Genres: Adventure/Biography/Drama
Runtime: 177
Rating 0

Title: Taxi Driver
Year of release: 1976
Certifiicate: R
Genres: Crime/Drama
Runtime: 113
Rating 0

Title: Rocky
Year of release: 1976
Certifiicate: PG
Genres: Drama
Runtime: 120
Rating 0

Title: Network
Year of release: 1976
Certifiicate: R
Genres: Drama/Romance
Runtime: 121
Rating 0

Title: Annie Hall
Year of release: 1977
Certifiicate: PG
Genres: Comedy/Romance
Runtime: 93
Rating 0

Title: Star Wars: Episode IV - A New Hope
Year of release: 1977
Certifiicate: PG
Genres: Action/Adventure/Fantasy
Runtime: 121
Rating 0

Title: The Deer Hunter
Year of release: 1978
Certifiicate: R
Genres: Drama/War
Runtime: 183
Rating 0

Title: Alien
Year of release: 1979
Certifiicate: R
```

```
Genres: Horror/Sci-Fi
Runtime: 117
Rating 0

Title: Life of Brian
Year of release: 1979
Certifiicate: R
Genres: Comedy
Runtime: 94
Rating 0

Title: Apocalypse Now
Year of release: 1979
Certifiicate: R
Genres: Drama/War
Runtime: 153
Rating 0

Title: Stalker
Year of release: 1979
Certifiicate: NOT RATED
Genres: Drama/Sci-Fi
Runtime: 163
Rating 0

Title: Raging Bull
Year of release: 1980
Certifiicate: R
Genres: Biography/Drama
Runtime: 129
Rating 0

Title: Star Wars: Episode V - The Empire Strikes Back
Year of release: 1980
Certifiicate: PG
Genres: Action/Adventure/Fantasy
Runtime: 124
Rating 0

Title: The Elephant Man
Year of release: 1980
Certifiicate: PG
Genres: Biography/Drama
Runtime: 124
Rating 0

Title: The Shining
Year of release: 1980
Certifiicate: R
Genres: Drama/Horror
Runtime: 146
Rating 0

Title: Das Boot
Year of release: 1981
Certifiicate: R
Genres: Adventure/Drama/Thriller
Runtime: 149
Rating 0

Title: Raiders of the Lost Ark
Year of release: 1981
Certifiicate: PG
```

```
Genres: Action/Adventure
Runtime: 115
Rating 0

Title: Gandhi
Year of release: 1982
Certifiicate: PG
Genres: Biography/Drama
Runtime: 191
Rating 0

Title: Fanny and Alexander
Year of release: 1982
Certifiicate: R
Genres: Drama
Runtime: 188
Rating 0

Title: Blade Runner
Year of release: 1982
Certifiicate: R
Genres: Sci-Fi/Thriller
Runtime: 117
Rating 0

Title: The Thing
Year of release: 1982
Certifiicate: R
Genres: Horror/Mystery/Sci-Fi
Runtime: 109
Rating 0

Title: Scarface
Year of release: 1983
Certifiicate: R
Genres: Crime/Drama
Runtime: 170
Rating 0

Title: Star Wars: Episode VI - Return of the Jedi
Year of release: 1983
Certifiicate: PG
Genres: Action/Adventure/Fantasy
Runtime: 131
Rating 0

Title: This Is Spinal Tap
Year of release: 1984
Certifiicate: R
Genres: Comedy/Music
Runtime: 82
Rating 0

Title: The Terminator
Year of release: 1984
Certifiicate: R
Genres: Action/Sci-Fi
Runtime: 107
Rating 0

Title: Nausicaa of the Valley of the Wind
Year of release: 1984
Certifiicate: PG
```

Genres: Adventure/Animation/Fantasy
Runtime: 117
Rating 0

Title: Amadeus
Year of release: 1984
Certifiicate: R
Genres: Biography/Drama/History
Runtime: 160
Rating 0

Title: Once Upon a Time in America
Year of release: 1984
Certifiicate: R
Genres: Crime/Drama
Runtime: 229
Rating 0

Title: Back to the Future
Year of release: 1985
Certifiicate: PG
Genres: Adventure/Comedy/Sci-Fi
Runtime: 116
Rating 0

Title: Come and See
Year of release: 1985
Certifiicate: NOT RATED
Genres: Drama/War
Runtime: 140
Rating 0

Title: Ran
Year of release: 1985
Certifiicate: R
Genres: Action/Drama
Runtime: 162
Rating 0

Title: Aliens
Year of release: 1986
Certifiicate: R
Genres: Action/Adventure/Sci-Fi
Runtime: 137
Rating 0

Title: Castle in the Sky
Year of release: 1986
Certifiicate: PG
Genres: Adventure/Animation/Family
Runtime: 125
Rating 0

Title: Stand by Me
Year of release: 1986
Certifiicate: R
Genres: Adventure/Drama
Runtime: 89
Rating 0

Title: Platoon
Year of release: 1986
Certifiicate: R

