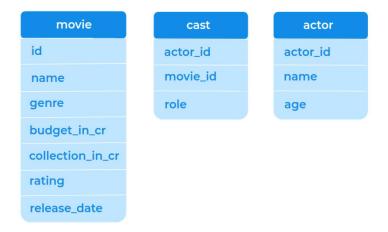
#### **Database**

The database contains movies, actors, and cast. You can check the schema and data of movies, actors, and cast tables in the code playground.

#### Schema



#### Arithmetic Functions

Arithmetic functions in SQL are used to perform mathematical operations on numeric values. Some commonly used arithmetic functions are

```
FLOOR, CEIL, and ROUND.
```

FLOOR Function

The

FLOOR function rounds a number to the nearest integer below its current value.

## **Syntax**

```
1 FLOOR(number)
```

# Example

```
SQL

1 SELECT FLOOR(2.3);
```

#### Output

```
2
CEIL Function
The
        function rounds a number to the nearest integer above its current value.
Syntax
      1 CEIL(number)
Example
          SELECT CEIL(-2.7);
Output
       CEIL
         -2
ROUND Function
The
 ROUND function rounds a number to a specified number of decimal places.
Syntax
                                                                                     SQL
          ROUND(number, decimal_places)
Example
                                                                                      SQL
          SELECT ROUND(2.345, 2);
          SELECT ROUND(2.345, 1);
Output
```

ROUND
2.35
2.3

You can use these arithmetic functions in your SQL queries to perform calculations and manipulate numeric values as needed.

The below-given values are some examples for the

```
FLOOR, CEIL, and ROUND.
```

	2.3	3.9	4.0	5.5
FLOOR	2	3	4	5
CEIL	3	4	4	6
ROUND	2	4	4	6
4				<b>•</b>

#### Example

1. Fetch the ceil, floor, and round (to 1 decimal) values of the collections of all movies.

```
1 SELECT
2 name,
3 ROUND(collection_in_cr, 1) AS RoundedValue,
4 CEIL(collection_in_cr) AS CeilValue,
5 FLOOR(collection_in_cr) AS FloorValue
6 FROM
7 movie;
```

From the above query,

- We want to get the data from the movie table.
- We use the ROUND() function for round the collection in cr to 1 decimal.
- We use the CEIL() function for round the collection\_in\_cr to the nearest integer above its current value..
- We use the FLOOR() function for round collection\_in\_cr to the nearest integer below its current value..

## Output

name	RoundedValue	CeilValue	FloorValue
The Matrix	46.4	47	46
Inception	83.7	84	83
The Dark Knight	100.5	101	100

# String Functions

String functions in SQL are used to manipulate and operate on string values or character data.

SQL Function	Behavior
UPPER()	Converts a string to upper case
LOWER()	Converts a string to lowercase

## Example

To search for all the Avengers movies regardless of their case(Upper/Lower), you can use write a query below

```
SQL

1 SELECT

2 name

3 FROM

4 movie

5 WHERE

6 UPPER(name) LIKE UPPER("%avengers%");
```

## Output

name
Avengers: Age of Ultron
Avengers: Endgame
Avengers: Infinity War



Usually, UPPER() AND LOWER() functions can help you to perform case-insensitive searches.

#### Try it Yourself!

Now that you've learned about

Arithmetic Functions and String Functions in SQL, let's try some practice exercises. Here are four example questions:

## **Question 1**

For each movie, get the ceil, floor, and round (to 1 decimal) values of the budget.

#### **Approach**

We need to retrieve the ceil, floor, and round values of the budget for each movie.

## **Expected Output**

name	round_value	ceil_value	floor_value
The Matrix	6.3	7	6
Inception	16	16	16
The Dark Knight	18	18	18

## ▶ Click to view hints

## **Question 2**

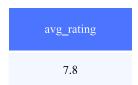
Get the average rating of movies released in the year

2010 and round to the 1 decimal value.

### Approach

We need to retrieve the average rating of movies released in the year

# **Expected Output**



# ► Click to view hints

## **Question 3**

Get all the collections of all movies in the database that are greater than

250 .

## Approach

We need to retrieve the collections of all movies in the database that are greater than

250 .

## **Expected Output**

collection	
723	
266	
600	
600	

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# **Question 4**

Get all the movie names that are released in 2010 and belong to the "Action" genre.

## Approach

We need to retrieve the movie names of movies released in 2010 and belonging to the

"Action" genre.

Expected Output

movie\_name
Inception
Iron Man 2

Thor

Spider-Man: Homecoming

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O MARK AS COMPLETED