

ProyectoFinalLDH

1.0

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# Chapter 1

## Namespace Index

### 1.1 Package List

Here are the packages with brief descriptions (if available):

[ull](#) . . . . . ??



## Chapter 2

# Hierarchical Index

### 2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

|                               |    |
|-------------------------------|----|
| Comparable                    |    |
| ull.Rating                    | ?? |
| ull.Filter                    | ?? |
| ull.AllFilters                | ?? |
| ull.DirectorsFilter           | ?? |
| ull.GenreFilter               | ?? |
| ull.MinutesFilter             | ?? |
| ull.TrueFilter                | ?? |
| ull.YearAfterFilter           | ?? |
| ull.FirstRatings              | ?? |
| ull.FourthRatings             | ?? |
| ull.Movie                     | ?? |
| ull.MovieDatabase             | ?? |
| ull.MovieRunnerSimilarRatings | ?? |
| ull.Rater                     | ?? |
| ull.EfficientRater            | ?? |
| ull.RaterDatabase             | ?? |
| ull.Recommender               | ?? |
| ull.RecommendationRunner      | ?? |



## Chapter 3

# Class Index

### 3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

|                                               |    |
|-----------------------------------------------|----|
| <a href="#">ull.AllFilters</a>                | ?? |
| <a href="#">ull.DirectorsFilter</a>           | ?? |
| <a href="#">ull.EfficientRater</a>            | ?? |
| <a href="#">ull.Filter</a>                    | ?? |
| <a href="#">ull.FirstRatings</a>              | ?? |
| <a href="#">ull.FourthRatings</a>             | ?? |
| <a href="#">ull.GenreFilter</a>               | ?? |
| <a href="#">ull.MinutesFilter</a>             | ?? |
| <a href="#">ull.Movie</a>                     | ?? |
| <a href="#">ull.MovieDatabase</a>             | ?? |
| <a href="#">ull.MovieRunnerSimilarRatings</a> | ?? |
| <a href="#">ull.Rater</a>                     | ?? |
| <a href="#">ull.RaterDatabase</a>             | ?? |
| <a href="#">ull.Rating</a>                    | ?? |
| <a href="#">ull.RecommendationRunner</a>      | ?? |
| <a href="#">ull.Recommender</a>               | ?? |
| <a href="#">ull.TrueFilter</a>                | ?? |
| <a href="#">ull.YearAfterFilter</a>           | ?? |





## Chapter 4

# File Index

### 4.1 File List

Here is a list of all files with brief descriptions:

|                                                                   |    |
|-------------------------------------------------------------------|----|
| src/main/java/ull/ <a href="#">AllFilters.java</a>                | ?? |
| src/main/java/ull/ <a href="#">DirectorsFilter.java</a>           | ?? |
| src/main/java/ull/ <a href="#">EfficientRater.java</a>            | ?? |
| src/main/java/ull/ <a href="#">Filter.java</a>                    | ?? |
| src/main/java/ull/ <a href="#">FirstRatings.java</a>              | ?? |
| src/main/java/ull/ <a href="#">FourthRatings.java</a>             | ?? |
| src/main/java/ull/ <a href="#">GenreFilter.java</a>               | ?? |
| src/main/java/ull/ <a href="#">MinutesFilter.java</a>             | ?? |
| src/main/java/ull/ <a href="#">Movie.java</a>                     | ?? |
| src/main/java/ull/ <a href="#">MovieDatabase.java</a>             | ?? |
| src/main/java/ull/ <a href="#">MovieRunnerSimilarRatings.java</a> | ?? |
| src/main/java/ull/ <a href="#">Rater.java</a>                     | ?? |
| src/main/java/ull/ <a href="#">RaterDatabase.java</a>             | ?? |
| src/main/java/ull/ <a href="#">Rating.java</a>                    | ?? |
| src/main/java/ull/ <a href="#">RecommendationRunner.java</a>      | ?? |
| src/main/java/ull/ <a href="#">Recommender.java</a>               | ?? |
| src/main/java/ull/ <a href="#">TrueFilter.java</a>                | ?? |
| src/main/java/ull/ <a href="#">YearAfterFilter.java</a>           | ?? |



## Chapter 5

# Namespace Documentation

### 5.1 Package ull

#### Classes

- class [AllFilters](#)
- class [DirectorsFilter](#)
- class [EfficientRater](#)
- interface [Filter](#)
- class [FirstRatings](#)
- class [FourthRatings](#)
- class [GenreFilter](#)
- class [MinutesFilter](#)
- class [Movie](#)
- class [MovieDatabase](#)
- class [MovieRunnerSimilarRatings](#)
- interface [Rater](#)
- class [RaterDatabase](#)
- class [Rating](#)
- class [RecommendationRunner](#)
- interface [Recommender](#)
- class [TrueFilter](#)
- class [YearAfterFilter](#)