```
Genres: Drama/War
Runtime: 120
Rating 0

Title: Full Metal Jacket
Year of release: 1987
Certifiicate: R
Genres: Drama/War
Runtime: 116
Rating 0

Title: The Princess Bride
Year of release: 1987
Certifiicate: PG
Genres: Adventure/Family/Fantasy
Runtime: 98
Rating 0

Title: My Neighbor Totoro
Year of release: 1988
Certifiicate: G
Genres: Animation/Family/Fantasy
Runtime: 86
Rating 0

Title: Grave of the Fireflies
Year of release: 1988
Certifiicate: UNRATED
Genres: Animation/Drama/War
Runtime: 89
Rating 0

Title: Die Hard
Year of release: 1988
Certifiicate: R
Genres: Action/Thriller
Runtime: 131
Rating 0

Title: Cinema Paradiso
Year of release: 1988
Certifiicate: R
Genres: Drama/Romance
Runtime: 155
Rating 0

Title: Indiana Jones and the Last Crusade
Year of release: 1989
Certifiicate: PG-13
Genres: Action/Adventure/Fantasy
Runtime: 127
Rating 0

Title: Goodfellas
Year of release: 1990
Certifiicate: R
Genres: Biography/Crime/Drama
Runtime: 146
Rating 0

Title: The Silence of the Lambs
Year of release: 1991
Certifiicate: R
```

```
Genres: Crime/Drama/Thriller
Runtime: 118
Rating 0

Title: Terminator 2: Judgment Day
Year of release: 1991
Certifiicate: R
Genres: Action/Sci-Fi
Runtime: 137
Rating 0

Title: Beauty and the Beast
Year of release: 1991
Certifiicate: G
Genres: Animation/Family/Fantasy
Runtime: 84
Rating 0

Title: Reservoir Dogs
Year of release: 1992
Certifiicate: R
Genres: Crime/Drama/Thriller
Runtime: 99
Rating 0

Title: Unforgiven
Year of release: 1992
Certifiicate: R
Genres: Drama/Western
Runtime: 131
Rating 0

Title: In the Name of the Father
Year of release: 1993
Certifiicate: R
Genres: Biography/Drama/History
Runtime: 133
Rating 0

Title: Jurassic Park
Year of release: 1993
Certifiicate: PG-13
Genres: Adventure/Sci-Fi/Thriller
Runtime: 127
Rating 0

Title: Schindler's List
Year of release: 1993
Certifiicate: R
Genres: Biography/Drama/History
Runtime: 195
Rating 0

Title: Groundhog Day
Year of release: 1993
Certifiicate: PG
Genres: Comedy/Fantasy/Romance
Runtime: 101
Rating 0

Title: Forrest Gump
Year of release: 1994
Certifiicate: PG-13
```

```
Genres: Comedy/Drama
Runtime: 142
Rating 0

Title: Pulp Fiction
Year of release: 1994
Certifiicate: R
Genres: Crime/Drama
Runtime: 154
Rating 0

Title: The Shawshank Redemption
Year of release: 1994
Certifiicate: R
Genres: Crime/Drama
Runtime: 142
Rating 0

Title: Leon
Year of release: 1994
Certifiicate: R
Genres: Crime/Drama/Thriller
Runtime: 110
Rating 0

Title: The Lion King
Year of release: 1994
Certifiicate: G
Genres: Adventure/Animation/Drama
Runtime: 89
Rating 0

Title: Heat
Year of release: 1995
Certifiicate: R
Genres: Action/Crime/Drama
Runtime: 170
Rating 0

Title: La Haine
Year of release: 1995
Certifiicate: NOT RATED
Genres: Crime/Drama
Runtime: 98
Rating 0

