DA _ SQL TASK- 2

```
mysql> -- 1. Create employee table
mysql> CREATE TABLE employees11 (
    ->    employee_id INTEGER,
    ->    first_name TEXT,
    ->    last_name TEXT,
    ->    department TEXT,
    ->    salary DECIMAL,
    ->    hire_date DATE
    -> );
ERROR 1050 (42S01): Table 'employees11' already exists
mysql>
mysql> -- 2. Insert fifteen records (example data)
mysql> INSERT INTO employees11 VALUES (1, 'John', 'Doe', 'HR', 55000, '2020-01-15');
Query OK, 1 row affected (0.00 sec)


mysql> INSERT INTO employees11 VALUES (2, 'Jane', 'Smith', 'Engineering', 75000, '2019-03-22');
Query OK, 1 row affected (0.00 sec)


mysql> INSERT INTO employees11 VALUES (3, 'Alice', 'Brown', 'Sales', 48000, '2021-06-01');
Query OK, 1 row affected (0.00 sec)


mysql> INSERT INTO employees11 VALUES (4, 'Bob', 'Taylor', 'HR', 60000, '2022-01-10');
Query OK, 1 row affected (0.00 sec)


mysql> INSERT INTO employees11 VALUES (5, 'Charlie', 'Wilson', 'Engineering', 82000, '2018-12-05');
Query OK, 1 row affected (0.00 sec)
```

```
mysql> INSERT INTO employees11 VALUES (6, 'David', 'Moore', 'Finance', 54000, '2017-07-19');
```

Query OK, 1 row affected (0.00 sec)

```
mysql> INSERT INTO employees11 VALUES (7, 'Eve', 'Clark', 'Engineering', 72000, '2020-09-11');
```

Query OK, 1 row affected (0.00 sec)

```
mysql> INSERT INTO employees11 VALUES (8, 'Frank', 'Lopez', 'Marketing', 51000, '2021-11-30');
```

Query OK, 1 row affected (0.00 sec)

```
mysql> INSERT INTO employees11 VALUES (9, 'Grace', 'Hall', 'HR', 62000, '2019-10-07');
```

Query OK, 1 row affected (0.00 sec)

```
mysql> INSERT INTO employees11 VALUES (10, 'Hank', 'Young', 'Engineering', 79000, '2020-05-17');
```

Query OK, 1 row affected (0.00 sec)

```
mysql> INSERT INTO employees11 VALUES (11, 'Ivy', 'King', 'Sales', 45000, '2021-08-25');
```

Query OK, 1 row affected (0.00 sec)

```
mysql> INSERT INTO employees11 VALUES (12, 'Jack', 'Wright', 'Engineering', 69000, '2018-03-14');
```
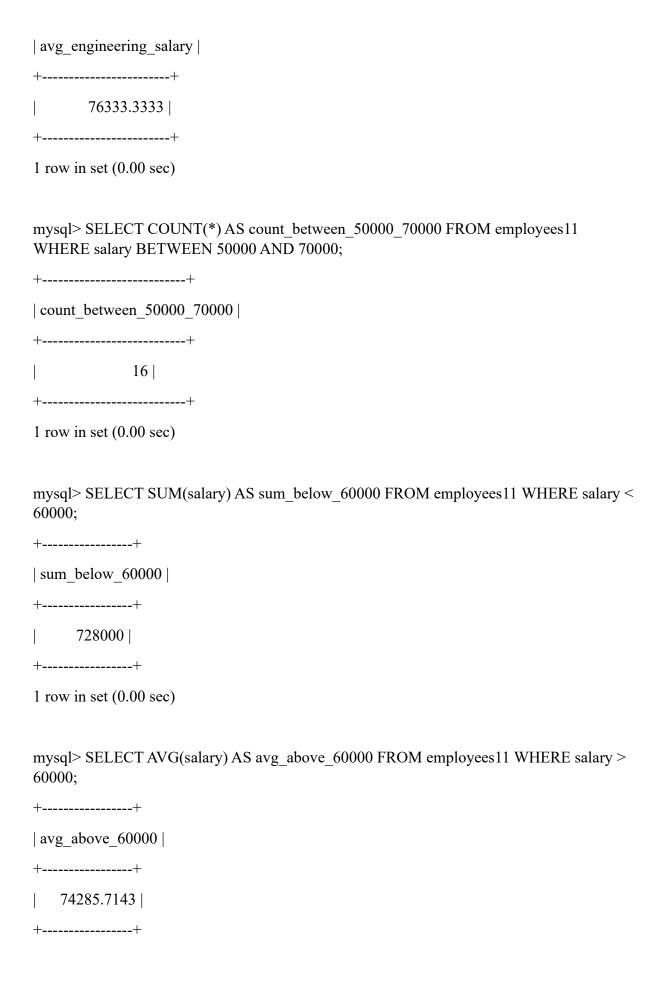
Query OK, 1 row affected (0.00 sec)

```
mysql> INSERT INTO employees11 VALUES (13, 'Karen', 'Scott', 'Finance', 58000, '2022-02-02');
```

