

Educational Project

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# Data Analysis - Naruto Shippuden



# DATASET

Data extraction from the webpage to perform a descriptive and exploratory analysis of:

<https://www.kaggle.com/code/mariaglezhfhfhf/naruto-shippuden-dataset>

The dataset provides the following information, explored at a glance using the notepad tool:

```
[{"Num_episode":1,"Title":"Homecoming","Type":"Mixed Canon/Filler","Year_launch":8.2,728,"Rate":8.2,728,"Votes":8.2,728,"Saga":"Kazekage Rescue","Airdate":"2007-02-15"}, {"Num_episode":2,"Title":"The Akatsuki Makes Its Move","Type":"Mixed Canon/Filler","Year_launch":8.2,575,"Rate":8.2,575,"Votes":8.2,575,"Saga":"Kazekage Rescue","Airdate":"2007-02-15"}, {"Num_episode":3,"Title":"The Results of Training","Type":"Mixed Canon/Filler","Year_launch":8.2,508,"Rate":8.2,508,"Votes":8.2,508,"Saga":"Kazekage Rescue","Airdate":"2007-02-22"}, {"Num_episode":4,"Title":"The Jinchuriki of the Sand","Type":"Mixed Canon/Filler","Year_launch":8.2,517,"Rate":8.2,517,"Votes":8.2,517,"Saga":"Kazekage Rescue","Airdate":"2007-03-01"}, {"Num_episode":5,"Title":"The Kazekage Stands Tall","Type":"Mixed Canon/Filler","Year_launch":8.2,486,"Rate":8.2,486,"Votes":8.2,486,"Saga":"Kazekage Rescue","Airdate":"2007-03-15"}, {"Num_episode":6,"Title":"Mission Cleared","Type":"Mixed Canon/Filler","Year_launch":8.2,480,"Rate":8.2,480,"Votes":8.2,480,"Saga":"Kazekage Rescue","Airdate":"2007-03-29"}, {"Num_episode":7,"Title":"Run, Kankuro","Type":"Mixed Canon/Filler","Year_launch":7.8,457,"Rate":7.8,457,"Votes":7.8,457,"Saga":"Kazekage Rescue","Airdate":"2007-03-29"}, {"Num_episode":8,"Title":"Team Kakashi, Deployed","Type":"Mixed Canon/Filler","Year_launch":7.7,437,"Rate":7.7,437,"Votes":7.7,437,"Saga":"Kazekage Rescue","Airdate":"2007-04-12"}, {"Num_episode":9,"Title":"The Jinchuriki's Tears","Type":"Mixed Canon/Filler","Year_launch":7.6,434,"Rate":7.6,434,"Votes":7.6,434,"Saga":"Kazekage Rescue","Airdate":"2007-04-12"}, {"Num_episode":10,"Title":"Sealing Jutsu: Nine Phantom Dragons","Type":"Mixed Canon/Filler","Year_launch":7.5,424,"Rate":7.5,424,"Votes":7.5,424,"Saga":"Kazekage Rescue","Airdate":"2007-04-19"}, {"Num_episode":11,"Title":"The Medical Ninja's Student","Type":"Mixed Canon/Filler","Year_launch":7.7,425,"Rate":7.7,425,"Votes":7.7,425,"Saga":"Kazekage Rescue","Airdate":"2007-04-26"}, {"Num_episode":12,"Title":"The Retired Granny's Determination","Type":"Mixed Canon/Filler","Year_launch":7.9,425,"Rate":7.9,425,"Votes":7.9,425,"Saga":"Kazekage Rescue","Airdate":"2007-05-03"}, {"Num_episode":13,"Title":"A Meeting With Destiny","Type":"Mixed Canon/Filler","Year_launch":8.1,432,"Rate":8.1,432,"Votes":8.1,432,"Saga":"Kazekage Rescue","Airdate":"2007-05-10"}, {"Num_episode":14,"Title":"Naruto's Growth","Type":"Mixed Canon/Filler","Year_launch":8.3,452,"Rate":8.3,452,"Votes":8.3,452,"Saga":"Kazekage Rescue","Airdate":"2007-05-17"}, {"Num_episode":15,"Title":"The Secret Weapon is Called...","Type":"Mixed Canon/Filler","Year_launch":8.4,447,"Rate":8.4,447,"Votes":8.4,447,"Saga":"Kazekage Rescue","Airdate":"2007-05-24"}, {"Num_episode":16,"Title":"The Secret of Jinchuriki","Type":"Mixed Canon/Filler","Year_launch":7.6,403,"Rate":7.6,403,"Votes":7.6,403,"Saga":"Kazekage Rescue","Airdate":"2007-05-31"}, {"Num_episode":17,"Title":"The Death of Gaara","Type":"Mixed Canon/Filler","Year_launch":7.8,405,"Rate":7.8,405,"Votes":7.8,405,"Saga":"Kazekage