Title: The Usual Suspects
Year of release: 1995
Certifiicate: R
Genres: Crime/Drama/Mystery
Runtime: 106
Rating 0

Title: Toy Story
Year of release: 1995
Certifiicate: G
Genres: Adventure/Animation/Comedy
Runtime: 81
Rating 0

Title: Se7en
Year of release: 1995
Certifiicate: R
```

```
Genres: Crime/Drama/Mystery
Runtime: 127
Rating 0

Title: Casino
Year of release: 1995
Certifiicate: R
Genres: Biography/Crime/Drama
Runtime: 178
Rating 0

Title: Braveheart
Year of release: 1995
Certifiicate: R
Genres: Biography/Drama/History
Runtime: 178
Rating 0

Title: Before Sunrise
Year of release: 1995
Certifiicate: R
Genres: Drama/Romance
Runtime: 105
Rating 0

Title: Twelve Monkeys
Year of release: 1995
Certifiicate: R
Genres: Mystery/Sci-Fi/Thriller
Runtime: 129
Rating 0

Title: Trainspotting
Year of release: 1996
Certifiicate: R
Genres: Drama
Runtime: 94
Rating 0

Title: Fargo
Year of release: 1996
Certifiicate: R
Genres: Crime/Drama/Thriller
Runtime: 98
Rating 0

Title: Life Is Beautiful
Year of release: 1997
Certifiicate: PG-13
Genres: Comedy/Drama/War
Runtime: 116
Rating 0

Title: Princess Mononoke
Year of release: 1997
Certifiicate: PG-13
Genres: Adventure/Animation/Fantasy
Runtime: 134
Rating 0

Title: L.A. Confidential
Year of release: 1997
Certifiicate: R
```

Genres: Crime/Drama/Mystery
Runtime: 138
Rating 0

Title: Good Will Hunting
Year of release: 1997
Certifiicate: R
Genres: Drama
Runtime: 126
Rating 0

Title: Children of Heaven
Year of release: 1997
Certifiicate: PG
Genres: Drama/Family
Runtime: 89
Rating 0

Title: The Truman Show
Year of release: 1998
Certifiicate: PG
Genres: Comedy/Drama/Sci-Fi
Runtime: 103
Rating 0

Title: The Big Lebowski
Year of release: 1998
Certifiicate: R
Genres: Comedy/Crime
Runtime: 117
Rating 0

Title: American History X
Year of release: 1998
Certifiicate: R
Genres: Crime/Drama
Runtime: 119
Rating 0

Title: Lock, Stock and Two Smoking Barrels
Year of release: 1998
Certifiicate: R
Genres: Comedy/Crime
Runtime: 107
Rating 0

Title: Saving Private Ryan
Year of release: 1998
Certifiicate: R
Genres: Action/Drama/War
Runtime: 169
Rating 0

Title: American Beauty
Year of release: 1999
Certifiicate: R
Genres: Drama/Romance
Runtime: 122
Rating 0

Title: The Green Mile
Year of release: 1999
Certifiicate: R

```
Genres: Crime/Drama/Fantasy
Runtime: 189
Rating 0

Title: Fight Club
Year of release: 1999
Certifiicate: R
Genres: Drama
Runtime: 139
Rating 0

Title: The Sixth Sense
Year of release: 1999
Certifiicate: PG-13
Genres: Drama/Mystery/Thriller
Runtime: 107
Rating 0

Title: The Matrix
Year of release: 1999
Certifiicate: R
Genres: Action/Sci-Fi
Runtime: 136
Rating 0

Title: Memento
Year of release: 2000
Certifiicate: R
Genres: Mystery/Thriller
Runtime: 113
Rating 0

Title: Requiem for a Dream
Year of release: 2000
Certifiicate: R
Genres: Drama
Runtime: 102
Rating 0

Title: Snatch
Year of release: 2000
Certifiicate: R
Genres: Comedy/Crime
Runtime: 102
Rating 0

Title: Amores Perros
Year of release: 2000
Certifiicate: R
Genres: Drama/Thriller
Runtime: 154
Rating 0

Title: Gladiator
Year of release: 2000
Certifiicate: R
Genres: Action/Adventure/Drama
Runtime: 155
Rating 0

Title: Lagaan: Once Upon a Time in India
Year of release: 2001
Certifiicate: PG
```

