

From: Madeline Rosenberg, Database Manager
 To: Mr. Schwartz, Chief Strategist
 Date: 20 Apr 2021
 Hello David,

Dear Mr. Schwartz,

Thank you for reaching out with this opportunity to assist with executive level decisions. I would be happy to assist you with your data questions.

To answer your first question, below I have provided a table of the number of available movies on each platform. Please note, about 40 movies overlap between multiple platforms, so the total sum of movies in the table is greater than the number of records in the data set (100 movies).

Netflix Count	Prime Count	Hulu Count	Disney Plus Count
<u>51</u>	45	24	20

As you can see, **Netflix has the most movies with 51 films**. The distribution of movies is that Netflix and Prime have approximately 50 films each whereas have much less with around 20 films each.

If you would like, I could provide a chart of how many and which movies are available between platforms. I decided not to provide this information because I did not think it would provide additional help for determining partnership prospects. But if you think it would be helpful, I would be happy to provide that information if you reach out and let me know.

As for your second question, I took 'most enjoyable' content to mean the highest average rating of movies by platform. Since there are two types of ratings in the data set, IMDb and Rotten Tomato, I looked into both. I found Hulu had the highest average Rotten Tomato rating with 61.8% and the highest average IMDb rating at 6.95. An IMDb score of 6.95 converted to a Rotten Tomato rating is about a 69.5% rating. This means that about 61.8% of reviewers and 69.5% of reviewers on average found Hulu enjoyable, despite having less content than Netflix or Prime. In my opinion, this demonstrates **Hulu is the most enjoyable platform** and provides *high-quality* content. Here is a table:

	Netflix Rating	Prime Rating	Hulu Rating	Disney Plus Rating
Rotten Tomato:	57.6%	45.8%	<u>61.8%</u>	61.5%
IMDb:	<u>6.67</u>	5.94	<u>6.95</u>	5.87

From my analysis, it appears **Netflix has the most underrepresented countries included on its service** (defined when a country only appears once in our data set). **Netflix has six unique countries represented:** West Germany, Malawi, Mexico, South Africa, India, and Bulgaria. Hulu has three unique countries while Prime has two and Disney Plus has none. I believe it is important to consider when comparing platform country diversity that India is a popular movie producer that just may not have been well represented in our data set. Below is a table. If a movie's country of origin is on a given platform, that platform will have a 1:

	Netflix	Prime	Hulu	Disney Plus
West Germany	1	1	0	0
Malawi	1	1	0	0
Mexico	1	0	0	0
South Africa	1	0	0	0
India	1	0	0	0
Bulgaria	1	0	0	0
Sweden	0	0	1	0
Luxembourg	0	0	1	0

Colombia	0	0	1	0
----------	---	---	---	---

In your next question, I interpret adult audiences as films intended for 16 years and older, which is similar to US's R rating. My definition of young children is all or 7+, which is similar to G and PG in the US. In the table below, I also provide the number of movies intended for 13+ year old audiences so you can have a full view of the number of movies in this data set by age category.

	Young Children (<13)	Older Children (13-15)	Adults (>=16)
Count	31	14	21
Country	United States	United States	United States

The most popular country for every age category is the United States, which makes sense considering Hollywood, USA is a major global influencer of the film industry. **Young children (under 13 years old) represented 31 movies, 10 more than adults (16 years old and older) represent in the data set.**

I chose to look at IMDb ratings to base the most popular genre in the dataset, since the scale is smaller at between 1 to 10 as opposed to Rotten Tomato's 1 to 100 system. The **most popular genre was drama** while **the least popular was horror**. I have provided a screenshot of the database tables, to ensure you that the years are not returned by the query attached in the separate query document. Just for your information, the years are in ascending order and some titles repeat for each language in which they are available.

Most Popular Genre:

	title	language	genre
1	Taxi Driver	Spanish	Drama
2	Taxi Driver	English	Drama
3	Free Willy 2: The Adventure Home	Finnish	Drama
4	Free Willy 2: The Adventure Home	Indonesian	Drama
5	Free Willy 2: The Adventure Home	Dutch	Drama
6	Free Willy 2: The Adventure Home	English	Drama
7	The Secret	English	Drama
8	One Day	English	Drama
9	We Need to Talk About Kevin	English	Drama
10	Just 45 Minutes from Broadway	English	Drama
11	Ultrasonic	English	Drama
12	A Perfect Man	English	Drama
13	Enemy	English	Drama
14	Starred Up	English	Drama
15	The M Word	English	Drama
16	A Family Man	English	Drama
17	At First Light	English	Drama
18	Change in the Air	English	Drama
19	Gemini	English	Drama
20	A Quiet Place	English	Drama
21	White Fang	English	Drama
22	Spinning Man	English	Drama
23	Mirage	Spanish	Drama
24	Running with the Devil	Spanish	Drama
25	Running with the Devil	English	Drama
26	Run the Race	English	Drama
27	The Boy Who Harnessed the Wind	English	Drama
28	The Boy Who Harnessed the Wind	Nyanja	Drama
29	The Boy Who Harnessed the Wind	Arabic	Drama

Least Popular Genre:

	title	language	genre
1	Reverb	English	Horror
2	The Cabin in the Woods	Japanese	Horror
3	The Cabin in the Woods	English	Horror
4	The Alchemist Cookbook	English	Horror
5	The Darkness	Italian	Horror
6	The Darkness	French	Horror
7	The Darkness	English	Horror
8	Day of the Dead: Bloodline	English	Horror

I found **two holiday movies and two Steven Spielberg movies in the data set** based on your criteria. Groundhogs Day is another holiday related movie you should be aware of, but I did not include it in the returned table since it is not a national holiday, nor was it part of your requested holiday keywords. Since Hanukkah is spelled many different ways in English – sometimes with a ‘c’, other times without a ‘c’, sometimes with two ‘n’s or one ‘n’, and sometimes with two ‘k’s or one ‘k’—I made sure to account for all those scenarios in the query.

Here is a table of the movies and their respective platform availability information:

Title	Director First name	Director Last name	Netflix	Prime	Hulu	Disney
The Chanukkah Candles	Roman	Polanski	1	1	0	0
Raiders of the Lost Ark	Steven	Spielberg	1	0	0	0
Indiana Jones and the Last Crusade	Steven		1	0	0	0
Halloweentown	Duwayne	Dunham	0	0	0	1

You inquired about the platform with the most family movies. Unfortunately, there are only seven movies in the data set under the family genre of which is not a lot to base the distinction of “family friendliest” platform. However, all the family genre movies are in Disney Plus and Disney tends to market movies to children and families. I assume **Disney Plus would be the most family friendly** based on what I know about the target market of Disney’s films.

I define one ranking system as much higher than another if it is at least 40%, or 4 points, score difference (plus or minus). To calculate the difference in scores, I standardized movie ratings to conform to Rotten Tomato’s percent system. I have provided additional movie information such as the original IMDb and Rotten Tomato scores, the movie country of origin, and genre to give you a better idea of the characteristics of these films. **The 18 films are listed in the image below.**

	name	rating_difference	rotten_tomato	imdb	country	genre
1	The Darkness	41	3	4.4	Italy	Horror
2	Ultrasonic	42	13	5.5	United States	Drama
3	The Pink Panther 2	43	13	5.6	United States	Action
4	Change in the Air	43	11	5.4	United States	Drama
5	The Reunion	44	8	5.2	United Kingdom	Comedy
6	Blank Check	44	9	5.3	United States	Comedy
7	Playing It Cool	46	14	6	United States	Comedy
8	The Boy Who Harnessed the Wind	46	30	7.6	Malawi	Drama
9	The Do-Over	48	9	5.7	United States	Action
10	Yours, Mine & Ours	49	6	5.5	United States	Comedy
11	It Takes Two	51	8	5.9	United States	Comedy
12	The Cabin in the Woods	52	92	4	United States	Horror
13	The King's Speech	55	25	8	United Kingdom	Biography
14	One Day	63	36	9.9	United States	Drama
15	Free Willy 2: The Adventure Home	68	31	9.9	Luxembourg	Drama
16	A Family Man	73	13	8.6	Canada	Drama
17	Major League II	85	5	9	United States	Comedy
18	Just 45 Minutes from Broadway	85	10	9.5	United States	Drama

I have no problem helping you with your personal questions as well. Hopefully I can assist you and your son's bonding experience. I based the movie approval rate on Rotten Tomato scores since you mentioned a 75% approval baseline, the same units of the Rotten Tomato rating. There is one movie that meets your criteria called The Super; however, sir I must warn you this film is intended for mature audiences with a recommended viewer age of 18+ years old. For more information about the movie, please refer to the table below:

Title	Genre	Rotten Tomato	Language	Runtime	Age Category
The Super	Thriller	90	English	90	18+

As for your last question, I did not know your threshold for "terrible", so I picked the three lowest Rotten Tomato rated films in the data set, so you have a selection to choose from. I broke ties, in situations where multiple movies had the same Rotten Tomato rating, with the IMDb rating. I assumed by "foreign" to you meant anywhere outside of the United States. I returned the film title, the movie's country of origin, and the Rotten Tomato rating so you can brag about how terrible it is to your colleagues. The most terribly rated, foreign horror film is The Darkness from Italy with a 3% Rotten Tomato score. Hopefully the table below provides you some fitting options:

Title	Rotten Tomato	Country
The Darkness	3	Italy
Reverb	9	United Kingdom
Day of the Dead: Bloodline	13	Bulgaria

If you would like my process for obtaining this information, I encourage you Mr. Schwartz to refer to the attached queries document. Feel free to reach out if you have any follow-up questions or any additional requests.

Sincerely,
Madeline