SQL PROJECT
STRUCTURED QUERY LANGUAGE

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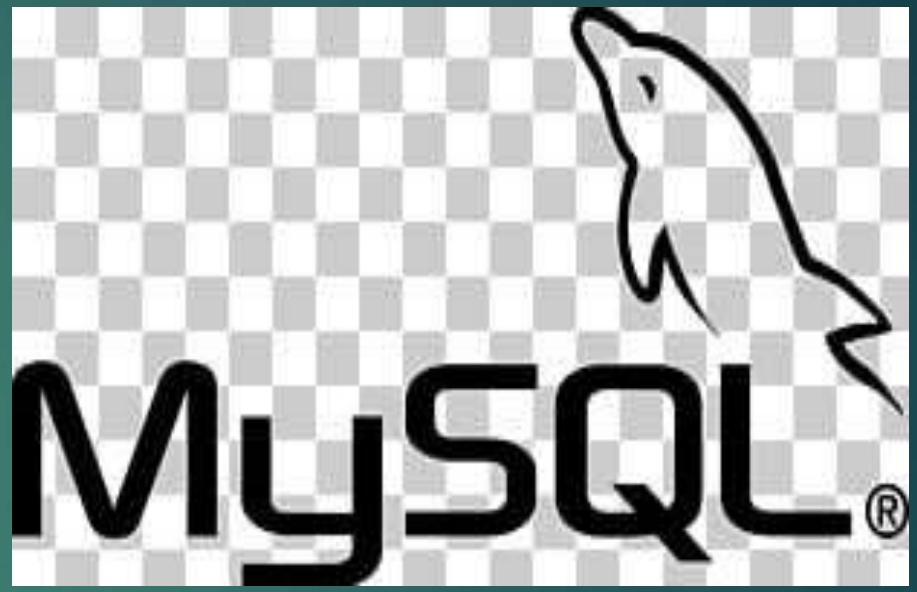
SQL stands for Structured Query Language. It is a language used to communicate, manage or manipulate in a relational database management system (RDBMS). A relational database stores information in tabular form.

SQL commands are mainly categorized into five categories:

- DDL: Data Definition Language
- DQL: Data Query Language
- DML: Data Manipulation Language
- DCL: Data Control Language
- TCL: Transaction Control Language



Operators in SQL

An operator is a reserved word or character that is used to query our database in a SQL expression. To query a database using operators, we use WHERE clause.

Types of operators:

1.Arithmetic Operator

2.Concatenation Operator

3.Comparison Operator

4.Relational Operator

5.Logical Operator

6.Special Operator

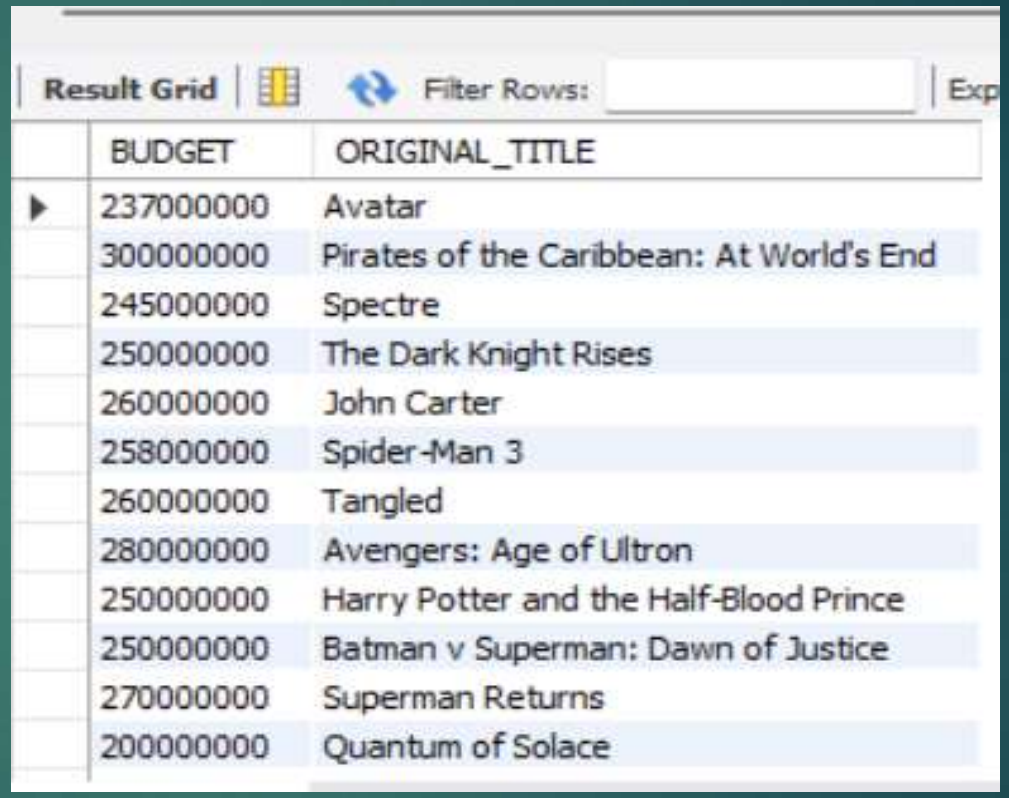
7.Sub Query Operator

WAQTD budget and original_title of the movies where budget is greater than 30000000.

```
SELECT BUDGET,
ORIGINAL_TITLE

FROM tmdb_5000_movies

WHERE BUDGET>30000000;
```

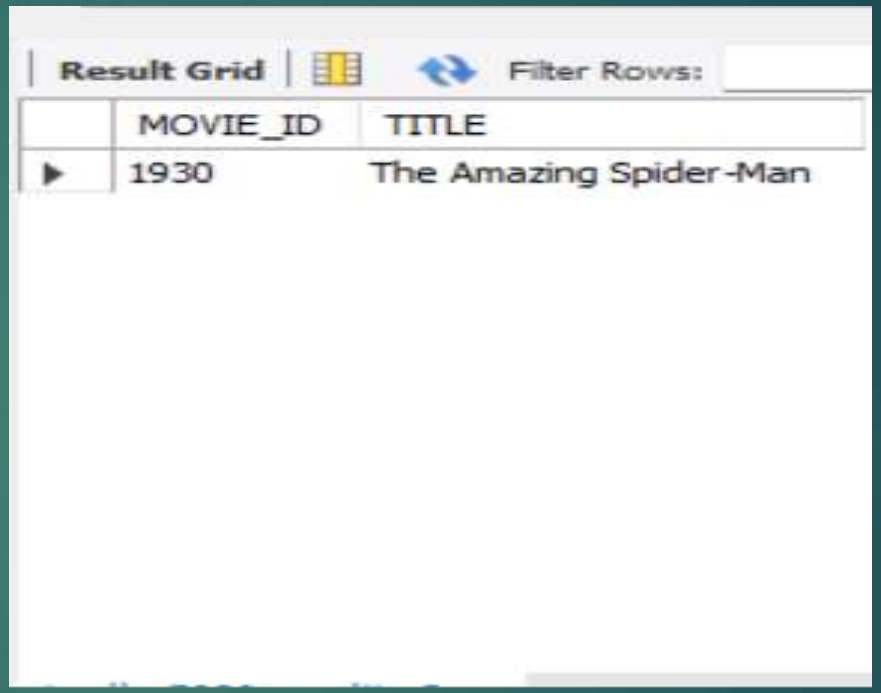


Result Grid | Filter Rows: | Exp

BUDGET	ORIGINAL_TITLE
237000000	Avatar
300000000	Pirates of the Caribbean: At World's End
245000000	Spectre
250000000	The Dark Knight Rises
260000000	John Carter
258000000	Spider-Man 3
260000000	Tangled
280000000	Avengers: Age of Ultron
250000000	Harry Potter and the Half-Blood Prince
250000000	Batman v Superman: Dawn of Justice
270000000	Superman Returns
200000000	Quantum of Solace