```
Genres: Adventure/Drama/Musical
Runtime: 224
Rating 0

Title: The Lord of the Rings: The Fellowship of the Ring
Year of release: 2001
Certifiicate: PG-13
Genres: Action/Adventure/Drama
Runtime: 178
Rating 0

Title: Amelie
Year of release: 2001
Certifiicate: R
Genres: Comedy/Romance
Runtime: 122
Rating 0

Title: Spirited Away
Year of release: 2001
Certifiicate: PG
Genres: Adventure/Animation/Family
Runtime: 125
Rating 0

Title: A Beautiful Mind
Year of release: 2001
Certifiicate: PG-13
Genres: Biography/Drama
Runtime: 135
Rating 0

Title: Donnie Darko
Year of release: 2001
Certifiicate: R
Genres: Drama/Sci-Fi/Thriller
Runtime: 113
Rating 0

Title: Monsters, Inc.
Year of release: 2001
Certifiicate: G
Genres: Adventure/Animation/Comedy
Runtime: 92
Rating 0

Title: Infernal Affairs
Year of release: 2002
Certifiicate: R
Genres: Crime/Drama/Mystery
Runtime: 101
Rating 0

Title: City of God
Year of release: 2002
Certifiicate: R
Genres: Crime/Drama
Runtime: 130
Rating 0

Title: The Pianist
Year of release: 2002
Certifiicate: R
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```
Genres: Biography/Drama/War
Runtime: 150
Rating 0

Title: The Lord of the Rings: The Two Towers
Year of release: 2002
Certifiicate: PG-13
Genres: Action/Adventure/Drama
Runtime: 179
Rating 0

Title: Catch Me If You Can
Year of release: 2002
Certifiicate: PG-13
Genres: Biography/Crime/Drama
Runtime: 141
Rating 0

Title: The Lord of the Rings: The Return of the King
Year of release: 2003
Certifiicate: PG-13
Genres: Action/Adventure/Drama
Runtime: 201
Rating 0

Title: Kill Bill: Vol. 1
Year of release: 2003
Certifiicate: R
Genres: Action/Crime/Thriller
Runtime: 111
Rating 0

Title: Memories of Murder
Year of release: 2003
Certifiicate: UNRATED
Genres: Crime/Drama/Mystery
Runtime: 132
Rating 0

Title: Oldboy
Year of release: 2003
Certifiicate: R
Genres: Drama/Mystery/Thriller
Runtime: 120
Rating 0

Title: Pirates of the Caribbean: The Curse of the Black Pearl
Year of release: 2003
Certifiicate: PG-13
Genres: Action/Adventure/Fantasy
Runtime: 143
Rating 0

Title: Finding Nemo
Year of release: 2003
Certifiicate: G
Genres: Adventure/Animation/Comedy
Runtime: 100
Rating 0

Title: Howl's Moving Castle
Year of release: 2004
Certifiicate: PG
```

Genres: Adventure/Animation/Family
Runtime: 119
Rating 0

Title: Million Dollar Baby
Year of release: 2004
Certifiicate: PG-13
Genres: Drama
Runtime: 132
Rating 0

Title: Downfall
Year of release: 2004
Certifiicate: R
Genres: Biography/Drama/History
Runtime: 156
Rating 0

Title: Eternal Sunshine of the Spotless Mind
Year of release: 2004
Certifiicate: R
Genres: Drama/Fantasy/Romance
Runtime: 108
Rating 0

Title: Hotel Rwanda
Year of release: 2004
Certifiicate: PG-13
Genres: Drama/History/War
Runtime: 121
Rating 0

Title: Sin City
Year of release: 2005
Certifiicate: R
Genres: Crime/Thriller
Runtime: 124
Rating 0

Title: V for Vendetta
Year of release: 2005
Certifiicate: R
Genres: Action/Drama/Thriller
Runtime: 132
Rating 0

Title: Batman Begins
Year of release: 2005
Certifiicate: PG-13
Genres: Action/Adventure
Runtime: 140
Rating 0

Title: The Prestige
Year of release: 2006
Certifiicate: PG-13
Genres: Drama/Mystery/Sci-Fi
Runtime: 130
Rating 0

Title: The Departed
Year of release: 2006
Certifiicate: R

