

# Unit III Project

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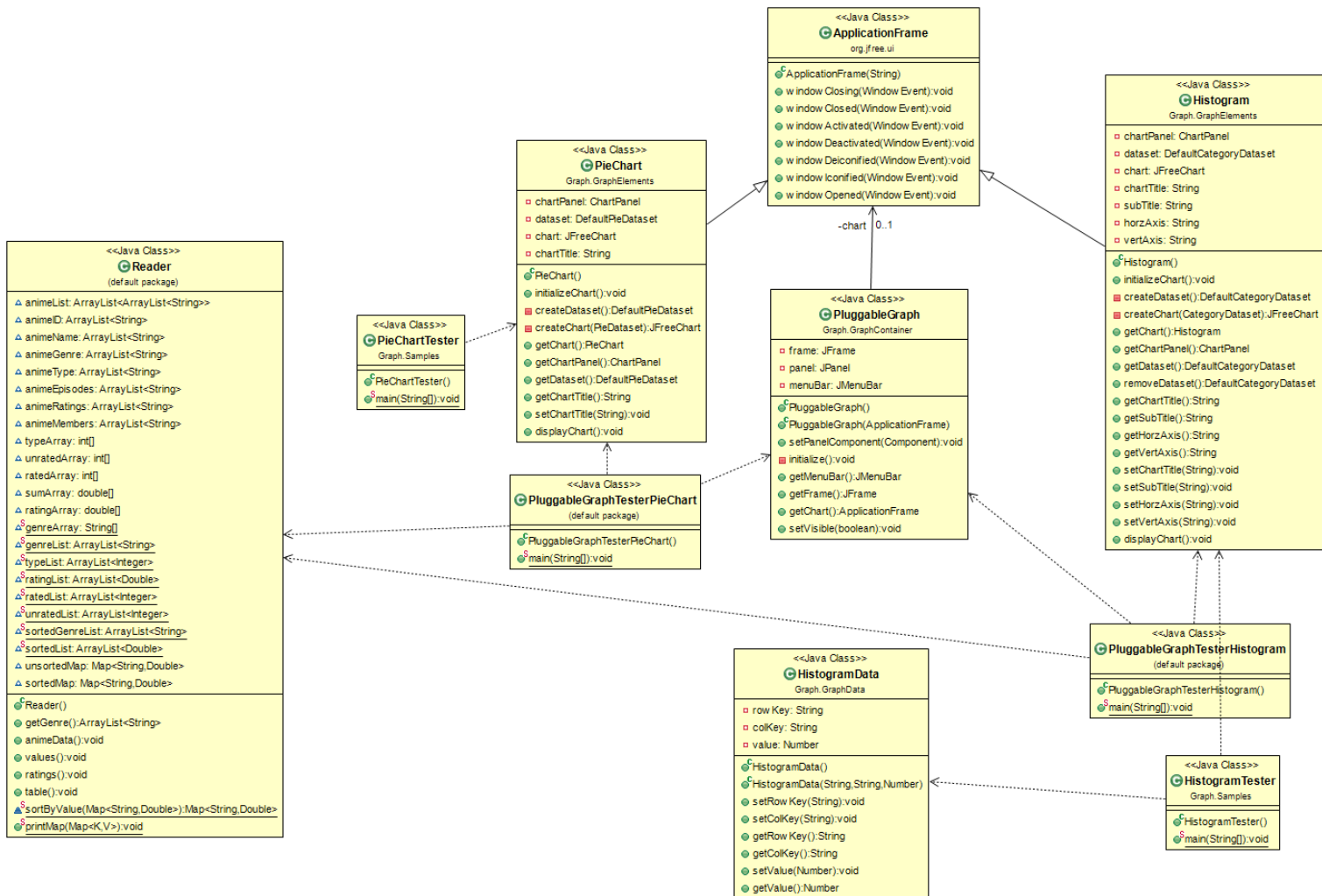
## Pseudocode

```
for i: to array length:i++  
    double ratenumber:=0  
    If (ratings is empty AND genre(i) contains genre(j))  
        ratenumber := 0  
        unratedArray[j] := unratedarray +1  
    else if( genre(i) contains genre(j))  
        ratenumber := ratings(i);  
        ratedArray[j] +=1
```
























For loop in Reader.java under ratings() method

- The loops gets the total number of times each genre was rated and how many times it was not rated.