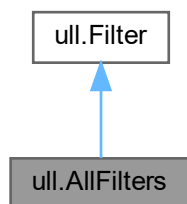


## Chapter 6

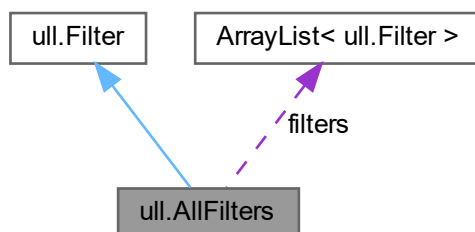
# Class Documentation

### 6.1 ull.AllFilters Class Reference

Inheritance diagram for ull.AllFilters:



Collaboration diagram for ull.AllFilters:



## Public Member Functions

- [AllFilters](#) ()
- void [addFilter](#) ([Filter](#) f)
- boolean [satisfies](#) (String id)

### 6.1.1 Constructor & Destructor Documentation

#### 6.1.1.1 AllFilters()

```
ull.AllFilters.AllFilters ( )
```

### 6.1.2 Member Function Documentation

#### 6.1.2.1 addFilter()

```
void ull.AllFilters.addFilter (
    Filter f )
```

#### 6.1.2.2 satisfies()

```
boolean ull.AllFilters.satisfies (
    String id )
```

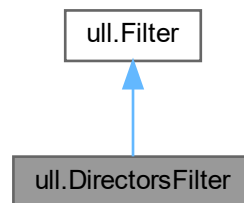
Implements [ull.Filter](#).

The documentation for this class was generated from the following file:

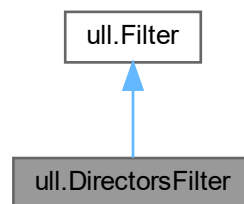
- src/main/java/ull/[AllFilters.java](#)

## 6.2 ull.DirectorsFilter Class Reference

Inheritance diagram for ull.DirectorsFilter:



Collaboration diagram for ull.DirectorsFilter:



### Public Member Functions

- [DirectorsFilter](#) (String directors)
- boolean [satisfies](#) (String id)

### 6.2.1 Detailed Description

A class for filter movies by directors

Author

Stanislav Rakitov

Version

1.0

## 6.2.2 Constructor & Destructor Documentation

### 6.2.2.1 DirectorsFilter()

```
ull.DirectorsFilter.DirectorsFilter (
    String directors )
```

## 6.2.3 Member Function Documentation

### 6.2.3.1 satisfies()

```
boolean ull.DirectorsFilter.satisfies (
    String id )
```

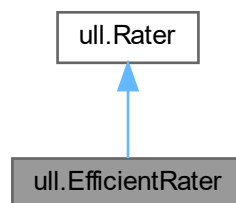
Implements [ull.Filter](#).

The documentation for this class was generated from the following file:

- [src/main/java/ull/DirectorsFilter.java](#)

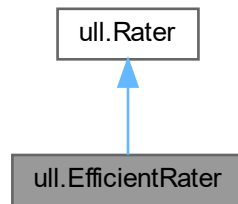
## 6.3 ull.EfficientRater Class Reference

Inheritance diagram for ull.EfficientRater:





Collaboration diagram for ull.EfficientRater:



## Public Member Functions

- `EfficientRater` (String id)
- void `addRating` (String movieID, double rating)
- boolean `hasRating` (String movieID)
- String `getID` ()
- double `getRating` (String movieID)
- int `numRatings` ()
- ArrayList< String > `getItemsRated` ()
- HashMap< String, Rating > `getMyRatings` ()

### 6.3.1 Detailed Description

The class `EfficientRater` keeps track of one rater and all their ratings.

Author

Stanislav Rakitov

Version

1.0

### 6.3.2 Constructor & Destructor Documentation

#### 6.3.2.1 EfficientRater()

```
ull.EfficientRater.EfficientRater (
    String id )
```

## 6.3.3 Member Function Documentation

### 6.3.3.1 addRating()

```
void ull.EfficientRater.addRating (
    String movieID,
    double rating )
```

Implements [ull.Rater](#).

### 6.3.3.2 getID()

```
String ull.EfficientRater.getID ( )
```

Implements [ull.Rater](#).

### 6.3.3.3 getItemsRated()

```
ArrayList< String > ull.EfficientRater.getItemsRated ( )
```

Implements [ull.Rater](#).

### 6.3.3.4 getMyRatings()

```
HashMap< String, Rating > ull.EfficientRater.getMyRatings ( )
```

Implements [ull.Rater](#).

### 6.3.3.5 getRating()

```
double ull.EfficientRater.getRating (
    String movieID )
```

Implements [ull.Rater](#).

### 6.3.3.6 hasRating()

```
boolean ull.EfficientRater.hasRating (
    String movieID )
```

Implements [ull.Rater](#).