```
Genres: Crime/Drama/Thriller
Runtime: 151
Rating 0

Title: Pan's Labyrinth
Year of release: 2006
Certifiicate: R
Genres: Drama/Fantasy/War
Runtime: 118
Rating 0

Title: The Lives of Others
Year of release: 2006
Certifiicate: R
Genres: Drama/Thriller
Runtime: 137
Rating 0

Title: Into the Wild
Year of release: 2007
Certifiicate: R
Genres: Adventure/Biography/Drama
Runtime: 148
Rating 0

Title: No Country for Old Men
Year of release: 2007
Certifiicate: R
Genres: Crime/Drama/Thriller
Runtime: 122
Rating 0

Title: There Will Be Blood
Year of release: 2007
Certifiicate: R
Genres: Drama
Runtime: 158
Rating 0

Title: The Bourne Ultimatum
Year of release: 2007
Certifiicate: PG-13
Genres: Action/Mystery/Thriller
Runtime: 115
Rating 0

Title: WALL-E
Year of release: 2008
Certifiicate: G
Genres: Adventure/Animation/Family
Runtime: 98
Rating 0

Title: The Dark Knight
Year of release: 2008
Certifiicate: PG-13
Genres: Action/Crime/Drama
Runtime: 152
Rating 0

Title: Ip Man
Year of release: 2008
Certifiicate: R
```

Genres: Action/Biography/Drama
Runtime: 106
Rating 0

Title: Gran Torino
Year of release: 2008
Certifiicate: R
Genres: Drama
Runtime: 116
Rating 0

Title: The Secret in Their Eyes
Year of release: 2009
Certifiicate: R
Genres: Drama/Mystery/Thriller
Runtime: 129
Rating 0

Title: Hachi: A Dog's Tale
Year of release: 2009
Certifiicate: G
Genres: Drama/Family
Runtime: 93
Rating 0

Title: Mary and Max
Year of release: 2009
Certifiicate: NOT RATED
Genres: Animation/Comedy/Drama
Runtime: 92
Rating 0

Title: Up
Year of release: 2009
Certifiicate: PG
Genres: Adventure/Animation/Comedy
Runtime: 96
Rating 0

Title: 3 Idiots
Year of release: 2009
Certifiicate: PG-13
Genres: Comedy/Drama
Runtime: 170
Rating 0

Title: Inglourious Basterds
Year of release: 2009
Certifiicate: R
Genres: Adventure/Drama/War
Runtime: 153
Rating 0

Title: Shutter Island
Year of release: 2010
Certifiicate: R
Genres: Mystery/Thriller
Runtime: 138
Rating 0

Title: How to Train Your Dragon
Year of release: 2010
Certifiicate: PG

```
Genres: Adventure/Animation/Family
Runtime: 98
Rating 0

Title: Toy Story 3
Year of release: 2010
Certifiicate: G
Genres: Adventure/Animation/Comedy
Runtime: 103
Rating 0

Title: Inception
Year of release: 2010
Certifiicate: PG-13
Genres: Action/Adventure/Sci-Fi
Runtime: 148
Rating 0

Title: The King's Speech
Year of release: 2010
Certifiicate: R
Genres: Biography/Drama/History
Runtime: 118
Rating 0

Title: Incendies
Year of release: 2010
Certifiicate: R
Genres: Drama/Mystery/War
Runtime: 139
Rating 0

Title: Harry Potter and the Deathly Hallows: Part 2
Year of release: 2011
Certifiicate: PG-13
Genres: Adventure/Drama/Fantasy
Runtime: 130
Rating 0

Title: Untouchable
Year of release: 2011
Certifiicate: N/A
Genres: Comedy/Drama
Runtime: 14
Rating 0

Title: The Help
Year of release: 2011
Certifiicate: PG-13
Genres: Drama
Runtime: 146
Rating 0

Title: A Separation
Year of release: 2011
Certifiicate: PG-13
Genres: Drama/Mystery
Runtime: 123
Rating 0

Title: Warrior
Year of release: 2011
Certifiicate: PG-13
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```
Genres: Drama
Runtime: 140
Rating 0

Title: The Dark Knight Rises
Year of release: 2012
Certifiicate: PG-13
Genres: Action/Thriller
Runtime: 164
Rating 0

Title: Gangs of Wasseypur
Year of release: 2012
Certifiicate: N/A
Genres: Action/Crime/Drama
Runtime: 320
Rating 0