Query OK, 1 row affected (0.00 sec)

```
mysql> INSERT INTO employees11 VALUES (14, 'Leo', 'Green', 'HR', 53000, '2020-07-21');
```

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employees11 VALUES (15, 'Mona', 'Baker', 'Engineering', 81000, '2017-04-12');

Query OK, 1 row affected (0.00 sec)

mysql>

mysql> -- 3. Aggregate Queries

mysql> SELECT SUM(salary) AS total_salary_above_60000 FROM employees11 WHERE salary > 60000;

```
+--------------------------+
| total_salary_above_60000 |
+--------------------------+
|                  1040000 |
+--------------------------+
```

1 row in set (0.00 sec)

mysql> SELECT AVG(salary) AS average_salary FROM employees11;

```
+----------------+
| average_salary |
+----------------+
|     62933.3333 |
+----------------+
```

1 row in set (0.00 sec)

mysql> SELECT COUNT(*) AS count_below_55000 FROM employees11 WHERE salary < 55000;

```
+-------------------+
| count_below_55000 |
+-------------------+
|                10 |
```

```
+------------------+
```
1 row in set (0.00 sec)

mysql> SELECT MAX(salary) AS highest_salary FROM employees11;
```
+----------------+
| highest_salary |
+----------------+
|          82000 |
+----------------+
```
1 row in set (0.00 sec)

mysql> SELECT MIN(salary) AS lowest_salary FROM employees11;
```
+---------------+
| lowest_salary |
+---------------+
|         45000 |
+---------------+
```
1 row in set (0.00 sec)

mysql> SELECT SUM(salary) AS total_hr_salary FROM employees11 WHERE department = 'HR';
```
+-----------------+
| total_hr_salary |
+-----------------+
|          460000 |
+-----------------+
```
1 row in set (0.00 sec)

mysql> SELECT AVG(salary) AS avg_engineering_salary FROM employees11 WHERE department = 'Engineering';
```
+------------------------+
```

```
| avg_engineering_salary |

+-----------------------+

|         76333.3333 |

+-----------------------+

1 row in set (0.00 sec)


mysql> SELECT COUNT(*) AS count_between_50000_70000 FROM employees11
WHERE salary BETWEEN 50000 AND 70000;

+--------------------------+

| count_between_50000_70000 |

+--------------------------+

|                    16 |

+--------------------------+

1 row in set (0.00 sec)


mysql> SELECT SUM(salary) AS sum_below_60000 FROM employees11 WHERE salary <
60000;

+----------------+

| sum_below_60000 |

+----------------+

|       728000 |

+----------------+

1 row in set (0.00 sec)


mysql> SELECT AVG(salary) AS avg_above_60000 FROM employees11 WHERE salary >
60000;

+----------------+

| avg_above_60000 |

+----------------+

|    74285.7143 |

+----------------+
```

1 row in set (0.00 sec)

mysql>

mysql> -- 4. Books table creation

mysql> CREATE TABLE Books1 (

    ->   book_id INTEGER,

    ->   title TEXT,

    ->   author TEXT,

    ->   genre TEXT,

    ->   published_year INTEGER,

    ->   available_copies INTEGER

    ->);

Query OK, 0 rows affected (0.01 sec)

mysql>

mysql> -- Example data insertions for Books

mysql> INSERT INTO Books1 VALUES (1, 'The Hobbit', 'J.R.R. Tolkien', 'Fantasy', 1937, 5);