### 6.3.3.7 numRatings()

```
int ull.EfficientRater.numRatings ( )
```

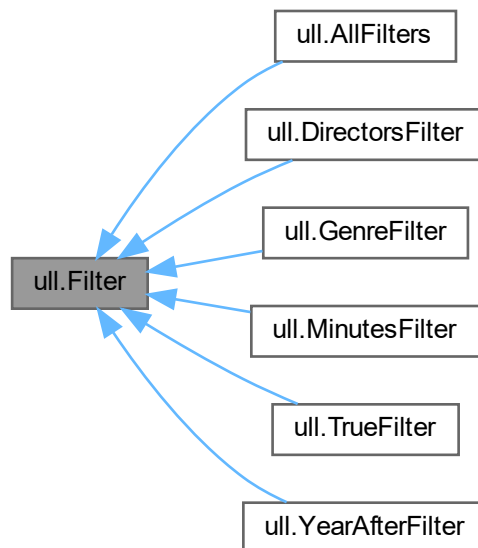
Implements [ull.Rater](#).

The documentation for this class was generated from the following file:

- [src/main/java/ull/EfficientRater.java](#)

## 6.4 ull.Filter Interface Reference

Inheritance diagram for ull.Filter:



### Public Member Functions

- boolean [satisfies](#) (String id)

## 6.4.1 Member Function Documentation

### 6.4.1.1 satisfies()

```
boolean ull.Filter.satisfies (
    String id )
```

Implemented in [ull.AllFilters](#), [ull.DirectorsFilter](#), [ull.GenreFilter](#), [ull.MinutesFilter](#), [ull.TrueFilter](#), and [ull.YearAfterFilter](#).

The documentation for this interface was generated from the following file:

- [src/main/java/ull/Filter.java](#)

## 6.5 ull.FirstRatings Class Reference

### Public Member Functions

- [FirstRatings](#) (String fileName)
- [FirstRatings](#) (String fileNameMovies, String fileNameRaters)
- [FirstRatings](#) ()
- void [testLoadMovies](#) ()
- void [testLoadRaters](#) (String raterID, String movieID)

### 6.5.1 Detailed Description

A class to process the movie and ratings data and to answer questions about them.

#### Author

Stanislav Rakitov

#### Version

1.0

## 6.5.2 Constructor & Destructor Documentation

### 6.5.2.1 FirstRatings() [1/3]

```
ull.FirstRatings.FirstRatings (
    String fileName )
```

### 6.5.2.2 FirstRatings() [2/3]

```
ull.FirstRatings.FirstRatings (
    String fileNameMovies,
    String fileNameRaters )
```

### 6.5.2.3 FirstRatings() [3/3]

```
ull.FirstRatings.FirstRatings ( )
```

## 6.5.3 Member Function Documentation

### 6.5.3.1 testLoadMovies()

```
void ull.FirstRatings.testLoadMovies ( )
```

A void method for tests cases.

- determine how many movies in total.
- determine how many movies include the Comedy genre.
- determine how many movies are greater than 150 minutes in length.
- determine the maximum number of movies by any director, and who the directors are that directed that many movies.

### 6.5.3.2 testLoadRaters()

```
void ull.FirstRatings.testLoadRaters (
    String raterID,
    String movieID )
```

The documentation for this class was generated from the following file:

- src/main/java/ull/[FirstRatings.java](#)

## 6.6 ull.FourthRatings Class Reference

### Public Member Functions

- `ArrayList< Rating > getAverageRatings` (int minimalRaters)
- `ArrayList< Rating > getAverageRatingsByFilter` (Integer minimalRaters, [Filter](#) filterCriteria)
- `double dotProduct` ([Rater](#) meRater, [Rater](#) otherRater)
- `ArrayList< Rating > getSimilarRatings` (String id, Integer numSimilarRaters, Integer minimalRaters)
- `ArrayList< Rating > getSimilarRatingsByFilter` (String id, Integer numSimilarRaters, Integer minimalRaters, [Filter](#) filterCriteria)

### 6.6.1 Detailed Description

The week 4 class

Author

Stanislav Rakitov

Version

1.0

### 6.6.2 Member Function Documentation

#### 6.6.2.1 dotProduct()

```
double ull.FourthRatings.dotProduct (
    Rater meRater,
    Rater otherRater )
```

#### 6.6.2.2 getAverageRatings()

```
ArrayList< Rating > ull.FourthRatings.getAverageRatings (
    int minimalRaters )
```

#### 6.6.2.3 getAverageRatingsByFilter()

```
ArrayList< Rating > ull.FourthRatings.getAverageRatingsByFilter (
    Integer minimalRaters,
    Filter filterCriteria )
```

#### 6.6.2.4 getSimilarRatings()

```
ArrayList< Rating > ull.FourthRatings.getSimilarRatings (
    String id,
    Integer numSimilarRaters,
    Integer minimalRaters )
```