Title: The Avengers
Year of release: 2012
Certifiicate: PG-13
Genres: Action/Sci-Fi/Thriller
Runtime: 143
Rating 0

Title: The Hunt
Year of release: 2012
Certifiicate: R
Genres: Drama
Runtime: 115
Rating 0

Title: Django Unchained
Year of release: 2012
Certifiicate: R
Genres: Drama/Western
Runtime: 165
Rating 0

Title: The Wolf of Wall Street
Year of release: 2013
Certifiicate: R
Genres: Biography/Comedy/Crime
Runtime: 180
Rating 0

Title: 12 Years a Slave
Year of release: 2013
Certifiicate: R
Genres: Biography/Drama/History
Runtime: 134
Rating 0

Title: Prisoners
Year of release: 2013
Certifiicate: R
Genres: Crime/Drama/Mystery
Runtime: 153
Rating 0

Title: Sharknado
Year of release: 2013
Certifiicate: TV-14
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```
Genres: Horror
Runtime: 86
Rating 0

Title: Rush
Year of release: 2013
Certifiicate: R
Genres: Action/Biography/Drama
Runtime: 123
Rating 0

Title: Song of the Sea
Year of release: 2014
Certifiicate: PG
Genres: Adventure/Animation/Family
Runtime: 93
Rating 0

Title: Wild Tales
Year of release: 2014
Certifiicate: R
Genres: Comedy/Drama/Thriller
Runtime: 122
Rating 0

Title: Guardians of the Galaxy
Year of release: 2014
Certifiicate: PG-13
Genres: Action/Adventure/Sci-Fi
Runtime: 121
Rating 0

Title: Gone Girl
Year of release: 2014
Certifiicate: R
Genres: Crime/Drama/Mystery
Runtime: 149
Rating 0

Title: Whiplash
Year of release: 2014
Certifiicate: R
Genres: Drama
Runtime: 107
Rating 0

Title: The Grand Budapest Hotel
Year of release: 2014
Certifiicate: R
Genres: Adventure/Comedy/Crime
Runtime: 99
Rating 0

Title: The Imitation Game
Year of release: 2014
Certifiicate: PG-13
Genres: Biography/Drama/Thriller
Runtime: 114
Rating 0

Title: Interstellar
Year of release: 2014
Certifiicate: PG-13
```

```
Genres: Adventure/Drama/Sci-Fi
Runtime: 169
Rating 0

Title: The Martian
Year of release: 2015
Certifiicate: PG-13
Genres: Adventure/Drama/Sci-Fi
Runtime: 144
Rating 0

Title: Star Wars: The Force Awakens
Year of release: 2015
Certifiicate: PG-13
Genres: Action/Adventure/Fantasy
Runtime: 138
Rating 0

Title: Inside Out
Year of release: 2015
Certifiicate: PG
Genres: Adventure/Animation/Comedy
Runtime: 95
Rating 0

Title: Room
Year of release: 2015
Certifiicate: R
Genres: Drama
Runtime: 118
Rating 0

Title: Spotlight
Year of release: 2015
Certifiicate: R
Genres: Biography/Crime/Drama
Runtime: 128
Rating 0

Title: The Revenant
Year of release: 2015
Certifiicate: R
Genres: Adventure/Drama/Thriller
Runtime: 156
Rating 0

Title: Mad Max: Fury Road
Year of release: 2015
Certifiicate: R
Genres: Action/Adventure/Sci-Fi
Runtime: 120
Rating 0

Title: Zootopia
Year of release: 2016
Certifiicate: PG
Genres: Action/Adventure/Animation
Runtime: 108
Rating 0

Title: Deadpool
Year of release: 2016
Certifiicate: R
```

```
Genres: Action/Adventure/Comedy
Runtime: 108
Rating 0


Third longest Noir film:

Title: Double Indemnity
Year of release: 1944
Certifiicate: PASSED
Genres: Crime/Drama/Film-Noir
Runtime: 107
Rating 0


Eighth most recent unrated films:

Title: Rashomon
Year of release: 1950
Certifiicate: UNRATED
Genres: Crime/Drama/Mystery
Runtime: 88
Rating 0


Longest title:

Title: Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb
Year of release: 1964
Certifiicate: PG
Genres: Comedy
Runtime: 95
Rating 0
```

Messages to STDERR

None.