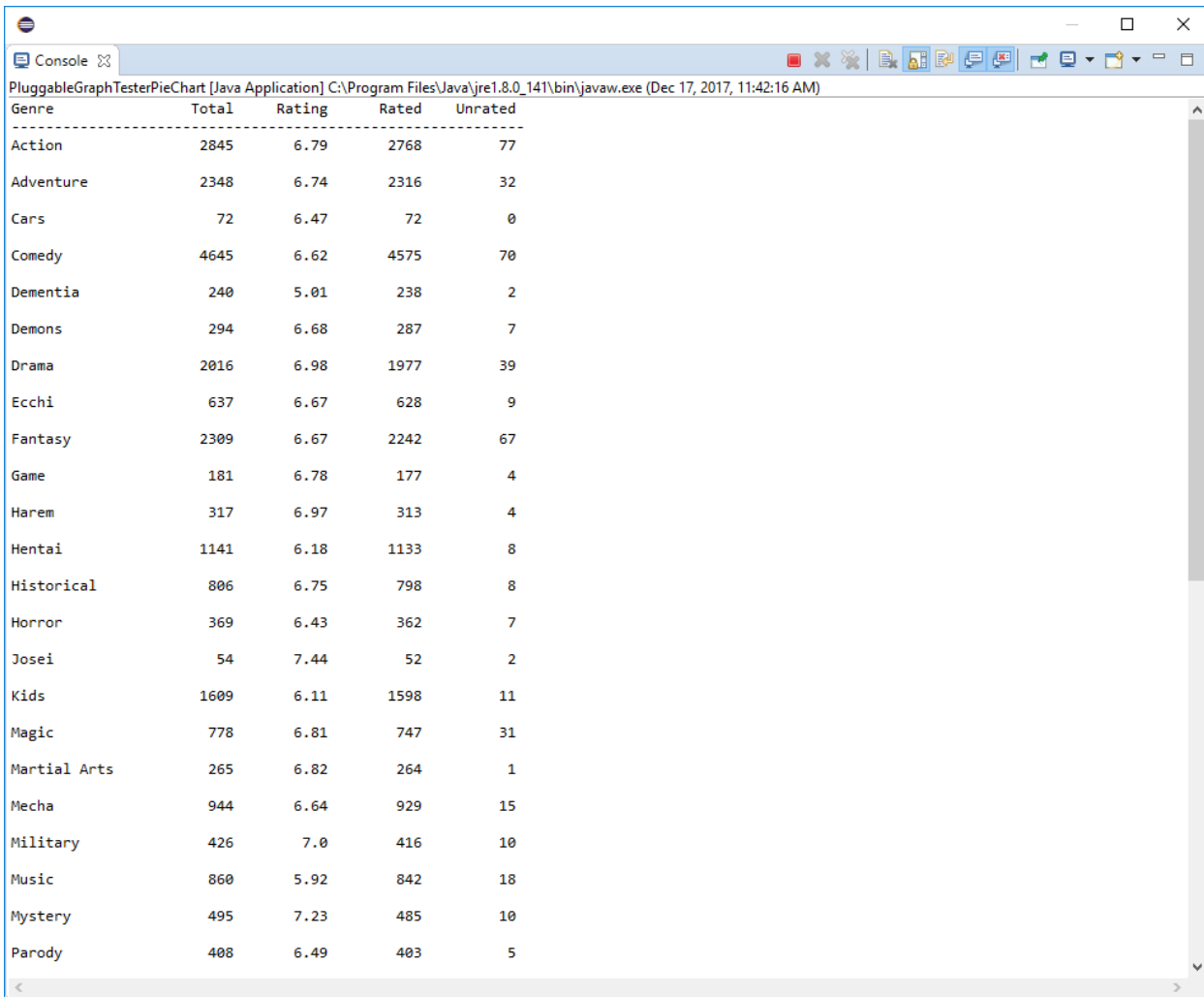
# UML