WAQTD name of the movies whose movie_id is 1930.

```
SELECT MOVIE_ID, TITLE
FROM tmdb_5000_credits
WHERE MOVIE_ID=1930;
```

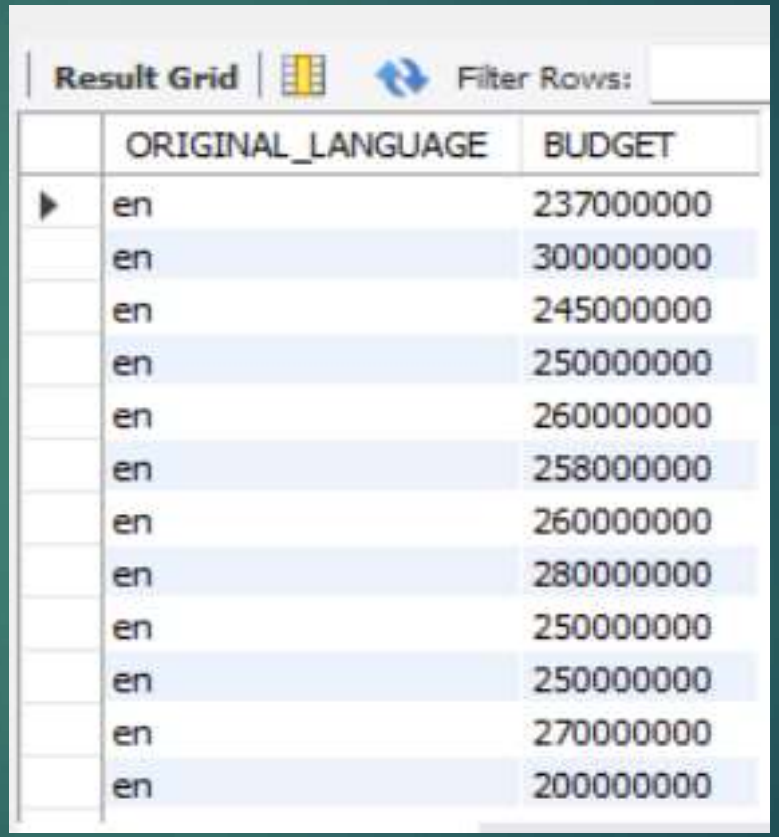


WAQTD movies that are in English language or budget is greater than 50000000.

```
SELECT
ORIGINAL_LANGUAGE,
BUDGET

FROM tmdb_5000_movies

WHERE
ORIGINAL_LANGUAGE='EN'
OR BUDGET>50000000;
```



Result Grid | Filter Rows:

ORIGINAL_LANGUAGE	BUDGET
en	237000000
en	300000000
en	245000000
en	250000000
en	260000000
en	258000000
en	260000000
en	280000000
en	250000000
en	250000000
en	270000000
en	200000000

WAQTD original_title and vote_average whose vote_average between 7 and 9.

```
SELECT ORIGINAL_TITLE,
VOTE_AVERAGE

FROM tmdb_5000_movies

WHERE VOTE_AVERAGE
BETWEEN 7 AND 9;
```

Result Grid | Filter Rows: | Export:

ORIGINAL_TITLE	VOTE_AVERAGE
Hugo	7
Edge of Tomorrow	7.6
Inside Out	8
Maleficent	7
Dawn of the Planet of the Apes	7.3
Captain America: The Winter Soldier	7.6
Big Hero 6	7.8
Wreck-It Ralph	7.1
How to Train Your Dragon	7.5
Guardians of the Galaxy	7.9
Interstellar	8.1
Inception	8.1

WAQTD name of the movies starting with T.

```
SELECT TITLE
FROM tmdb_5000_credits
Where title like 'T';
```

Result Grid | Filter Rows:

TITLE
The Dark Knight Rises
Tangled
The Lone Ranger
The Chronicles of Narnia: Prince Caspian
The Avengers
The Hobbit: The Battle of the Five Armies
The Amazing Spider-Man
The Hobbit: The Desolation of Smaug
The Golden Compass
Titanic
Transformers: Revenge of the Fallen
Transformers: Age of Extinction

WAQTD name of the movies in descending order.