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Books1 VALUES (2, 'The War of the Worlds', 'H.G. Wells', 'Science Fiction', 1898, 3);

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Books1 VALUES (3, 'War and Peace', 'Leo Tolstoy', 'Historical Fiction', 1869, 7);

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Books1 VALUES (4, 'The Great Gatsby', 'F. Scott Fitzgerald', 'Fiction', 1925, 6);

Query OK, 1 row affected (0.00 sec)

```
mysql> INSERT INTO Books1 VALUES (5, 'Anna Karenina', 'Leo Tolstoy', 'Fiction', 1878, 2);

Query OK, 1 row affected (0.00 sec)


mysql> INSERT INTO Books1 VALUES (6, '1984', 'George Orwell', 'Dystopian', 1949, 10);

Query OK, 1 row affected (0.00 sec)


mysql> INSERT INTO Books1 VALUES (7, 'Brave New World', 'Aldous Huxley', 'Dystopian', 1932, 4);

Query OK, 1 row affected (0.00 sec)


mysql> INSERT INTO Books1 VALUES (8, 'The Silmarillion', 'J.R.R. Tolkien', 'Fantasy', 1977, 8);

Query OK, 1 row affected (0.00 sec)


mysql> INSERT INTO Books1 VALUES (9, 'The Art of War', 'Sun Tzu', 'Philosophy', 500, 6);

Query OK, 1 row affected (0.00 sec)


mysql> INSERT INTO Books1 VALUES (10, 'Fahrenheit 451', 'Ray Bradbury', 'Dystopian', 1953, 5);

Query OK, 1 row affected (0.00 sec)


mysql>
mysql> -- Queries for BETWEEN, ALIAS, LIKE, LIMIT
mysql> SELECT * FROM Books1 WHERE published_year BETWEEN 1900 AND 1950;
```

book_id	title	author	genre	published_year	available_copies
1	The Hobbit	J.R.R. Tolkien	Fantasy	1937	5
4	The Great Gatsby	F. Scott Fitzgerald	Fiction	1925	6
6	1984	George Orwell	Dystopian	1949	10

| 7 | Brave New World | Aldous Huxley | Dystopian | 1932 | 4 |
+---------+-----------------+-------------------+----------+--------------+-----------------+

4 rows in set (0.00 sec)

mysql> SELECT * FROM Books1 WHERE available_copies BETWEEN 4 AND 7;

+---------+-----------------+--------------------+-------------------+---------------+-----------------+
| book_id | title | author | genre | published_year | available_copies |
+---------+-----------------+--------------------+-------------------+---------------+-----------------+
1	The Hobbit	J.R.R. Tolkien	Fantasy	1937	5
3	War and Peace	Leo Tolstoy	Historical Fiction	1869	7
4	The Great Gatsby	F. Scott Fitzgerald	Fiction	1925	6
7	Brave New World	Aldous Huxley	Dystopian	1932	4
9	The Art of War	Sun Tzu	Philosophy	500	6
10	Fahrenheit 451	Ray Bradbury	Dystopian	1953	5
+---------+-----------------+--------------------+-------------------+---------------+-----------------+

6 rows in set (0.00 sec)

mysql> SELECT * FROM Books1 WHERE published_year BETWEEN 1800 AND 1900;

+---------+----------------------+-------------+-------------------+---------------+-----------------+
| book_id | title | author | genre | published_year | available_copies |
+---------+----------------------+-------------+-------------------+---------------+-----------------+
2	The War of the Worlds	H.G. Wells	Science Fiction	1898	3
3	War and Peace	Leo Tolstoy	Historical Fiction	1869	7
5	Anna Karenina	Leo Tolstoy	Fiction	1878	2
+---------+----------------------+-------------+-------------------+---------------+-----------------+