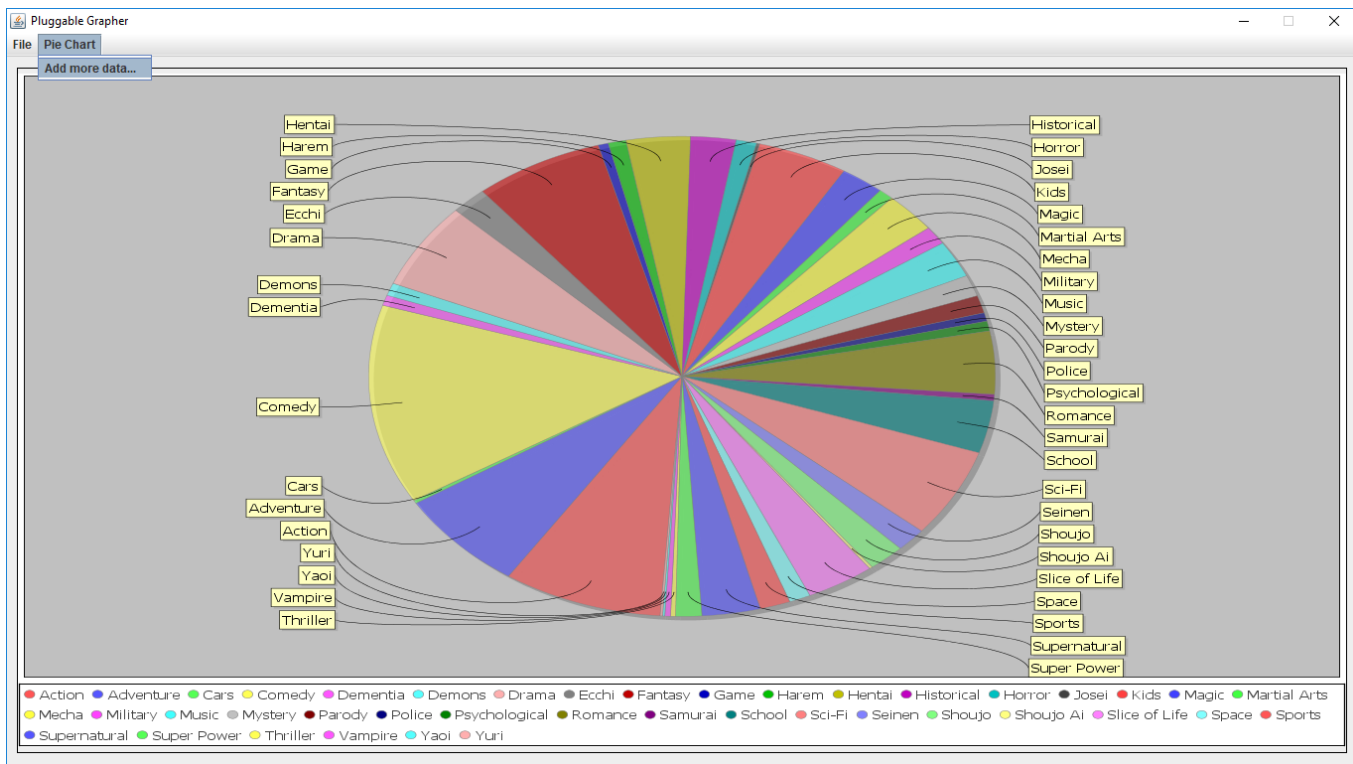