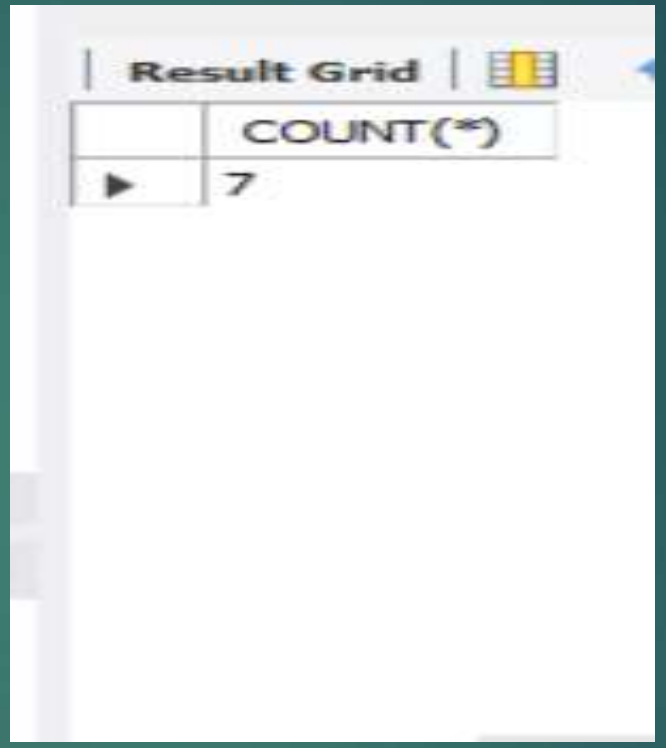
```
SELECT TITLE
FROM tmdb_5000_credits
ORDER BY TITLE DESC;
```

Result Grid | Filter Rows:

TITLE
Zulu
Zoom
Zoolander 2
Zoolander
Zookeeper
Zombieland
Zombie Hunter
Zodiac
ZMD: Zombies of Mass Destruction
Zipper
Zero Effect
Zero Dark Thirty

WAQTD number of movies having vote_count greater than 9106.

```
SELECT COUNT(*)
FROM tmdb_5000_movies
WHERE
VOTE_COUNT>9106;
```