Rescue","Airdate":"2007-06-07"}, {"Num_episode":18,"Title":"Charge Tactics! Button Hook Entry!!","Type":"Mixed Canon/Filler","Year_launch":7.7,407,"Rate":7.7,407,"Votes":7.7,407,"Saga":"Kazekage Rescue","Airdate":"2007-06-21"}, {"Num_episode":19,"Title":"Traps Activate! Team Guy's Enemies","Type":"Mixed Canon/Filler","Year_launch":7.8,399,"Rate":7.8,399,"Votes":7.8,399,"Saga":"Kazekage Rescue","Airdate":"2007-07-05"}, {"Num_episode":20,"Title":"Hiruko vs. Two Kunoichi","Type":"Manga Canon","Year_launch":8.1,427,"Rate":8.1,427,"Votes":8.1,427,"Saga":"Kazekage Rescue","Airdate":"2007-07-19"}, {"Num_episode":21,"Title":"Sasori's Real Face","Type":"Manga Canon","Year_launch":8.1,421,"Rate":8.1,421,"Votes":8.1,421,"Saga":"Kazekage Rescue","Airdate":"2007-07-26"}, {"Num_episode":22,"Title":"Chiyu's Secret Skills","Type":"Manga Canon","Year_launch":7.9,413,"Rate":7.9,413,"Votes":7.9,413,"Saga":"Kazekage Rescue","Airdate":"2007-08-02"}, {"Num_episode":23,"Title":"Father and Mother","Type":"Manga Canon","Year_launch":7.9,410,"Rate":7.9,410,"Votes":7.9,410,"Saga":"Kazekage Rescue","Airdate":"2007-08-02"}, {"Num_episode":24,"Title":"The Third Kazekage","Type":"Mixed Canon/Filler","Year_launch":8.1,418,"Rate":8.1,418,"Votes":8.1,418,"Saga":"Kazekage Rescue","Airdate":"2007-08-09"}, {"Num_episode":25,"Title":"Three Minutes Between Life and Death","Type":"Mixed Canon/Filler","Year_launch":7.9,414,"Rate":7.9,414,"Votes":7.9,414,"Saga":"Kazekage Rescue","Airdate":"2007-08-16"}, {"Num_episode":26,"Title":"Puppet Fight: 10 vs. 100!","Type":"Manga Canon","Year_launch":8.4,656,"Rate":8.4,656,"Votes":8.4,656,"Saga":"Kazekage Rescue","Airdate":"2007-08-23"}, {"Num_episode":27,"Title":"Impossible Dream","Type":"Manga Canon","Year_launch":8.5,474,"Rate":8.5,474,"Votes":8.5,474,"Saga":"Kazekage Rescue","Airdate":"2007-08-30"}, {"Num_episode":28,"Title":"Beasts! Alive Again!","Type":"Filler","Year_launch":7.1,367,"Rate":7.1,367,"Votes":7.1,367,"Saga":"Kazekage Rescue","Airdate":"2007-09-13"}, {"Num_episode":29,"Title":"Kakashi Enlightened!","Type":"Manga Canon","Year_launch":8.1,402,"Rate":8.1,402,"Votes":8.1,402,"Saga":"Kazekage Rescue","Airdate":"2007-09-27"}, {"Num_episode":30,"Title":"Aesthetics of an Instant","Type":"Manga Canon","Year_launch":8.4,439,"Rate":8.4,439,"Votes":8.4,439,"Saga":"Kazekage Rescue","Airdate":"2007-09-27"}, {"Num_episode":31,"Title":"The Legacy!","Type":"Manga Canon","Year_launch":8.5,675,"Rate":8.5,675,"Votes":8.5,675,"Saga":"Kazekage Rescue","Airdate":"2007-10-18"}, {"Num_episode":32,"Title":"Return of the Kazekage","Type":"Manga Canon","Year_launch":7.9,405,"Rate":7.9,405,"Votes":7.9,405,"Saga":"Kazekage Rescue","Airdate":"2007-10-25"}, {"Num_episode":33,"Title":"The New Target","Type":"Manga Canon","Year_launch":7.7,374,"Rate":7.7,374,"Votes":7.7,374,"Saga":"Long-Awaited Reunion","Airdate":"2007-11-08"}, {"Num_episode":34,"Title":"Formation! New Team Kakashi!","Type":"Manga Canon","Year_launch":7.2,362,"Rate":7.2,362,"Votes":7.2,362,"Saga":"Long-Awaited Reunion","Airdate":"2007-11-15"}, {"Num_episode":35,"Title":"An Unnecessary Addition","Type":"Manga Canon","Year_launch":7.3,364,"Rate":7.3,364,"Votes":7.3,364,"Saga":"Long-Awaited Reunion","Airdate":"2007-11-22"}, {"Num_episode":36,"Title":"The Fake Smile","Type":"Manga Canon","Year_launch":7.2,362,"Rate":7.2,362,"Votes":7.2,362,"Saga":"Long-Awaited Reunion","Airdate":"2007-11-29"}]
```