3 rows in set (0.00 sec)

mysql> SELECT * FROM Books1 WHERE book_id BETWEEN 5 AND 10;

```
+---------+-----------------+----------------+-----------+----------------+-----------------+
| book_id | title           | author         | genre     | published_year | available_copies |
+---------+-----------------+----------------+-----------+----------------+-----------------+
|       5 | Anna Karenina   | Leo Tolstoy    | Fiction   |           1878 |               2 |
|       6 | 1984            | George Orwell  | Dystopian |           1949 |              10 |
|       7 | Brave New World | Aldous Huxley  | Dystopian |           1932 |               4 |
|       8 | The Silmarillion| J.R.R. Tolkien | Fantasy   |           1977 |               8 |
|       9 | The Art of War  | Sun Tzu        | Philosophy|            500 |               6 |
|      10 | Fahrenheit 451  | Ray Bradbury   | Dystopian |           1953 |               5 |
+---------+-----------------+----------------+-----------+----------------+-----------------+
6 rows in set (0.00 sec)
```

mysql> SELECT * FROM Books1 WHERE published_year BETWEEN 1850 AND 1950 AND available_copies >= 5;

```
+---------+-----------------+--------------------+-------------------+----------------+-----------------+
| book_id | title           | author             | genre             | published_year | available_copies |
+---------+-----------------+--------------------+-------------------+----------------+-----------------+
|       1 | The Hobbit      | J.R.R. Tolkien     | Fantasy           |           1937 |               5 |
|       3 | War and Peace   | Leo Tolstoy        | Historical Fiction|           1869 |               7 |
|       4 | The Great Gatsby| F. Scott Fitzgerald| Fiction           |           1925 |               6 |
|       6 | 1984            | George Orwell      | Dystopian         |           1949 |              10 |
+---------+-----------------+--------------------+-------------------+----------------+-----------------+
4 rows in set (0.00 sec)
```

mysql> SELECT * FROM Books1 WHERE title LIKE 'The%';

```
+---------+----------------------+--------------------+----------------+----------------+----------------+
| book_id | title                | author             | genre          | published_year | available_copies |
```

```
+---------+---------------------+--------------------+----------------+----------------+------------------+
|    1 | The Hobbit          | J.R.R. Tolkien     | Fantasy        |         1937 |            5 |
|    2 | The War of the Worlds | H.G. Wells       | Science Fiction |        1898 |            3 |
|    4 | The Great Gatsby     | F. Scott Fitzgerald | Fiction        |        1925 |            6 |
|    8 | The Silmarillion    | J.R.R. Tolkien     | Fantasy        |         1977 |            8 |
|    9 | The Art of War       | Sun Tzu            | Philosophy     |          500 |            6 |
+---------+---------------------+--------------------+----------------+----------------+------------------+
5 rows in set (0.00 sec)
```

mysql> SELECT * FROM Books1 WHERE author LIKE '%Tolkien%';

```
+---------+------------------+----------------+---------+----------------+------------------+
| book_id | title            | author         | genre   | published_year | available_copies |
+---------+------------------+----------------+---------+----------------+------------------+
|    1 | The Hobbit       | J.R.R. Tolkien | Fantasy |         1937 |            5 |
|    8 | The Silmarillion | J.R.R. Tolkien | Fantasy |         1977 |            8 |
+---------+------------------+----------------+---------+----------------+------------------+
2 rows in set (0.00 sec)
```

mysql> SELECT * FROM Books1 WHERE genre LIKE '%Fiction%';

```
+---------+---------------------+--------------------+-------------------+----------------+------------------+
| book_id | title               | author             | genre             | published_year | available_copies |
+---------+---------------------+--------------------+-------------------+----------------+------------------+
|    2 | The War of the Worlds | H.G. Wells        | Science Fiction   |         1898 |            3 |
|    3 | War and Peace       | Leo Tolstoy        | Historical Fiction |        1869 |            7 |
|    4 | The Great Gatsby     | F. Scott Fitzgerald | Fiction           |        1925 |            6 |
|    5 | Anna Karenina       | Leo Tolstoy        | Fiction           |         1878 |            2 |
```

```
+---------+--------------------+-------------------+------------------+---------------+-------------------+
```
4 rows in set (0.00 sec)

mysql> SELECT * FROM Books1 WHERE title LIKE '%War%';

book_id	title	author	genre	published_year	available_copies
2	The War of the Worlds	H.G. Wells	Science Fiction	1898	3
3	War and Peace	Leo Tolstoy	Historical Fiction	1869	7
9	The Art of War	Sun Tzu	Philosophy	500	6

3 rows in set (0.00 sec)

mysql> SELECT * FROM Books1 WHERE author LIKE '%Tolstoy';

book_id	title	author	genre	published_year	available_copies
3	War and Peace	Leo Tolstoy	Historical Fiction	1869	7
5	Anna Karenina	Leo Tolstoy	Fiction	1878	2

2 rows in set (0.00 sec)

mysql> SELECT title AS Book_Title, available_copies AS Copies FROM Books1;

Book_Title	Copies
The Hobbit	5
The War of the Worlds	3
War and Peace	7
The Great Gatsby	6
```

```
| Anna Karenina       |      2 |
| 1984                |     10 |
| Brave New World     |      4 |
| The Silmarillion    |      8 |
| The Art of War      |      6 |
| Fahrenheit 451      |      5 |
+---------------------+--------+
10 rows in set (0.00 sec)


mysql> SELECT * FROM Books1 AS B WHERE B.available_copies > 5;
+---------+------------------+--------------------+------------------+----------------+-----------------+
| book_id | title            | author             | genre            | published_year | available_copies |
+---------+------------------+--------------------+------------------+----------------+-----------------+
|       3 | War and Peace    | Leo Tolstoy        | Historical Fiction |         1869 |              7 |
|       4 | The Great Gatsby | F. Scott Fitzgerald | Fiction          |         1925 |              6 |
|       6 | 1984             | George Orwell      | Dystopian        |         1949 |             10 |
|       8 | The Silmarillion | J.R.R. Tolkien     | Fantasy          |         1977 |              8 |
|       9 | The Art of War   | Sun Tzu            | Philosophy       |          500 |              6 |
+---------+------------------+--------------------+------------------+----------------+-----------------+
5 rows in set (0.00 sec)


mysql> SELECT title, author, published_year AS Year_Published FROM Books1;
+----------------------+--------------------+----------------+
| title                | author             | Year_Published |
+----------------------+--------------------+----------------+
| The Hobbit           | J.R.R. Tolkien     |           1937 |
| The War of the Worlds | H.G. Wells        |           1898 |
| War and Peace        | Leo Tolstoy        |           1869 |
```

```
| The Great Gatsby     | F. Scott Fitzgerald |        1925 |
| Anna Karenina        | Leo Tolstoy      |        1878 |
| 1984                 | George Orwell    |        1949 |
| Brave New World      | Aldous Huxley    |        1932 |
| The Silmarillion     | J.R.R. Tolkien   |        1977 |
| The Art of War       | Sun Tzu          |         500 |
| Fahrenheit 451       | Ray Bradbury     |        1953 |
+---------------------+-------------------+--------------+
10 rows in set (0.00 sec)
```

mysql> SELECT title AS Book_Title, author AS Book_Author, available_copies AS Copies FROM Books1;

```
+---------------------+-------------------+--------+
| Book_Title          | Book_Author       | Copies |
+---------------------+-------------------+--------+
| The Hobbit          | J.R.R. Tolkien    |     5 |
| The War of the Worlds | H.G. Wells      |     3 |
| War and Peace       | Leo Tolstoy       |     7 |
| The Great Gatsby    | F. Scott Fitzgerald |   6 |
| Anna Karenina       | Leo Tolstoy       |     2 |
| 1984                | George Orwell     |    10 |
| Brave New World     | Aldous Huxley     |     4 |
| The Silmarillion    | J.R.R. Tolkien    |     8 |
| The Art of War      | Sun Tzu           |     6 |
| Fahrenheit 451      | Ray Bradbury      |     5 |
+---------------------+-------------------+--------+
10 rows in set (0.00 sec)
```

mysql> SELECT title, author, available_copies AS Stock FROM Books1 WHERE available_copies > 4;

```
+------------------+---------------------+-------+
```

```
| title           | author           | Stock |
+-----------------+------------------+-------+
| The Hobbit      | J.R.R. Tolkien   |     5 |
| War and Peace   | Leo Tolstoy      |     7 |
| The Great Gatsby | F. Scott Fitzgerald |  6 |
| 1984            | George Orwell    |    10 |
| The Silmarillion | J.R.R. Tolkien  |     8 |
| The Art of War  | Sun Tzu          |     6 |
| Fahrenheit 451  | Ray Bradbury     |     5 |
+-----------------+------------------+-------+
7 rows in set (0.00 sec)


mysql> SELECT * FROM Books1 LIMIT 5;
+---------+--------------------+--------------------+------------------+---------------+-----------------+
| book_id | title              | author             | genre            | published_year | available_copies |
+---------+--------------------+--------------------+------------------+---------------+-----------------+
|       1 | The Hobbit         | J.R.R. Tolkien     | Fantasy          |          1937 |               5 |
|       2 | The War of the Worlds | H.G. Wells      | Science Fiction  |          1898 |               3 |
|       3 | War and Peace      | Leo Tolstoy        | Historical Fiction |        1869 |               7 |
|       4 | The Great Gatsby   | F. Scott Fitzgerald | Fiction         |          1925 |               6 |
|       5 | Anna Karenina      | Leo Tolstoy        | Fiction          |          1878 |               2 |
+---------+--------------------+--------------------+------------------+---------------+-----------------+
5 rows in set (0.00 sec)


mysql> SELECT * FROM Books1 ORDER BY published_year DESC LIMIT 3;
+---------+-----------------+---------------+-----------+---------------+-----------------+
| book_id | title           | author        | genre     | published_year | available_copies |
+---------+-----------------+---------------+-----------+---------------+-----------------+
```

8	The Silmarillion	J.R.R. Tolkien	Fantasy	1977	8
10	Fahrenheit 451	Ray Bradbury	Dystopian	1953	5
6	1984	George Orwell	Dystopian	1949	10

+---------+-----------------+---------------+----------+--------------+----------------+

3 rows in set (0.00 sec)

mysql> SELECT * FROM Books1 WHERE available_copies > 3 LIMIT 7;

+---------+-----------------+--------------------+------------------+--------------+----------------+

| book_id | title | author | genre | published_year | available_copies |

+---------+-----------------+--------------------+------------------+--------------+----------------+

1	The Hobbit	J.R.R. Tolkien	Fantasy	1937	5
3	War and Peace	Leo Tolstoy	Historical Fiction	1869	7
4	The Great Gatsby	F. Scott Fitzgerald	Fiction	1925	6
6	1984	George Orwell	Dystopian	1949	10
7	Brave New World	Aldous Huxley	Dystopian	1932	4
8	The Silmarillion	J.R.R. Tolkien	Fantasy	1977	8
9	The Art of War	Sun Tzu	Philosophy	500	6

+---------+-----------------+--------------------+------------------+--------------+----------------+

7 rows in set (0.00 sec)

mysql> SELECT * FROM Books1 ORDER BY author LIMIT 10;

+---------+--------------------+--------------------+------------------+--------------+------------------+

| book_id | title | author | genre | published_year | available_copies |

+---------+--------------------+--------------------+------------------+--------------+------------------+

| 7 | Brave New World | Aldous Huxley | Dystopian | 1932 | 4 |
| 4 | The Great Gatsby | F. Scott Fitzgerald | Fiction | 1925 | 6 |

```
|       6 | 1984              | George Orwell    | Dystopian        |          1949 |            10 |
|       2 | The War of the Worlds | H.G. Wells  | Science Fiction  |          1898 |             3 |
|       1 | The Hobbit       | J.R.R. Tolkien   | Fantasy          |          1937 |             5 |
|       8 | The Silmarillion | J.R.R. Tolkien   | Fantasy          |          1977 |             8 |
|       3 | War and Peace    | Leo Tolstoy      | Historical Fiction |        1869 |             7 |
|       5 | Anna Karenina    | Leo Tolstoy      | Fiction          |          1878 |             2 |
|      10 | Fahrenheit 451   | Ray Bradbury     | Dystopian        |          1953 |             5 |
|       9 | The Art of War   | Sun Tzu          | Philosophy       |           500 |             6 |
+---------+----------------------+--------------------+------------------+---------------+-------------------+
10 rows in set (0.00 sec)


mysql> SELECT * FROM Books1 WHERE genre = 'Fantasy' LIMIT 4;
+---------+------------------+----------------+---------+----------------+------------------+
| book_id | title            | author         | genre   | published_year | available_copies |
+---------+------------------+----------------+---------+----------------+------------------+
|       1 | The Hobbit       | J.R.R. Tolkien | Fantasy |           1937 |                5 |
|       8 | The Silmarillion | J.R.R. Tolkien | Fantasy |           1977 |                8 |
+---------+------------------+----------------+---------+----------------+------------------+
2 rows in set (0.00 sec)
```