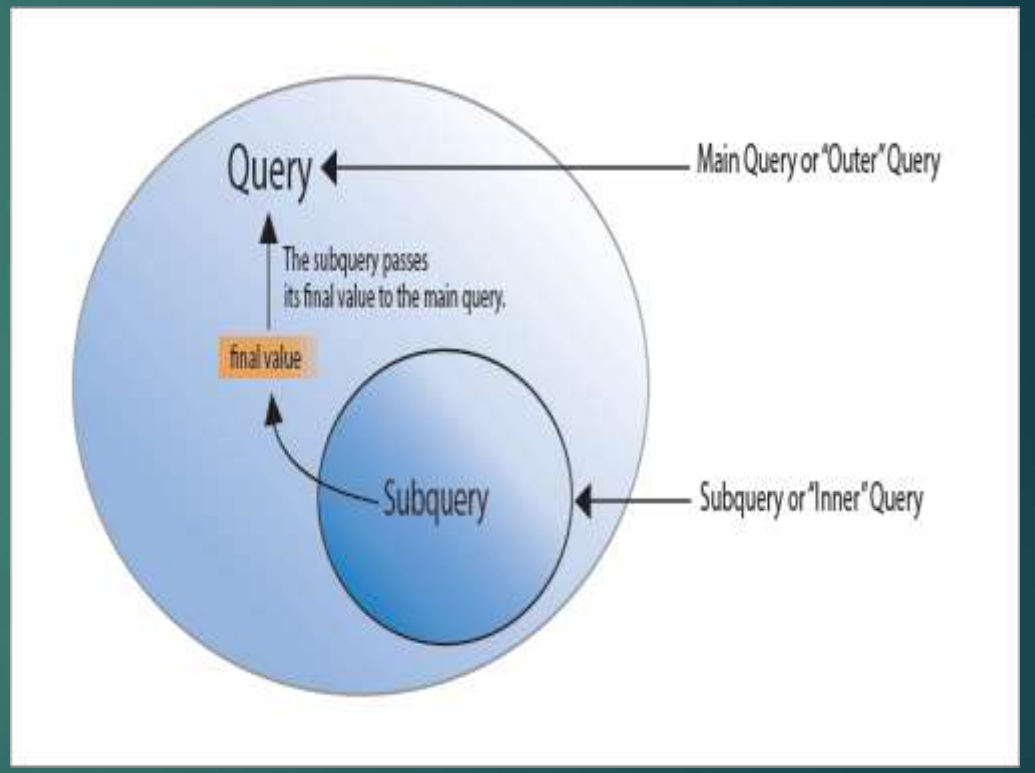
Sub Query in SQL

A query written inside another query is called sub query. In sub query the inner query will execute first and produce output. The output of inner query will be passed as a input to the outer query and then the outer query will produce the complete result. Therefore the outer query and inner query completely depends on each other

There are two cases of sub query

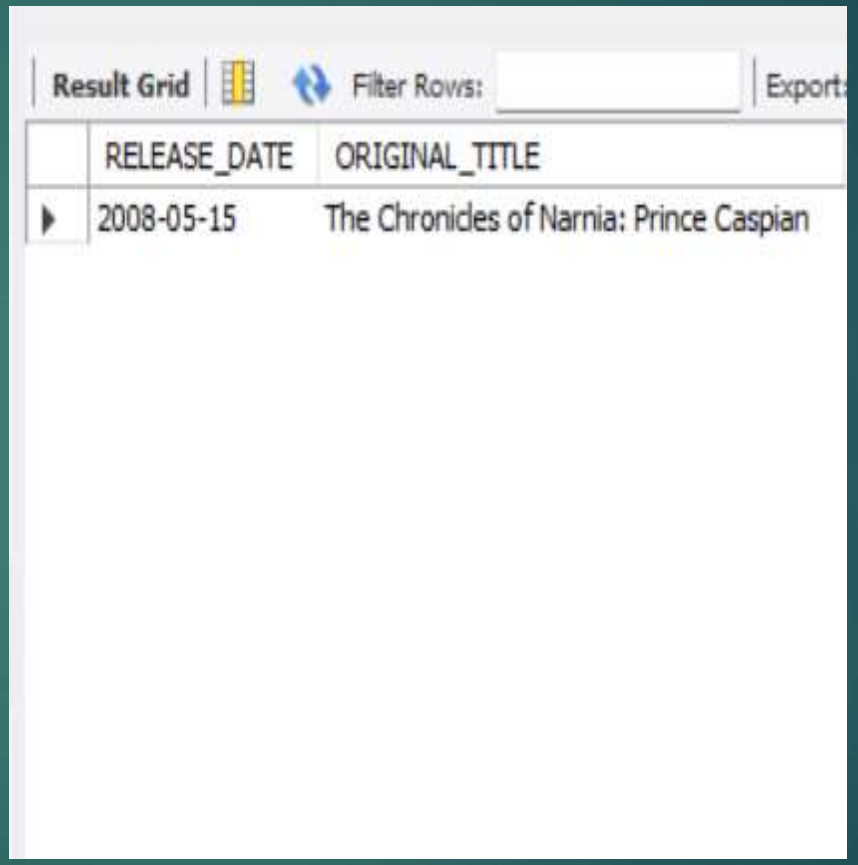
Case1:When we have unknown present in the query we go for sub query

Case2:Whenever the data to be selected and the condition are present in a different tables



WAQTD release date and original_title whose id is 2454.

```
SELECT
RELEASE_DATE,ORIGINAL_
TITLE
FROM tmdb_5000_movies
WHERE TITLE IN
(SELECT TITLE
FROM tmdb_5000_credits
WHERE MOVIE_ID=2454);
```