# MYSQL

Proceeding to create a table in MySQL as we will use it to clean the data and perform transformations. If we load it directly into Power BI, it is because one of the objectives is to demonstrate the advantages of the MYSQL tool. We create a database named "naruto" to load the dataset. We will use a table called "series" with variables declared with the titles noted in the notepad:

```
CREATE DATABASE naruto;

USE naruto;

CREATE TABLE series(
  ID int,
  num_ep INT,
  title VARCHAR(150),
  ttype VARCHAR (100),
  years_launch VARCHAR(50),
  rating VARCHAR(50),
  votes VARCHAR(50),
  saga VARCHAR(150),
  airdate VARCHAR(150),
  years VARCHAR (150),
  months VARCHAR (150),
  days VARCHAR(100)
);
```

The type of variable we all use is VARCHAR or INT (integer). Then we load the data, in this step, an error may occur depending on the security measures of the user's MySQL version, so it will be up to the reader to resolve. The following page can be helpful, and caution should be taken when using "/" or "" or trying the following scripts.

```
# ante una advertencia de error
SET GLOBAL local_infile = true;
SHOW VARIABLES LIKE "secure_file_priv";
```

	Variable_name	Value
►	secure_file_priv	C:\ProgramData\MySQL\MySQL Server 8.0\Upl...

```
#CARGA DE DATOS
LOAD DATA LOCAL INFILE 'C:/Program Files/MySQL/MySQL Server 8.0/Uploads/naruto_sh.csv'
INTO TABLE series
FIELDS TERMINATED BY ','
LINES TERMINATED BY '\n'
ignore 1 lines;
```

```
# visualizamos la tabla series
SELECT * FROM naruto.series;
SHOW TABLES FROM naruto;
```

```
# iniciamos un contador
# tabla dimension TYPE
SET @contador=0;
CREATE TABLE tab_type as