#### 6.6.2.5 getSimilarRatingsByFilter()

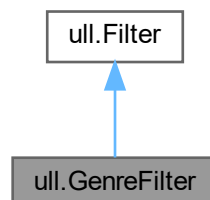
```
ArrayList< Rating > ull.FourthRatings.getSimilarRatingsByFilter (
    String id,
    Integer numSimilarRaters,
    Integer minimalRaters,
    Filter filterCriteria )
```

The documentation for this class was generated from the following file:

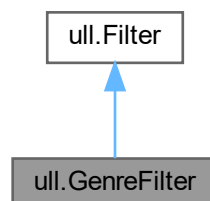
- src/main/java/ull/[FourthRatings.java](#)

## 6.7 ull.GenreFilter Class Reference

Inheritance diagram for ull.GenreFilter:



Collaboration diagram for ull.GenreFilter:



## Public Member Functions

- [GenreFilter](#) (String genre)
- boolean [satisfies](#) (String id)

### 6.7.1 Detailed Description

A class for filter movies by genre

#### Author

Stanislav Rakitov

#### Version

1.0

### 6.7.2 Constructor & Destructor Documentation

#### 6.7.2.1 [GenreFilter](#)()

```
ull.GenreFilter.GenreFilter (  
    String genre )
```

### 6.7.3 Member Function Documentation

#### 6.7.3.1 [satisfies](#)()

```
boolean ull.GenreFilter.satisfies (  
    String id )
```

Implements [ull.Filter](#).

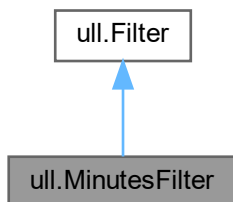
The documentation for this class was generated from the following file:

- src/main/java/ull/[GenreFilter.java](#)

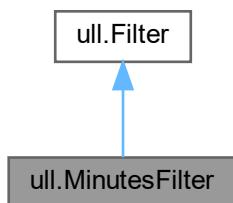


## 6.8 ull.MinutesFilter Class Reference

Inheritance diagram for ull.MinutesFilter:



Collaboration diagram for ull.MinutesFilter:



### Public Member Functions

- `MinutesFilter` (int minMinutes, int maxMinutes)
- `MinutesFilter` (int minMinutes)
- boolean `satisfies` (String id)

### 6.8.1 Detailed Description

A class for filter movies by time

Author

Stanislav Rakitov

Version

1.0

## 6.8.2 Constructor & Destructor Documentation

### 6.8.2.1 MinutesFilter() [1/2]

```
ull.MinutesFilter.MinutesFilter (
    int minMinutes,
    int maxMinutes )
```

### 6.8.2.2 MinutesFilter() [2/2]

```
ull.MinutesFilter.MinutesFilter (
    int minMinutes )
```

## 6.8.3 Member Function Documentation

### 6.8.3.1 satisfies()

```
boolean ull.MinutesFilter.satisfies (
    String id )
```

Implements [ull.Filter](#).

The documentation for this class was generated from the following file:

- [src/main/java/ull/MinutesFilter.java](#)

## 6.9 ull.Movie Class Reference

### Public Member Functions

- [Movie](#) (String anID, String aTitle, String aYear, String theGenres)
- [Movie](#) (String anID, String aTitle, String aYear, String theGenres, String aDirector, String aCountry, String aPoster, int theMinutes)
- String [getID](#) ()
- String [getTitle](#) ()
- int [getYear](#) ()
- String [getGenres](#) ()
- String [getCountry](#) ()
- String [getDirector](#) ()
- String [getPoster](#) ()
- int [getMinutes](#) ()
- String [toString](#) ()

## 6.9.1 Constructor & Destructor Documentation

### 6.9.1.1 Movie() [1/2]

```
ull.Movie.Movie (
    String anID,
    String aTitle,
    String aYear,
    String theGenres )
```

### 6.9.1.2 Movie() [2/2]

```
ull.Movie.Movie (
    String anID,
    String aTitle,
    String aYear,
    String theGenres,
    String aDirector,
    String aCountry,
    String aPoster,
    int theMinutes )
```

## 6.9.2 Member Function Documentation

### 6.9.2.1 getCountry()

```
String ull.Movie.getCountry ( )
```

### 6.9.2.2 getDirector()

```
String ull.Movie.getDirector ( )
```

### 6.9.2.3 getGenres()

```
String ull.Movie.getGenres ( )
```

#### 6.9.2.4 getID()

```
String ull.Movie.getID ( )
```

#### 6.9.2.5 getMinutes()

```
int ull.Movie.getMinutes ( )
```

#### 6.9.2.6 getPoster()

```
String ull.Movie.getPoster ( )
```

#### 6.9.2.7 getTitle()

```
String ull.Movie.getTitle ( )
```

#### 6.9.2.8 getYear()

```
int ull.Movie.getYear ( )
```

#### 6.9.2.9 toString()

```
String ull.Movie.toString ( )
```

The documentation for this class was generated from the following file:

- [src/main/java/ull/Movie.java](#)

## 6.10 ull.MovieDatabase Class Reference

### Static Public Member Functions

- static void [initialize](#) (String moviefile)
- static boolean [containsID](#) (String id)
- static int [getYear](#) (String id)
- static String [getGenres](#) (String id)
- static String [getTitle](#) (String id)
- static [Movie](#) [getMovie](#) (String id)
- static String [getPoster](#) (String id)
- static int [getMinutes](#) (String id)
- static String [getCountry](#) (String id)
- static String [getDirector](#) (String id)
- static int [size](#) ()
- static ArrayList< String > [filterBy](#) ([Filter](#) f)

### 6.10.1 Member Function Documentation

#### 6.10.1.1 containsID()

```
static boolean ull.MovieDatabase.containsID (  
    String id )    [static]
```

#### 6.10.1.2 filterBy()

```
static ArrayList< String > ull.MovieDatabase.filterBy (  
    Filter f )    [static]
```

#### 6.10.1.3 getCountry()

```
static String ull.MovieDatabase.getCountry (  
    String id )    [static]
```

#### 6.10.1.4 getDirector()

```
static String ull.MovieDatabase.getDirector (  
    String id )    [static]
```

#### 6.10.1.5 getGenres()

```
static String ull.MovieDatabase.getGenres (  
    String id ) [static]
```

#### 6.10.1.6 getMinutes()

```
static int ull.MovieDatabase.getMinutes (  
    String id ) [static]
```

#### 6.10.1.7 getMovie()

```
static Movie ull.MovieDatabase.getMovie (  
    String id ) [static]
```

#### 6.10.1.8 getPoster()

```
static String ull.MovieDatabase.getPoster (  
    String id ) [static]
```

#### 6.10.1.9 getTitle()

```
static String ull.MovieDatabase.getTitle (  
    String id ) [static]
```

#### 6.10.1.10 getYear()

```
static int ull.MovieDatabase.getYear (  
    String id ) [static]
```

#### 6.10.1.11 initialize()

```
static void ull.MovieDatabase.initialize (  
    String moviefile ) [static]
```

### 6.10.1.12 size()

```
static int ull.MovieDatabase.size ( ) [static]
```

The documentation for this class was generated from the following file:

- src/main/java/ull/[MovieDatabase.java](#)

## 6.11 ull.MovieRunnerSimilarRatings Class Reference

### Public Member Functions

- void [printAverageRatings](#) (int minimalRatings)
- void [printAverageRatingsByYearAfterAndGenre](#) (int minimalRatings, int year, String genre)
- void [printSimilarRatings](#) ()
- void [printSimilarRatingsByGenre](#) ()
- void [printSimilarRatingsByDirector](#) ()
- void [printSimilarRatingsByGenreAndMinutes](#) ()
- void [printSimilarRatingsByYearAfterAndMinutes](#) ()

### 6.11.1 Detailed Description

#### Author

Stanislav Rakitov

### 6.11.2 Member Function Documentation

#### 6.11.2.1 printAverageRatings()

```
void ull.MovieRunnerSimilarRatings.printAverageRatings (
    int minimalRatings )
```

Print a list of movies and their average ratings sorted by averages

#### Parameters

|                       |                                 |
|-----------------------|---------------------------------|
| <i>minimalRatings</i> | int specified number of ratings |
|-----------------------|---------------------------------|

#### 6.11.2.2 printAverageRatingsByYearAfterAndGenre()

```
void ull.MovieRunnerSimilarRatings.printAverageRatingsByYearAfterAndGenre (
```

```
int minimalRatings,  
int year,  
String genre )
```

#### 6.11.2.3 printSimilarRatings()

```
void ull.MovieRunnerSimilarRatings.printSimilarRatings ( )
```

#### 6.11.2.4 printSimilarRatingsByDirector()

```
void ull.MovieRunnerSimilarRatings.printSimilarRatingsByDirector ( )
```

#### 6.11.2.5 printSimilarRatingsByGenre()

```
void ull.MovieRunnerSimilarRatings.printSimilarRatingsByGenre ( )
```

#### 6.11.2.6 printSimilarRatingsByGenreAndMinutes()

```
void ull.MovieRunnerSimilarRatings.printSimilarRatingsByGenreAndMinutes ( )
```

#### 6.11.2.7 printSimilarRatingsByYearAfterAndMinutes()

```
void ull.MovieRunnerSimilarRatings.printSimilarRatingsByYearAfterAndMinutes ( )
```

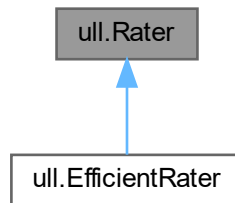
The documentation for this class was generated from the following file:

- src/main/java/ull/[MovieRunnerSimilarRatings.java](#)



## 6.12 ull.Rater Interface Reference

Inheritance diagram for ull.Rater:



### Public Member Functions

- void [addRating](#) (String movieID, double rating)
- boolean [hasRating](#) (String item)
- String [getID](#) ()
- double [getRating](#) (String item)
- int [numRatings](#) ()
- ArrayList< String > [getItemsRated](#) ()
- HashMap< String, [Rating](#) > [getMyRatings](#) ()

### 6.12.1 Member Function Documentation

#### 6.12.1.1 addRating()

```
void ull.Rater.addRating (  
    String movieID,  
    double rating )
```

Implemented in [ull.EfficientRater](#).