WAQTD name of the movies and popularity whose popularity is less than The Avengers.

```
SELECT
ORIGINAL_TITLE,POPULARITY
FROM tmdb_5000_movies
WHERE POPULARITY<
(SELECT POPULARITY
FROM tmdb_5000_movies
WHERE ORIGINAL_TITLE='THE
AVENGERS');
```

ORIGINAL_TITLE	POPULARITY
Pirates of the Caribbean: At World's End	139.082615
Spectre	107.376788
The Dark Knight Rises	112.31295
John Carter	43.926995
Spider-Man 3	115.699814
Tangled	48.681969
Avengers: Age of Ultron	134.279229
Harry Potter and the Half-Blood Prince	98.885637
Superman Returns	57.925623
Quantum of Solace	107.928811
The Lone Ranger	49.046956
Man of Steel	99.398009

Joins

It is a process of retrieve or fetch data from multiple table simultaneously. There are five types of join

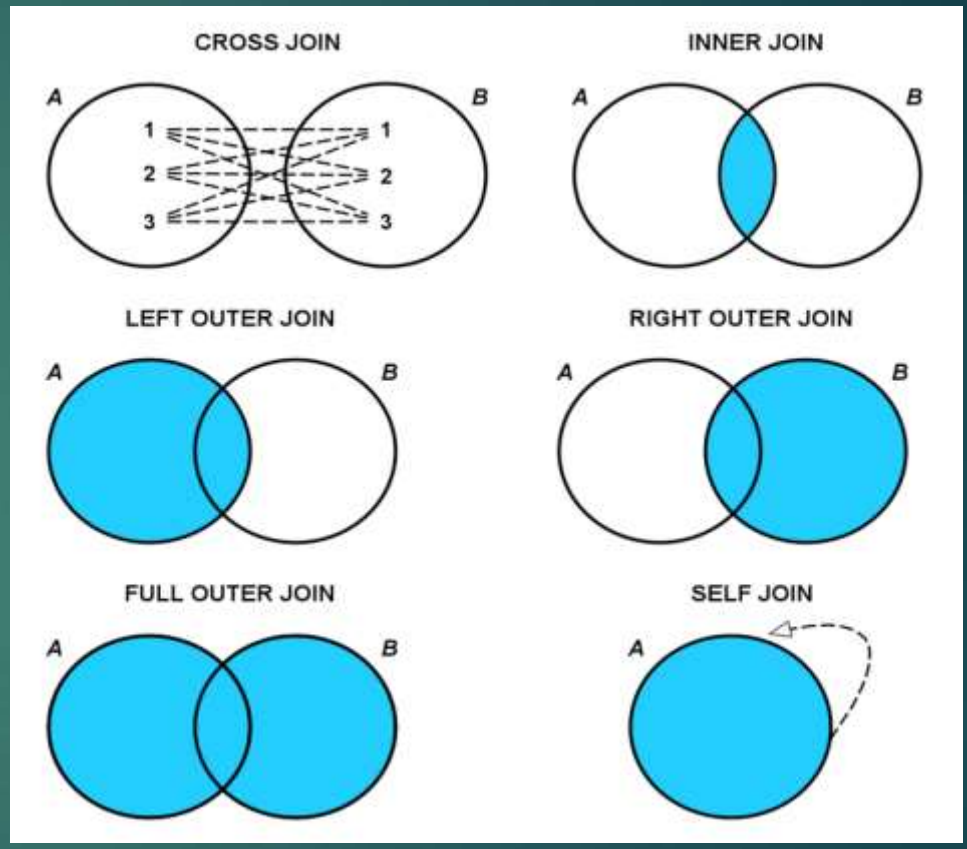
1.Cartesian Join or Cross Join

2.Inner Join

3.Outer Join (Left Outer, Right Outer and Full Outer)