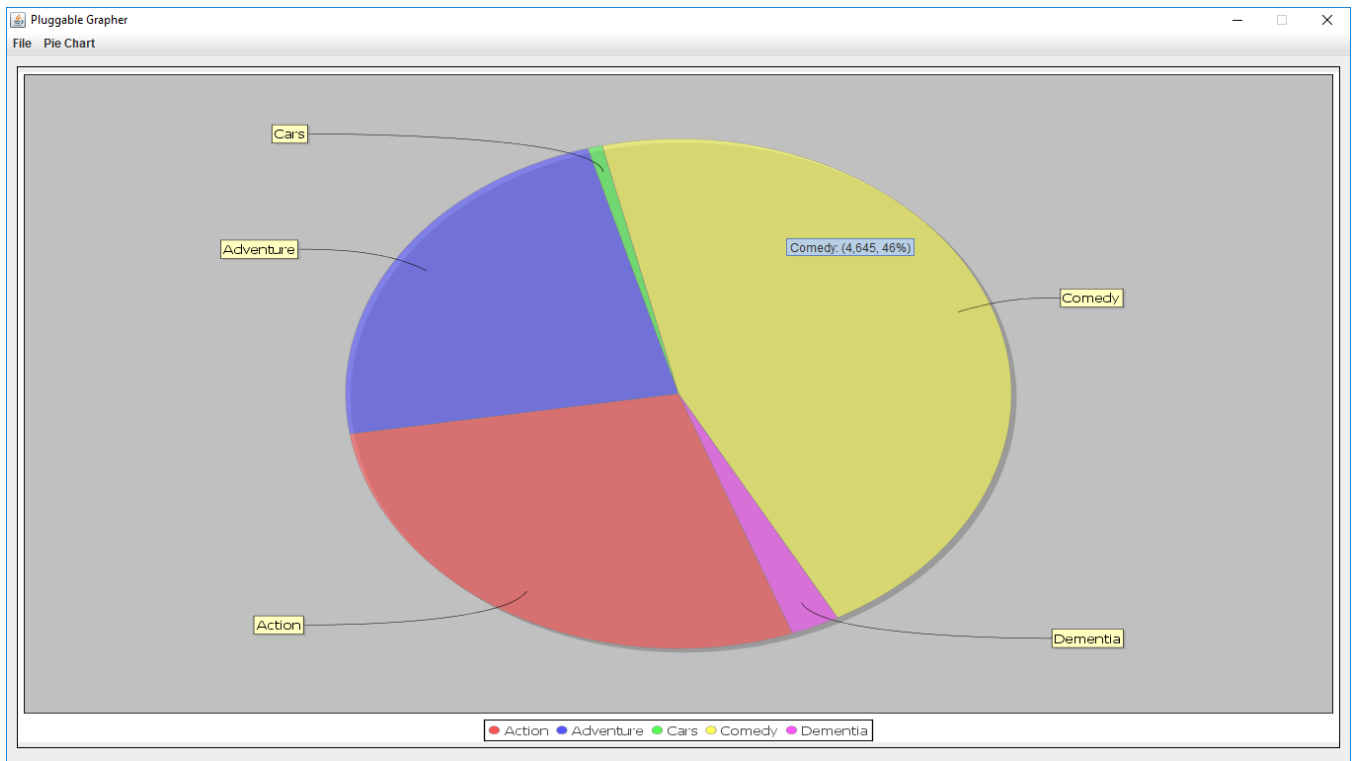
Source code attached as “Graph”.