#### 6.12.1.2 getID()

```
String ull.Rater.getID ( )
```

Implemented in [ull.EfficientRater](#).

#### 6.12.1.3 `getItemsRated()`

```
ArrayList< String > ull.Rater.getItemsRated ( )
```

Implemented in [ull.EfficientRater](#).

#### 6.12.1.4 `getMyRatings()`

```
HashMap< String, Rating > ull.Rater.getMyRatings ( )
```

Implemented in [ull.EfficientRater](#).

#### 6.12.1.5 `getRating()`

```
double ull.Rater.getRating (
    String item )
```

Implemented in [ull.EfficientRater](#).

#### 6.12.1.6 `hasRating()`

```
boolean ull.Rater.hasRating (
    String item )
```

Implemented in [ull.EfficientRater](#).

#### 6.12.1.7 `numRatings()`

```
int ull.Rater.numRatings ( )
```

Implemented in [ull.EfficientRater](#).

The documentation for this interface was generated from the following file:

- [src/main/java/ull/Rater.java](#)

## 6.13 ull.RaterDatabase Class Reference

### Static Public Member Functions

- static void [initialize](#) (String filename)
- static void [addRatings](#) (String filename)
- static void [addRaterRating](#) (String raterID, String movieID, double rating)
- static [Rater](#) [getRater](#) (String id)
- static ArrayList< [Rater](#) > [getRaters](#) ()
- static int [size](#) ()

### 6.13.1 Member Function Documentation

#### 6.13.1.1 addRaterRating()

```
static void ull.RaterDatabase.addRaterRating (  
    String raterID,  
    String movieID,  
    double rating ) [static]
```

#### 6.13.1.2 addRatings()

```
static void ull.RaterDatabase.addRatings (  
    String filename ) [static]
```

#### 6.13.1.3 getRater()

```
static Rater ull.RaterDatabase.getRater (  
    String id ) [static]
```

#### 6.13.1.4 getRaters()

```
static ArrayList< Rater > ull.RaterDatabase.getRaters ( ) [static]
```

#### 6.13.1.5 initialize()

```
static void ull.RaterDatabase.initialize (  
    String filename ) [static]
```

#### 6.13.1.6 size()

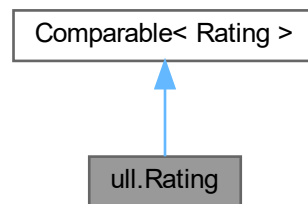
```
static int ull.RaterDatabase.size ( ) [static]
```

The documentation for this class was generated from the following file:

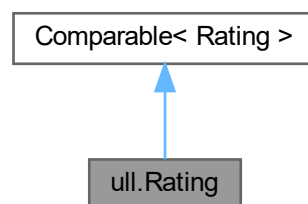
- src/main/java/ull/[RaterDatabase.java](#)

## 6.14 ull.Rating Class Reference

Inheritance diagram for ull.Rating:



Collaboration diagram for ull.Rating:



## Public Member Functions

- [Rating](#) (String anItem, double aValue)
- String [getItem](#) ()
- double [getValue](#) ()
- String [toString](#) ()
- int [compareTo](#) ([Rating](#) other)

### 6.14.1 Constructor & Destructor Documentation

#### 6.14.1.1 Rating()

```
ull.Rating.Rating (
    String anItem,
    double aValue )
```

### 6.14.2 Member Function Documentation

#### 6.14.2.1 compareTo()

```
int ull.Rating.compareTo (
    Rating other )
```

#### 6.14.2.2 getItem()

```
String ull.Rating.getItem ( )
```

#### 6.14.2.3 getValue()

```
double ull.Rating.getValue ( )
```

#### 6.14.2.4 toString()

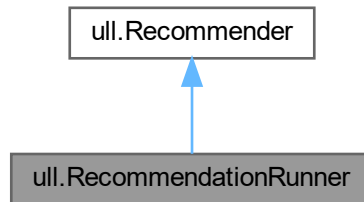
```
String ull.Rating.toString ( )
```

The documentation for this class was generated from the following file:

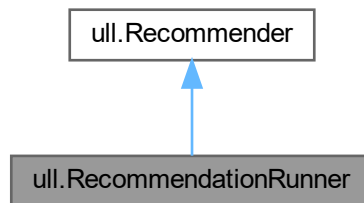
- src/main/java/ull/[Rating.java](#)

## 6.15 ull.RecommendationRunner Class Reference

Inheritance diagram for ull.RecommendationRunner:



Collaboration diagram for ull.RecommendationRunner:



### Public Member Functions

- `ArrayList< String > getItemsToRate ()`
- `void printRecommendationsFor (String webRaterID)`

#### 6.15.1 Detailed Description

Author

Stanislav Rakitov

#### 6.15.2 Member Function Documentation

### 6.15.2.1 `getItemsToRate()`

```
ArrayList< String > ull.RecommendationRunner.getItemsToRate ( )
```

This method returns a list of movie IDs that will be used to look up the movies in the [MovieDatabase](#) and present them to users to rate.