4.Natural Join

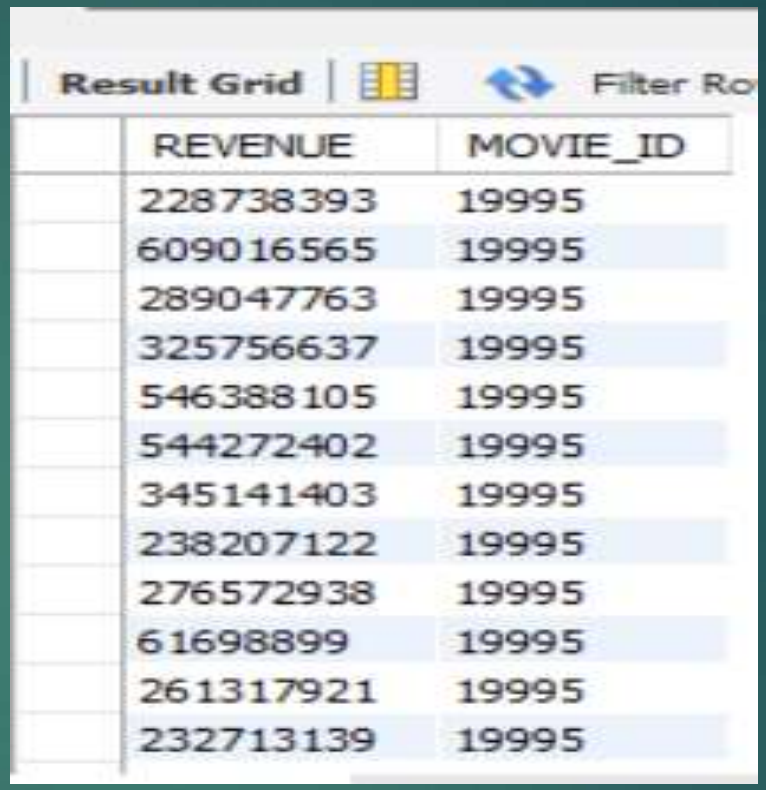
5.Self join



WAQTD revenue and movie_id using cross join.

```
SELECT REVENUE,
MOVIE_ID

FROM tmdb_5000_movies
CROSS JOIN
tmdb_5000_credits;
```



Result Grid | Filter Ro

REVENUE	MOVIE_ID
228738393	19995
609016565	19995
289047763	19995
325756637	19995
546388105	19995
544272402	19995
345141403	19995
238207122	19995
276572938	19995
61698899	19995
261317921	19995
232713139	19995

WAQTD runtime and movie_id using inner join.

```
SELECT RUNTIME,
MOVIE_ID

FROM tmdb_5000_movies
INNER JOIN
tmdb_5000_credits

ON
tmdb_5000_movies.TITLE=t
mdb_5000_credits.TITLE;
```