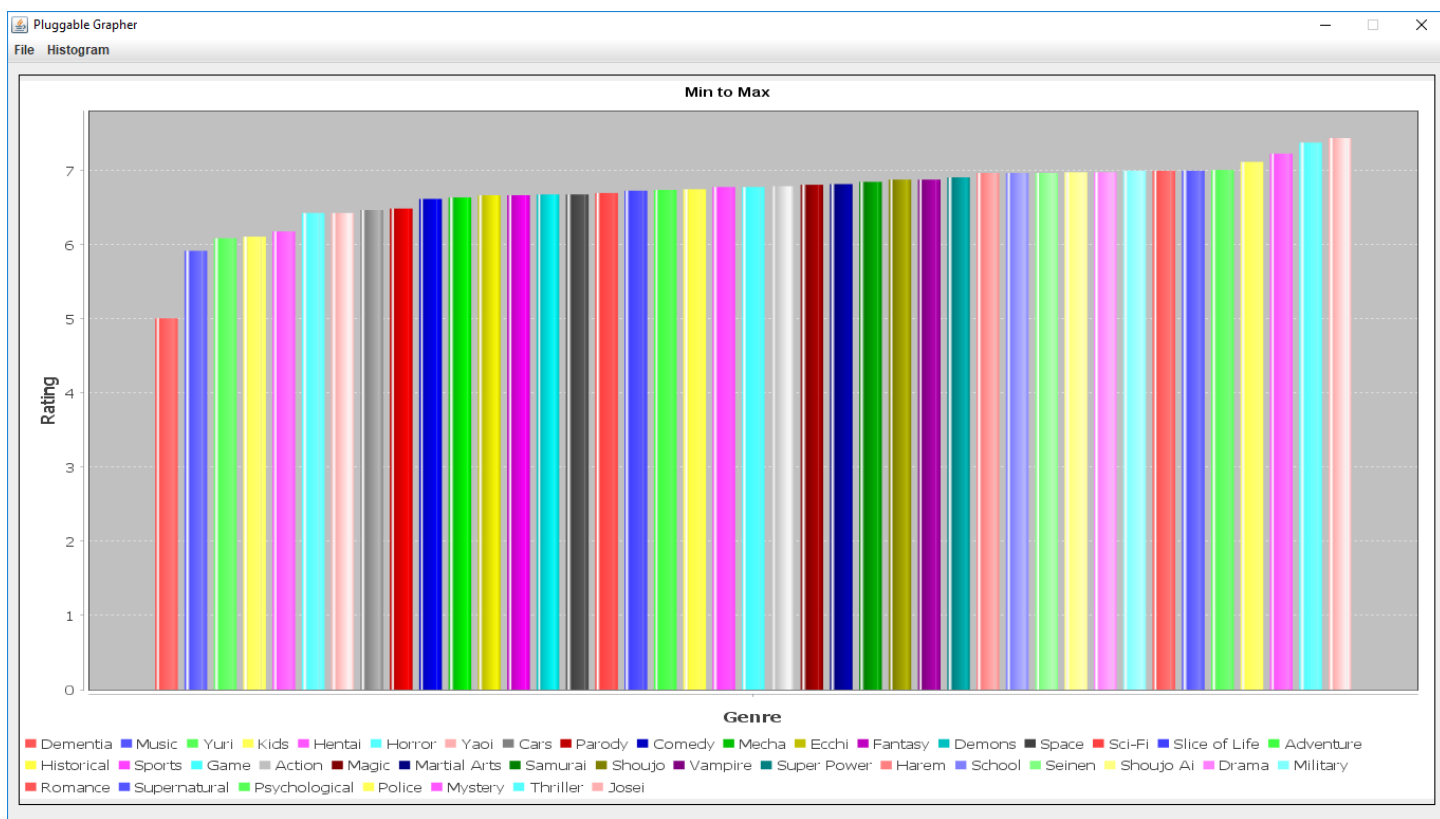
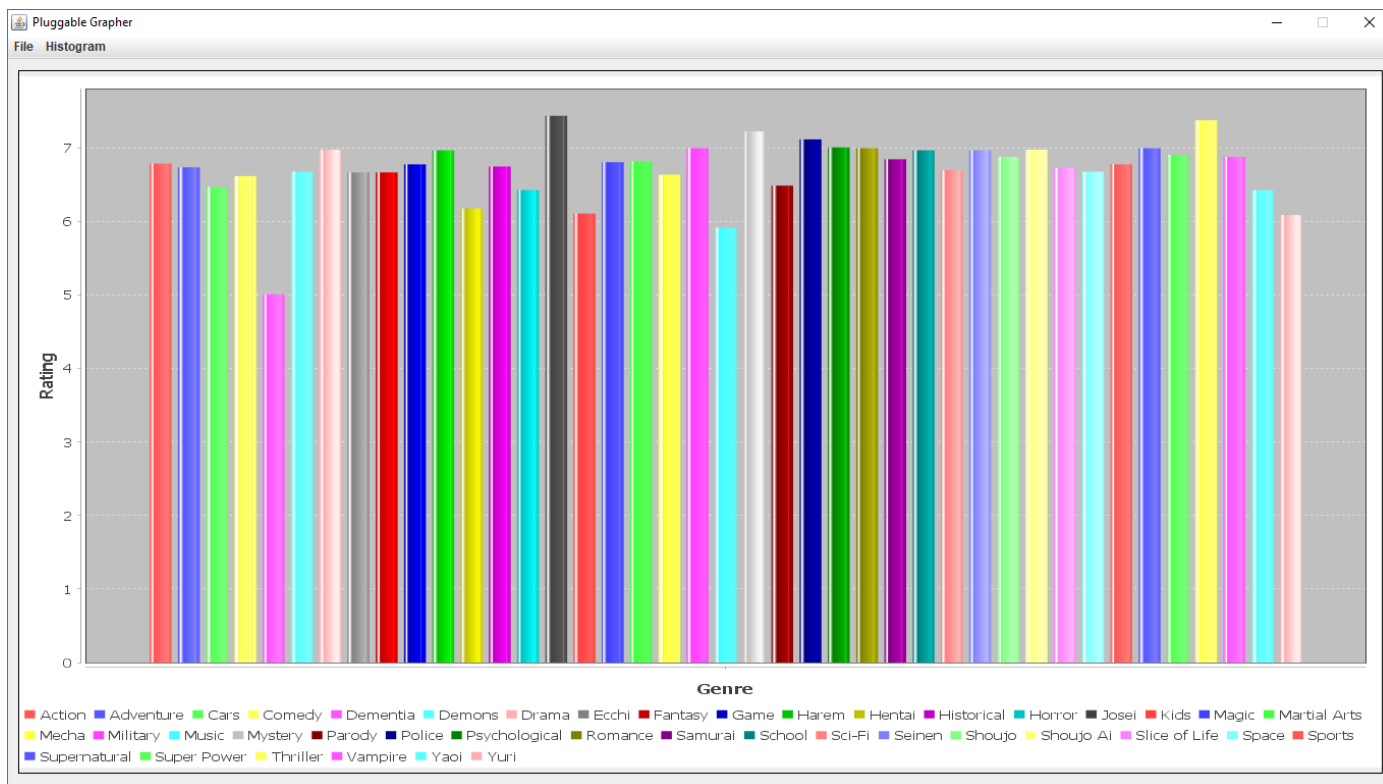
- ▼  Graph
  - ▼  src
    - ▼  (default package)
      - >  PluggableGraphTesterHistogram.java
      - >  PluggableGraphTesterPieChart.java
      - >  Reader.java
    - ▼  Graph.GraphContainer
      - >  PluggableGraph.java
    - ▼  Graph.GraphData
      - >  FunctionGrapherData.java
      - >  HistogramData.java
    - ▼  Graph.GraphElements
      - >  FunctionGrapher.java
      - >  Histogram.java
      - >  PieChart.java
    - ▼  Graph.Samples
      - >  FunctionGrapherTester.java
      - >  HistogramTester.java
      - >  PieChartTester.java
  - >  JRE System Library [JavaSE-1.8]
  - >  Referenced Libraries
  - >  lib
    -  anime.txt