The movies returned in the list will be displayed on a web page, so the number you choose may affect how long the page takes to load and how willing users are to rate the movies. For example, 10-20 should be fine, 50 or more would be too many.

There are no restrictions on the method you use to generate this list of movies: the most recent movies, movies from a specific genre, randomly chosen movies, or simply your favorite movies.

The ratings for these movies will make the profile for a new [Rater](#) that will be used to compare to for finding recommendations.

Implements [ull.Recommender](#).

### 6.15.2.2 `printRecommendationsFor()`

```
void ull.RecommendationRunner.printRecommendationsFor (
    String webRaterID )
```

This method returns nothing, but prints out an HTML table of the movies recommended for the given rater.

The HTML printed will be displayed on a web page, so the number you choose to display may affect how long the page takes to load. For example, you may want to limit the number printed to only the top 20-50 movies recommended or to movies not rated by the given rater.

You may also include CSS styling for your table using the `<style>` tag before you print the table. There are no restrictions on which movies you print, what order you print them in, or what information you include about each movie.

#### Parameters

|                   |                                                                                                                                                                                       |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>webRaterID</i> | the ID of a new <a href="#">Rater</a> that has been already added to the <a href="#">RaterDatabase</a> with ratings for the movies returned by the method <code>getItemsToRate</code> |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

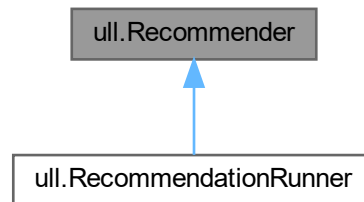
Implements [ull.Recommender](#).

The documentation for this class was generated from the following file:

- `src/main/java/ull/RecommendationRunner.java`

## 6.16 ull.Recommender Interface Reference

Inheritance diagram for ull.Recommender:



### Public Member Functions

- `ArrayList< String > getItemsToRate ()`
- `void printRecommendationsFor (String webRaterID)`

#### 6.16.1 Detailed Description

Implement this interface to allow your code to be integrated with our web site.

When users first visit the recommender website, our code will call the method `getItemsToRate ()` to get a list of movies to display on the web page for users to rate.

When a user submits their ratings, our code will call the method `printRecommendationsFor` to get your recommendations based on the user's ratings. The ID given to this method is for a new [Rater](#) that we have already added to the [RaterDatabase](#) with ratings for the movies returned by the first method. Whatever is printed from that method will be displayed on the web page: HTML, plain text, or debugging information.

#### 6.16.2 Member Function Documentation

##### 6.16.2.1 `getItemsToRate()`

```
ArrayList< String > ull.Recommender.getItemsToRate ( )
```

This method returns a list of movie IDs that will be used to look up the movies in the [MovieDatabase](#) and present them to users to rate.

The movies returned in the list will be displayed on a web page, so the number you choose may affect how long the page takes to load and how willing users are to rate the movies. For example, 10-20 should be fine, 50 or more would be too many.

There are no restrictions on the method you use to generate this list of movies: the most recent movies, movies from a specific genre, randomly chosen movies, or simply your favorite movies.

The ratings for these movies will make the profile for a new [Rater](#) that will be used to compare to for finding recommendations.

Implemented in [ull.RecommendationRunner](#).



### 6.16.2.2 printRecommendationsFor()

```
void ull.Recommender.printRecommendationsFor (
    String webRaterID )
```

This method returns nothing, but prints out an HTML table of the movies recommended for the given rater.

The HTML printed will be displayed on a web page, so the number you choose to display may affect how long the page takes to load. For example, you may want to limit the number printed to only the top 20-50 movies recommended or to movies not rated by the given rater.

You may also include CSS styling for your table using the `<style>` tag before you print the table. There are no restrictions on which movies you print, what order you print them in, or what information you include about each movie.

#### Parameters

|                   |                                                                                                                                                                                       |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>webRaterID</i> | the ID of a new <a href="#">Rater</a> that has been already added to the <a href="#">RaterDatabase</a> with ratings for the movies returned by the method <code>getItemsToRate</code> |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

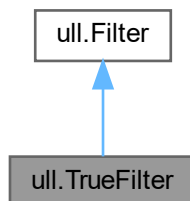
Implemented in [ull.RecommendationRunner](#).