select distinct(select @contador:= @contador+1) as id_type,
ttype as ttypes ,
AVG(rating) as promedio_rating ,
count(title) as cantidad_ep
from series group by ttype;
```

```
# tabla dimension YEARS
set @contador=0;
CREATE TABLE tab_years as select distinct(select @contador:= @contador+1) as id_years,
years as yyears,
SUM(votes) as votos_por_año ,
count(title) as num_ep
from series group by years;
```

```
# tabla dimension SEASON
create table tab_saga as select distinct(select @contador:= @contador+1) AS id_season,
saga as season ,
AVG(rating) as promedio_rating
from series group by saga ;
```

```

# tabla dimension RATING
set @contador=0;
CREATE TABLE tab_rate as
select distinct(select @contador:= @contador+1) as id_rate,
rating as ratings ,
count(num_ep) as cantidad_episodios
from series
group by ratings
order by rating desc;

# tabla dimension YEARS
set @contador=0;
CREATE TABLE tab_years as select distinct(select @contador:= @contador+1) as id_years,
years as yyears,
SUM(votes) as votos_por_año ,
count(title) as num_ep
from series group by years;

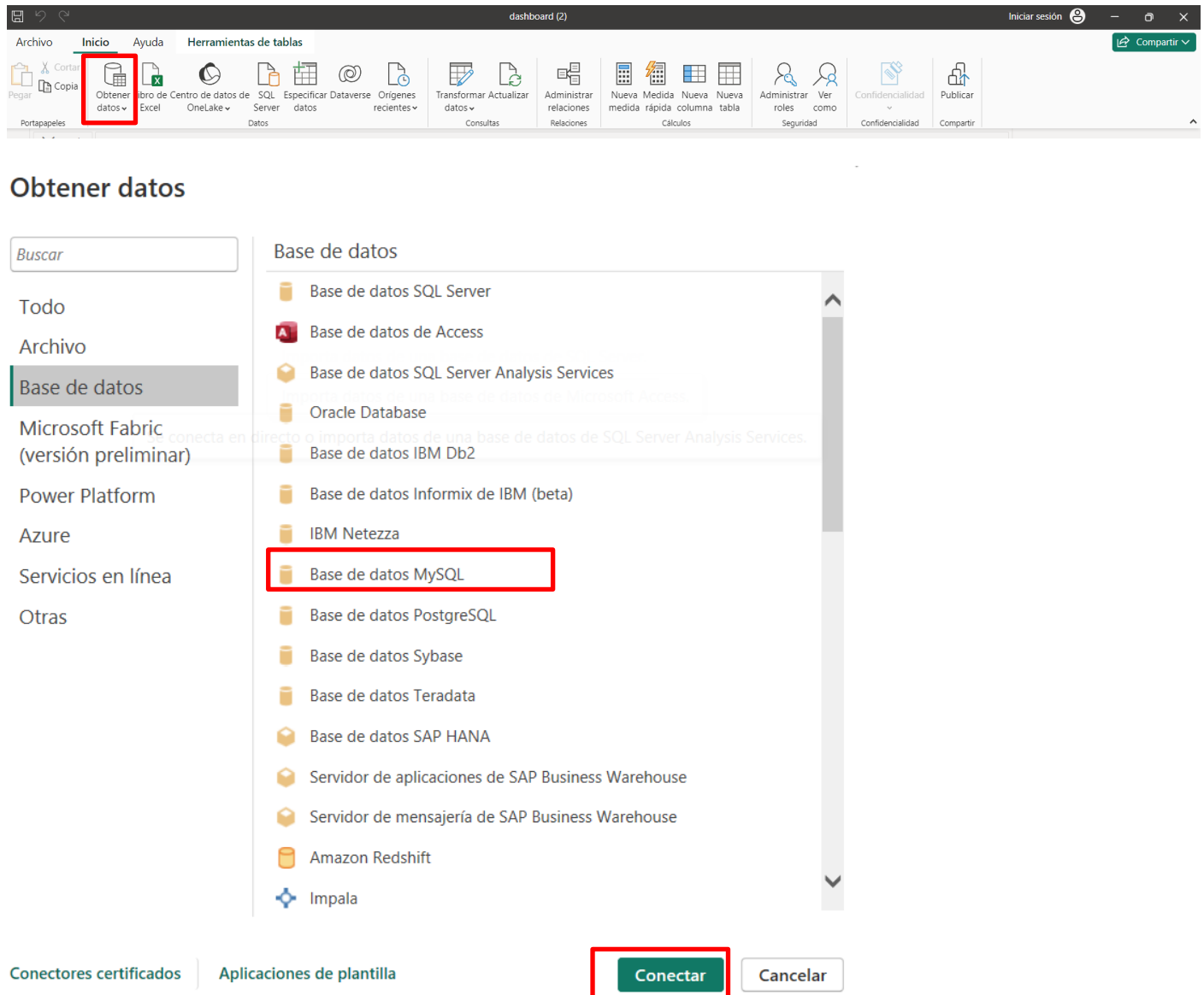
#tabla principal (de hechos)
drop table tab_principal;
create table tab_principal select A.ID as id_principal ,
A.num_ep as num_eps,A.title as title,
A.ttype as typee,
A.years_launch as years,
A.rating as ratingg,
A.votes as vote,
A.saga as season
,A.months as months,
C.id_rate as id_rate,
D.id_season as id_season,
E.id_type as id_type,
F.id_years as id_years
from series A
inner join tab_rate C on(A.rating = C.ratings)
inner join tab_saga D on(A.saga = D.season)
inner join tab_type E on (A.ttype = E.ttypes)
inner join tab_years F on (A.years = F.yyears)
order by id_principal asc;