## Program Output:



Genre	Total	Rating	Rated	Unrated
Action	2845	6.79	2768	77
Adventure	2348	6.74	2316	32
Cars	72	6.47	72	0
Comedy	4645	6.62	4575	70
Dementia	240	5.01	238	2
Demons	294	6.68	287	7
Drama	2016	6.98	1977	39
Ecchi	637	6.67	628	9
Fantasy	2309	6.67	2242	67
Game	181	6.78	177	4
Harem	317	6.97	313	4
Hentai	1141	6.18	1133	8
Historical	806	6.75	798	8
Horror	369	6.43	362	7
Josei	54	7.44	52	2
Kids	1609	6.11	1598	11
Magic	778	6.81	747	31
Martial Arts	265	6.82	264	1
Mecha	944	6.64	929	15
Military	426	7.0	416	10
Music	860	5.92	842	18
Mystery	495	7.23	485	10
Parody	408	6.49	403	5





Package Explorer

- AdvancedPortfolioManager
- Emilia
- Exam-Practical
- FileException
- FinalExamPractical
- FMML
- FMML2
- Graph
  - src
    - (default package)
      - PluggableGraphTesterFunctionGrapher.java
      - PluggableGraphTesterHistogram.java
      - PluggableGraphTesterPieChart.java
    - Graph.Container
      - PluggableGrapher.java
    - Graph.Data
      - FunctionGrapherData.java
      - HistogramData.java
    - Graph.Elements
      - FunctionGrapher.java
      - Histogram.java
      - PieChart.java
    - Graph.Samples
      - FunctionGrapherTester.java
      - HistogramTester.java
      - PieChartTester.java
    - Other
      - Reader.java
- JRE System Library [JavaSE-1.8]
- Referenced Libraries
- lib
- anime.txt
- InputOutput
  - src
    - (default package)
      - InputOutput.java
- JRE System Library [JavaSE-1.8]
- milkshake.txt
- reviewfinal
- Test
- Unit 2 Practical
- Unit II Project

PluggableGr... PluggableGr... FunctionGra... HistogramDa... FunctionGra... InputOutput... Reader.java

```
17 // Create the Scanner object and scope to the entire main method
18 Scanner in = null;
19
20 try {
21     // Try to open the file
22     in = new Scanner(file);
23
24     try {
25         // Read in the data one line at a time
26         //System.out.println(in.nextLine());
27
28         while(in.hasNextLine()) {
29             // Do something with this String
30             //in.nextLine();
31             String input = in.nextLine();
32             String[] wordsArray = input.split("\t");
33             String animeID = wordsArray[0];
34             String animeName = wordsArray[1];
35             String animeGenre = wordsArray[2];
36             String animeType = wordsArray[3];
37             String animeEpisodes = wordsArray[4];
38             String animeRating = wordsArray[5];
39             String animeMembers = wordsArray[6];
40             System.out.println("Anime ID: " + animeID);
41             System.out.println("Name: " + animeName);
42             System.out.println("Genre: " + animeGenre);
43             System.out.println("Type: " + animeType);
44             System.out.println("Episodes: " + animeEpisodes);
45             System.out.println("Rating: " + animeRating);
46             System.out.println("Members: " + animeMembers);
47             System.out.println();
48         }
49
50         // Fix anything that broke and clean up
51     } catch (NoSuchElementException e) {
52         System.err.println("Record Error: " + e.getMessage());
53     } catch (IndexOutOfBoundsException e) {
54         System.err.println("Parse Error: " + e.getMessage());
55     } catch (NumberFormatException e) {
56         System.err.println("Data Error: " + e.getMessage());
57     } finally {
58         in.close();
59     }
60 }
```

Console

<terminated> Reader [Java Application] C:\Program Files\Java\jre1.8.0\_141\bin\javaw.exe (Dec 16, 2017, 7:55:03 PM)

Anime ID: 5543  
Name: Under World  
Genre: Hentai  
Type: OVA  
Episodes: 1  
Rating: 4.28  
Members: 183

Anime ID: 5621  
Name: Violence Gekiga David no Hoshi  
Genre: Hentai  
Type: OVA  
Episodes: 4  
Rating: 4.88  
Members: 219

Anime ID: 6133  
Name: Violence Gekiga Shin David no Hoshi: Inma Densetsu  
Genre: Hentai  
Type: OVA  
Episodes: 1  
Rating: 4.98  
Members: 175

Anime ID: 26081  
Name: Yasuji no Pornorama: Yacchimaee!!  
Genre: Hentai  
Type: Movie  
Episodes: 1  
Rating: 5.46  
Members: 142

Problems

Description	Resource	Path	Location	Type
0 items				

Updates Available

Activate Windows



Super Power	465	6.91	451	14
Thriller	87	7.38	86	1
Vampire	102	6.88	100	2
Yaoi	39	6.43	38	1
Yuri	42	6.09	41	1

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Total:	34557	7.0	33897	660
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## Sorted List By Rating

Key : Dementia Value : 5.01  
 Key : Music Value : 5.92  
 Key : Yuri Value : 6.09  
 Key : Kids Value : 6.11  
 Key : Hentai Value : 6.18  
 Key : Horror Value : 6.43  
 Key : Yaoi Value : 6.43  
 Key : Cars Value : 6.47  
 Key : Parody Value : 6.49  
 Key : Comedy Value : 6.62  
 Key : Mecha Value : 6.64  
 Key : Ecchi Value : 6.67  
 Key : Fantasy Value : 6.67  
 Key : Demons Value : 6.68  
 Key : Space Value : 6.68  
 Key : Sci-Fi Value : 6.7  
 Key : Slice of Life Value : 6.73  
 Key : Adventure Value : 6.74  
 Key : Historical Value : 6.75  
 Key : Sports Value : 6.78  
 Key : Game Value : 6.78  
 Key : Action Value : 6.79  
 Key : Magic Value : 6.81  
 Key : Martial Arts Value : 6.82  
 Key : Samurai Value : 6.85  
 Key : Shoujo Value : 6.88  
 Key : Vampire Value : 6.88  
 Key : Super Power Value : 6.91  
 Key : Harem Value : 6.97  
 Key : School Value : 6.97  
 Key : Seinen Value : 6.97  
 Key : Shoujo Ai Value : 6.98  
 Key : Drama Value : 6.98

# Hypothesis

## What is the most popular genre in anime?

The anime.txt dataset contains data about:

- Anime ID Number
- Anime Title
- Anime Genre
- Anime Type
- Anime Episodes
- Anime Rating
- Anime Members

I took all of this data and separated each anime by Genre. The following information resulted.

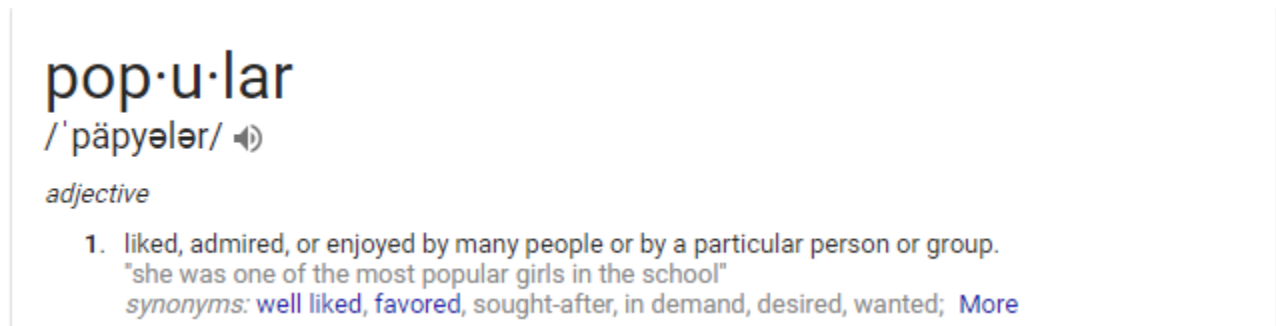
- **Total Anime:** 34557
  - **Total number of genres:** 40
  - **Genre containing most Anime:**
    - Comedy (4645)
      - **Rating:** 6.62
      - Rated 4575 times.
      - Unrated 70 times.
  - **Genre containing least Anime:**
    - Yaoi (39)
      - **Rating:** 6.43
      - Rated 38 times.
      - Unrated 1 times.
  - **Highest rated genre:**
    - Josei (54)
      - **Rating:** 7.44
      - Rated 52 times.
      - Unrated 2 times.
  - **Lowest rated genre:**
    - Dementia (240)
      - **Rating:** 5.01
      - Rated 238 times.
      - Unrated 2 times.

With this information we can see that the **most popular** genre in anime is **Comedy** according to *absolute* data. It is the genre that contains the most Anime along as the most ratings.

**Yaoi** has the **least** Anime.

However, if we consider *relative* data, we can see that the genre **Josei** has the **highest** rating ranking out of all the other genres.

**Dementai** has the **lowest** rating.



**Conclusion:** Comedy is the most popular genre in anime since it is the genre with that has the most amount Anime and a relatively high rating of 6.62 among 4575 ratings.