The documentation for this interface was generated from the following file:

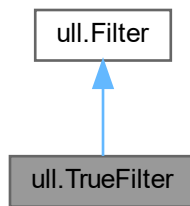
- `src/main/java/ull/Recommender.java`

## 6.17 ull.TrueFilter Class Reference

Inheritance diagram for `ull.TrueFilter`:



Collaboration diagram for ull.TrueFilter:



## Public Member Functions

- boolean [satisfies](#) (String id)

### 6.17.1 Member Function Documentation

#### 6.17.1.1 satisfies()

```
boolean ull.TrueFilter.satisfies (  
    String id )
```

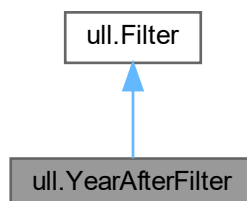
Implements [ull.Filter](#).

The documentation for this class was generated from the following file:

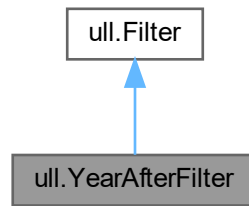
- `src/main/java/ull/TrueFilter.java`

## 6.18 ull.YearAfterFilter Class Reference

Inheritance diagram for ull.YearAfterFilter:



Collaboration diagram for ull.YearAfterFilter:



## Public Member Functions

- [YearAfterFilter](#) (int year)
- boolean [satisfies](#) (String id)

### 6.18.1 Constructor & Destructor Documentation

#### 6.18.1.1 YearAfterFilter()

```
ull.YearAfterFilter.YearAfterFilter (
    int year )
```

### 6.18.2 Member Function Documentation

#### 6.18.2.1 satisfies()

```
boolean ull.YearAfterFilter.satisfies (
    String id )
```

Implements [ull.Filter](#).

The documentation for this class was generated from the following file:

- `src/main/java/ull/YearAfterFilter.java`



## Chapter 7

# File Documentation

### 7.1 `src/main/java/ull/AllFilters.java` File Reference

#### Classes

- class [ull.AllFilters](#)

#### Packages

- package [ull](#)

### 7.2 `src/main/java/ull/DirectorsFilter.java` File Reference

#### Classes

- class [ull.DirectorsFilter](#)

#### Packages

- package [ull](#)

### 7.3 `src/main/java/ull/EfficientRater.java` File Reference

#### Classes

- class [ull.EfficientRater](#)

#### Packages

- package [ull](#)

## 7.4 src/main/java/ull/Filter.java File Reference

### Classes

- interface [ull.Filter](#)

### Packages

- package [ull](#)

## 7.5 src/main/java/ull/FirstRatings.java File Reference

### Classes

- class [ull.FirstRatings](#)

### Packages

- package [ull](#)

## 7.6 src/main/java/ull/FourthRatings.java File Reference

### Classes

- class [ull.FourthRatings](#)

### Packages

- package [ull](#)

## 7.7 src/main/java/ull/GenreFilter.java File Reference

### Classes

- class [ull.GenreFilter](#)

### Packages

- package [ull](#)

## 7.8 src/main/java/ull/MinutesFilter.java File Reference

### Classes

- class [ull.MinutesFilter](#)

### Packages

- package [ull](#)

## 7.9 src/main/java/ull/Movie.java File Reference

### Classes

- class [ull.Movie](#)

### Packages

- package [ull](#)

## 7.10 src/main/java/ull/MovieDatabase.java File Reference

### Classes

- class [ull.MovieDatabase](#)

### Packages

- package [ull](#)

## 7.11 src/main/java/ull/MovieRunnerSimilarRatings.java File Reference

### Classes

- class [ull.MovieRunnerSimilarRatings](#)

### Packages

- package [ull](#)

## 7.12 src/main/java/ull/Rater.java File Reference

### Classes

- interface [ull.Rater](#)

### Packages

- package [ull](#)

## 7.13 src/main/java/ull/RaterDatabase.java File Reference

### Classes

- class [ull.RaterDatabase](#)

### Packages

- package [ull](#)

## 7.14 src/main/java/ull/Rating.java File Reference

### Classes

- class [ull.Rating](#)

### Packages

- package [ull](#)

## 7.15 src/main/java/ull/RecommendationRunner.java File Reference

### Classes

- class [ull.RecommendationRunner](#)

### Packages

- package [ull](#)



## 7.16 src/main/java/ull/Recommender.java File Reference

### Classes

- interface [ull.Recommender](#)

### Packages

- package [ull](#)

## 7.17 src/main/java/ull/TrueFilter.java File Reference

### Classes

- class [ull.TrueFilter](#)

### Packages

- package [ull](#)

## 7.18 src/main/java/ull/YearAfterFilter.java File Reference

### Classes

- class [ull.YearAfterFilter](#)

### Packages

- package [ull](#)