Result Grid | Filter

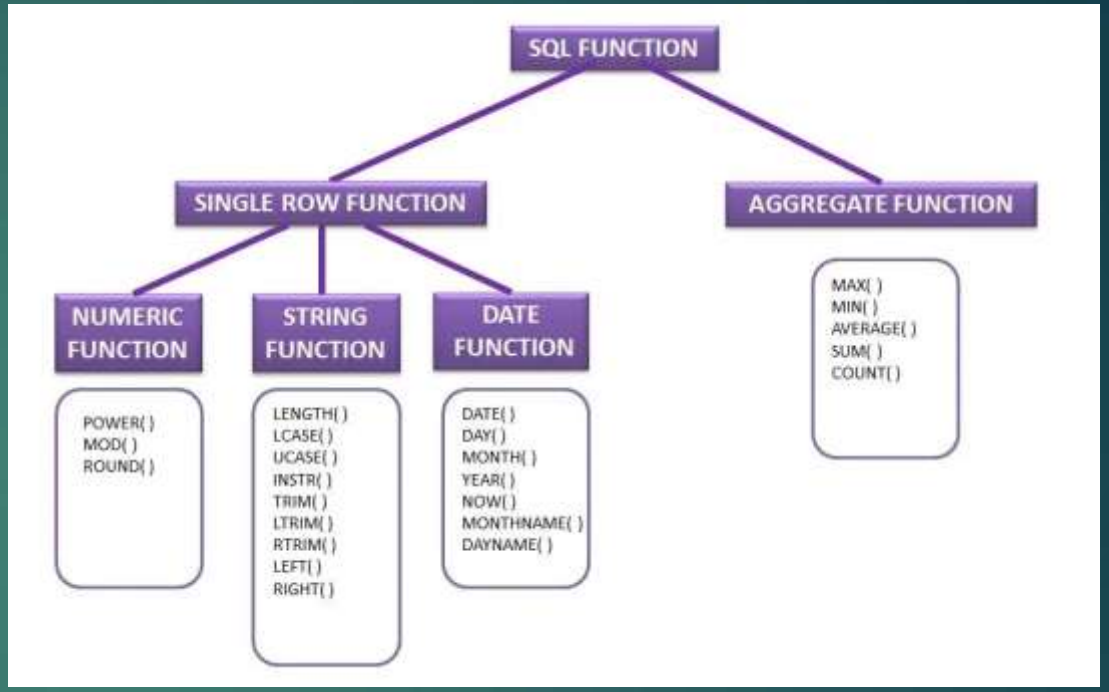
	RUNTIME	MOVIE_ID
▶	162	19995
	169	285
	148	206647
	165	49026
	132	49529
	139	559
	100	38757
	141	99861
	153	767
	151	209112
	154	1452
	106	10764

Functions

Functions are block of code or list of instruction which will do some specific task.There are two types of functions namely User Defined Function and Buildin Function (Aggregate Function). Buildin Function are of two types :

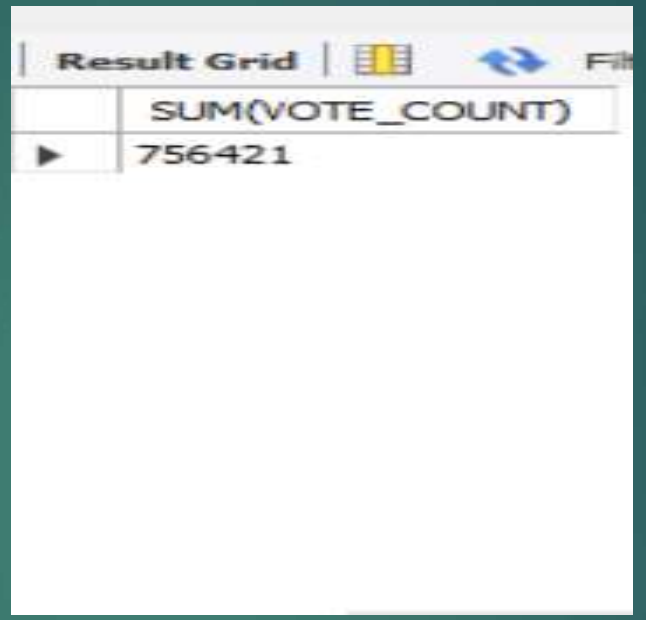
1.Single Row Function

2.Multi Row Function



WAQTD total vote_count.

```
SELECT
SUM(VOTE_COUNT)
FROM tmdb_5000_movies;
```



WAQTD name of the movies whose budget is exactly nine digits.

```
SELECT
ORIGINAL_TITLE,BUDGET

FROM tmdb_5000_movies

WHERE BUDGET
LIKE'_________';
```

Result Grid | Filter Rows:

ORIGINAL_TITLE	BUDGET
Avatar	237000000
Pirates of the Caribbean: At World's End	300000000
Spectre	245000000
The Dark Knight Rises	250000000
John Carter	260000000
Spider-Man 3	258000000
Tangled	260000000
Avengers: Age of Ultron	280000000
Harry Potter and the Half-Blood Prince	250000000
Batman v Superman: Dawn of Justice	250000000
Superman Returns	270000000
Quantum of Solace	200000000

WAQTD average runtime.

```
SELECT AVG(RUNTIME)
FROM
tmdb_5000_movies;
```

THANK YOU