```

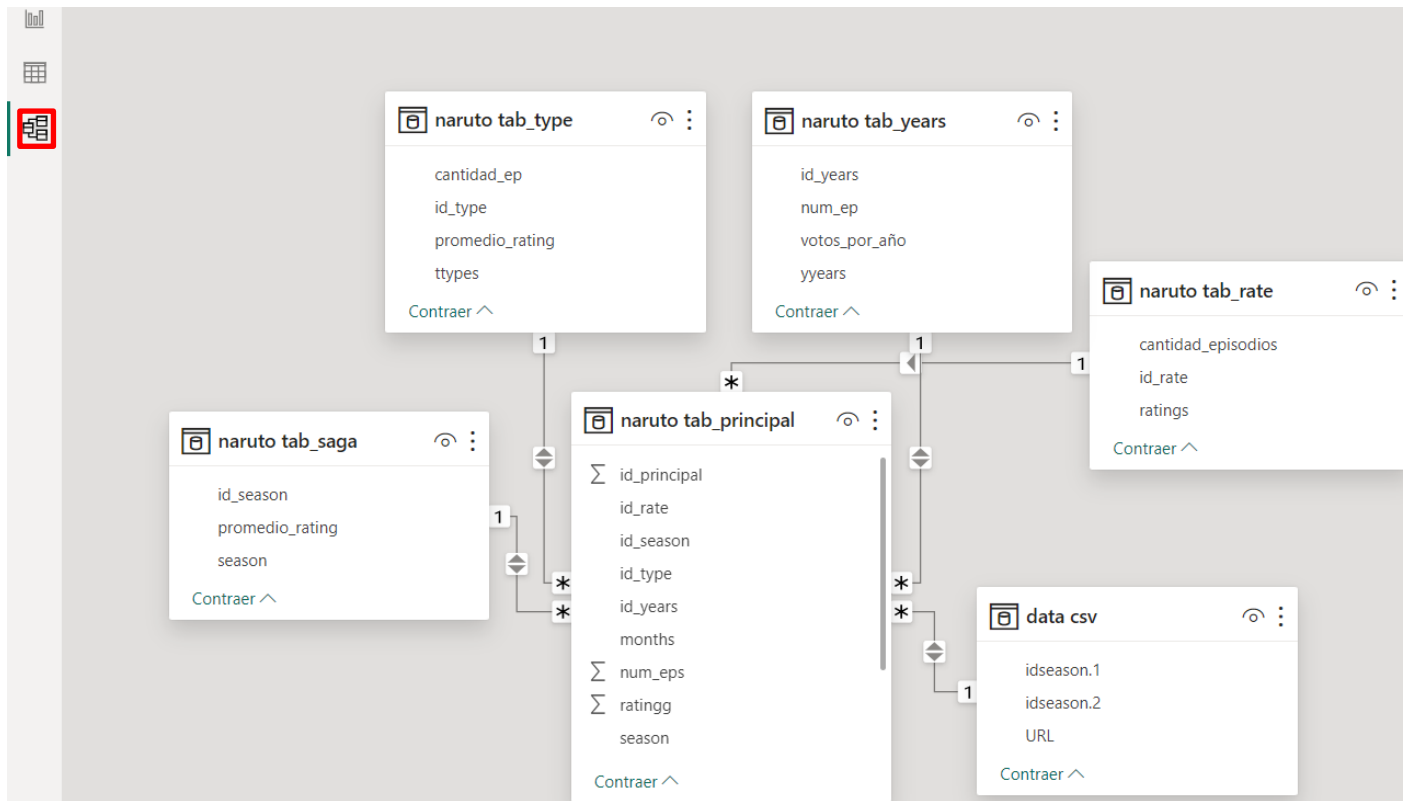


# Power BI

To connect the database to MYSQL, we install connectors so that updating the scripts reflects in Power BI. Upon entering to obtain data, we will have the following window where we will select the MYSQL database option:



Next, to visualize the entity-relationship diagram that was correctly loaded in the model view option, we can obtain the relationships as follows:



We can also view the loaded tables in the table view section:

id_principal	num_eps	title	typee	years	ratingg	vote	season
19	20	Hiruko vs. Two Kunoichi!	Manga Canon	2007	8,1	427	s1 Kazekage Rescue
20	21	Sasori's Real Face	Manga Canon	2007	8,1	421	s1 Kazekage Rescue
21	22	Chiyo's Secret Skills	Manga Canon	2007	7,9	413	s1 Kazekage Rescue
22	23	Father and Mother	Manga Canon	2007	7,9	410	s1 Kazekage Rescue
25	26	Puppet Fight: 10 vs. 100!	Manga Canon	2007	8,4	656	s1 Kazekage Rescue
26	27	Impossible Dream	Manga Canon	2007	8,5	474	s1 Kazekage Rescue
28	29	Kakashi Enlightened!	Manga Canon	2007	8,1	402	s1 Kazekage Rescue
29	30	Aesthetics of an Instant	Manga Canon	2007	8,4	439	s1 Kazekage Rescue
30	31	The Legacy!	Manga Canon	2007	8,5	675	s1 Kazekage Rescue
31	32	Return of the Kazekage	Manga Canon	2007	7,9	405	s1 Kazekage Rescue
32	33	The New Target	Manga Canon	2007	7,7	374	s2 Long-Awaited Reunion
33	34	Formation! New Team Kakashi!	Manga Canon	2007	7,2	362	s2 Long-Awaited Reunion
34	35	An Unnecessary Addition	Manga Canon	2007	7,3	364	s2 Long-Awaited Reunion
35	36	The Fake Smile	Manga Canon	2007	7,2	362	s2 Long-Awaited Reunion
36	37	Untitled	Manga Canon	2007	7,1	361	s2 Long-Awaited Reunion
37	38	Simulation	Manga Canon	2007	7,1	360	s2 Long-Awaited Reunion
38	39	The Tenchi Bridge	Manga Canon	2007	7,8	379	s2 Long-Awaited Reunion
39	40	Nine-Tails Unleashed	Manga Canon	2007	7,7	393	s2 Long-Awaited Reunion
40	41	The Top-Secret Mission Begins	Manga Canon	2007	8	395	s2 Long-Awaited Reunion
41	42	Orochimaru vs. Jinchuriki	Manga Canon	2008	8,5	459	s2 Long-Awaited Reunion
42	43	Sakura's Tears	Manga Canon	2008	7,9	380	s2 Long-Awaited Reunion
43	44	The Secret of the Battle!	Manga Canon	2008	7,4	354	s2 Long-Awaited Reunion
45	46	The Unfinished Page	Manga Canon	2008	7,3	347	s2 Long-Awaited Reunion
46	47	Infiltration: The Den of the Snake!	Manga Canon	2008	7,4	348	s2 Long-Awaited Reunion
47	48	Bonds	Manga Canon	2008	7,2	355	s2 Long-Awaited Reunion
50	51	Reunion	Manga Canon	2008	7,5	358	s2 Long-Awaited Reunion
51	52	The Power of the Uchiha	Manga Canon	2008	8	384	s2 Long-Awaited Reunion

Later, you can visualize charts and images in the report view section:

