Lesson 8- refining our selection

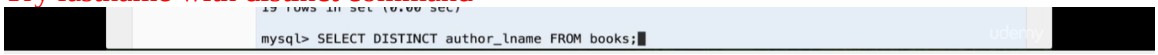
1- Seed data: Adding couple of new books
2- Using distinct
3- Sorting data with order by
4- Using limit
5- Better searches with like
6- Like part 2: more wildcard
7- Refining selection exercise

1-Distinct command

System 1

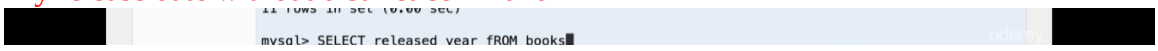
Try lastname without distinct command

Try lastname with distinct command

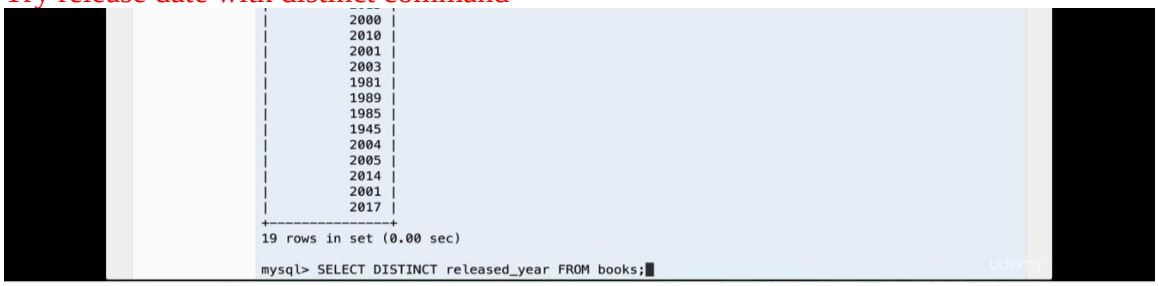


System 2 (it work with string as well)

Try release date without distinct command

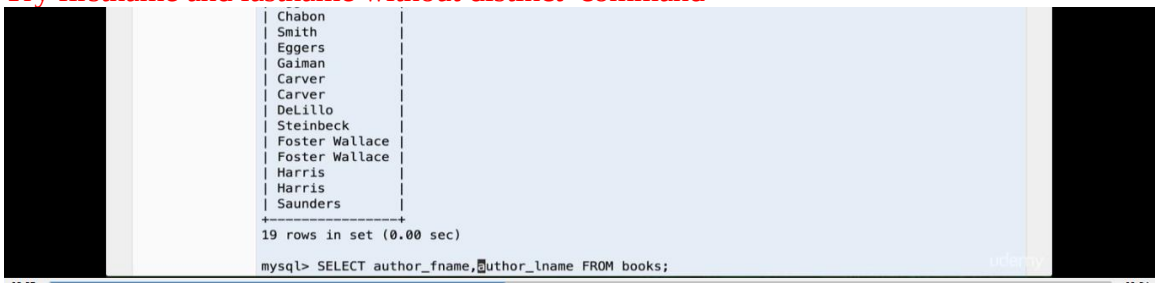


Try release date with distinct command



System 3

Try firstname and lastname without distinct command



Try firstname and lastname with distinct command

```
| Dave         | Eggers          |
| Michael      | Chabon          |
| Patti        | Smith           |
| Dave         | Eggers          |
| Neil         | Gaiman          |
| Raymond      | Carver          |
| Raymond      | Carver          |
| Don          | DeLillo         |
| John         | Steinbeck       |
| David        | Foster Wallace  |
| David        | Foster Wallace  |
| Dan          | Harris          |
| Freida       | Harris          |
| George       | Saunders        |
+--------------+-----------------+
19 rows in set (0.00 sec)

mysql> SELECT DISTINCT author_lname FROM books;
```

System 4

First way of doing it

```
SELECT CONCAT(author_fname, author_lname) FROM books;
```

Second way of doing full name with concating (combining) command

```
SELECT DISTINCT CONCAT(author_fname,' ', author_lname) FROM books;
```

Third and easy way of doing full name with distinct command

```
-- SELECT DISTINCT CONCAT(author_fname,' ', author_lname) FROM books;

SELECT DISTINCT author_fname, author_lname FROM books;
```

2-Order by (how can we sort/arrange our result)

```
SELECT author_lname FROM books ORDER BY author_lname;
```

Try with distinct command

System 1

```
-- SELECT DISTINCT CONCAT(author_fname,' ', author_lname) FROM books;

SELECT DISTINCT author_fname, author_lname FROM books;
```

This is Output

System 2

```
mysql> SELECT author_lname FROM books ORDER BY author_lname;
+-----------------+
| author_lname    |
+-----------------+
| Carver          |
| Carver          |
| Chabon          |
| DeLillo         |
| Eggers          |
| Eggers          |
| Eggers          |
| Foster Wallace  |
| Foster Wallace  |
| Gaiman          |
| Gaiman          |
| Gaiman          |
```

System 3

```
| The Amazing Adventures of Kavalier & Clay            |
| Just Kids                                            |
| A Heartbreaking Work of Staggering Genius            |
| Coraline                                             |
| What We Talk About When We Talk About Love: Stories  |
| Where I'm Calling From: Selected Stories             |
| White Noise                                          |
| Cannery Row                                          |
| Oblivion: Stories                                    |
| Consider the Lobster                                 |
| 10% Happier                                          |
| fake_book                                            |
| Lincoln In The Bardo                                 |
+------------------------------------------------------+
19 rows in set (0.00 sec)

mysql> SELECT title FROM books ORDER BY title;
```

System 3

```
SELECT author_lname FROM books ORDER BY author_lname DESC;
```

This is output

```
| author_lname   |
+----------------+
| Steinbeck      |
| Smith          |
| Saunders       |
| Lahiri         |
| Lahiri         |
| Harris         |
| Harris         |
| Gaiman         |
| Gaiman         |
| Gaiman         |
| Foster Wallace |
| Foster Wallace |
| Eggers         |
| Eggers         |
| Eggers         |
```

System 4

```
19 rows in set (0.00 sec)

mysql> SELECT title FROM books ORDER BY title DESC;
```

(Numbers) use For Highest price of item or blog post amount or highest release

```
SELECT released_year FROM books ORDER BY released_year;
```

System 1

```
mysql> SELECT released_year FROM books ORDER BY released_year;
+---------------+
| released_year |
+---------------+
|          1945 |
|          1981 |
|          1985 |
|          1989 |
|          1996 |
|          2000 |
|          2001 |
|          2001 |
|          2001 |
|          2003 |
|          2003 |
|          2004 |
```

System 2

```
19 rows in set (0.00 sec)

mysql> SELECT released_year FROM books ORDER BY released_year DESC;
+---------------+
| released_year |
+---------------+
|          2017 |
|          2016 |
|          2014 |
|          2013 |
|          2012 |
|          2010 |
|          2005 |
|          2004 |
|          2003 |
|          2003 |
|          2001 |
```

System 3

```
mysql> SELECT title, released_year, pages FROM books ORDER BY released_year;
+-----------------------------------------------------+---------------+-------+
| title                                               | released_year | pages |
+-----------------------------------------------------+---------------+-------+
| Cannery Row                                         |          1945 |   181 |
| What We Talk About When We Talk About Love: Stories |          1981 |   176 |
| White Noise                                         |          1985 |   320 |
| Where I'm Calling From: Selected Stories            |          1989 |   526 |
| Interpreter of Maladies                             |          1996 |   198 |
| The Amazing Adventures of Kavalier & Clay           |          2000 |   634 |
| American Gods                                       |          2001 |   465 |
| fake_book                                           |          2001 |   428 |
| A Heartbreaking Work of Staggering Genius           |          2001 |   437 |
| The Namesake                                        |          2003 |   291 |
| Coraline                                            |          2003 |   208 |
| Oblivion: Stories                                   |          2004 |   329 |
| Consider the Lobster                                |          2005 |   343 |
```

System 4

```
mysql> SELECT title, pages FROM books ORDER BY released_year;
+-----------------------------------------------------+-------+
| title                                               | pages |
+-----------------------------------------------------+-------+
| Cannery Row                                         |   181 |
| What We Talk About When We Talk About Love: Stories |   176 |
| White Noise                                         |   320 |
| Where I'm Calling From: Selected Stories            |   526 |
| Interpreter of Maladies                             |   198 |
| The Amazing Adventures of Kavalier & Clay           |   634 |
| American Gods                                       |   465 |
| fake_book                                           |   428 |
| A Heartbreaking Work of Staggering Genius           |   437 |
```

System 5

```
SELECT title, author_fname, author_lname
FROM books ORDER BY 2;
```

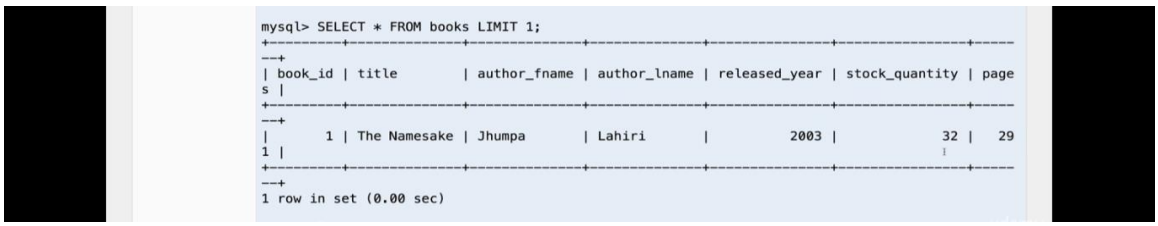
```
mysql>
mysql>
mysql>
mysql> SELECT title, author_fname, author_lname
    -> FROM books ORDER BY 2;
+-----------------------------------------------------+--------------+----------------+
| title                                               | author_fname | author_lname   |
+-----------------------------------------------------+--------------+----------------+
| 10% Happier                                         | Dan          | Harris         |
| A Hologram for the King: A Novel                    | Dave         | Eggers         |
| The Circle                                          | Dave         | Eggers         |
| A Heartbreaking Work of Staggering Genius           | Dave         | Eggers         |
| Consider the Lobster                                | David        | Foster Wallace |
| Oblivion: Stories                                   | David        | Foster Wallace |
| White Noise                                         | Don          | DeLillo        |
| The Amazing Adventures of Kavalier & Clay           | Michael      | Chabon         |
| Oblivion: Stories                                   | David        | Foster Wallace |
| Norse Mythology                                     | Neil         | Gaiman         |
| Lincoln In The Bardo                                | George       | Saunders       |
| Just Kids                                           | Patti        | Smith          |
| Interpreter of Maladies                             | Jhumpa       | Lahiri         |
| fake_book                                           | Freida       | Harris         |
| Coraline                                            | Neil         | Gaiman         |
| Consider the Lobster                                | David        | Foster Wallace |
| Cannery Row                                         | John         | Steinbeck      |
| American Gods                                       | Neil         | Gaiman         |
| A Hologram for the King: A Novel                    | Dave         | Eggers         |
| A Heartbreaking Work of Staggering Genius           | Dave         | Eggers         |
| 10% Happier                                         | Dan          | Harris         |
+-----------------------------------------------------+--------------+----------------+
19 rows in set (0.00 sec)

mysql> SELECT title, author_fname, author_lname  FROM books ORDER BY 1 DESC
```

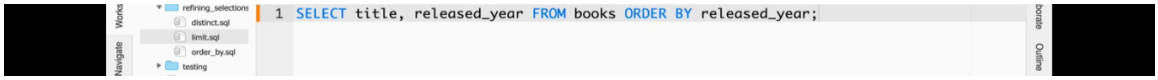
System 6

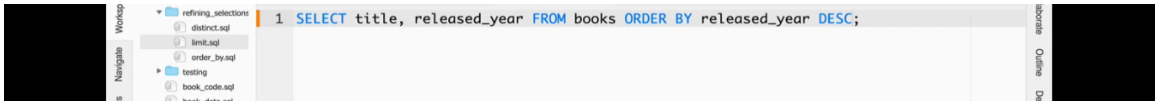
```
SELECT author_fname, author_lname FROM books
ORDER BY author_lname, author_fname;
```

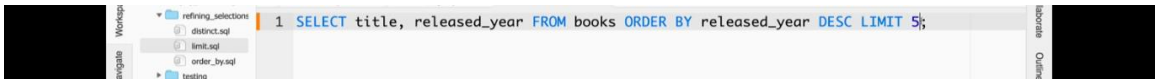
```
1 SELECT author_fname, author_lname FROM books ORDER BY author_lname;
```

Limit
Order by first 10 best selling book

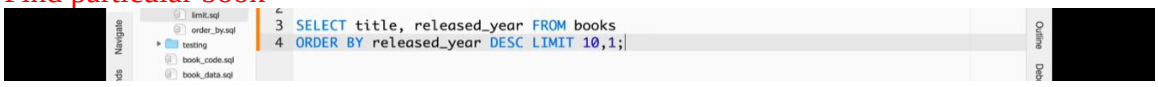




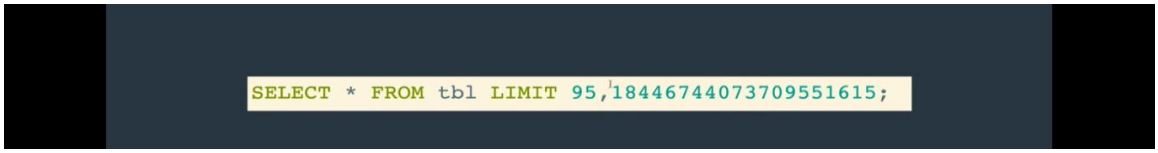




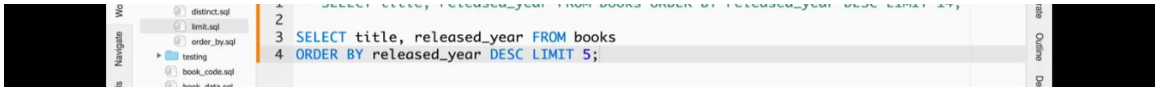
Find particular book



From fifth raw to end

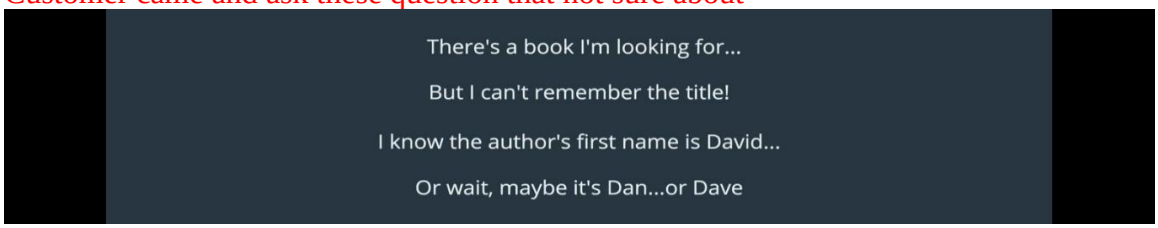


But we use normally this

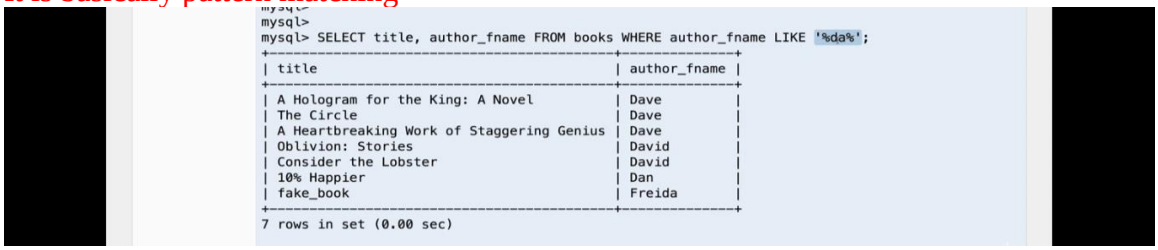


Like (find books)

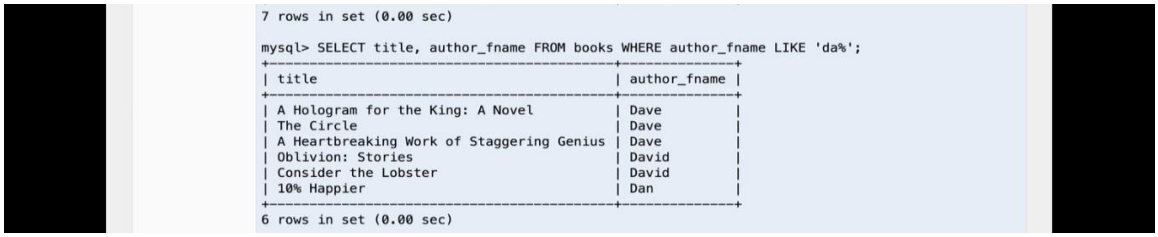
Customer came and ask these question that not sure about



It is basically pattern matching



```
mysql>
mysql> SELECT title, author_fname FROM books WHERE author_fname LIKE '%da%';
+-------------------------------------------+--------------+
| title                                     | author_fname |
+-------------------------------------------+--------------+
| A Hologram for the King: A Novel          | Dave         |
| The Circle                                | Dave         |
| A Heartbreaking Work of Staggering Genius | Dave         |
| Oblivion: Stories                         | David        |
| Consider the Lobster                      | David        |
| 10% Happier                               | Dan          |
| fake_book                                 | Freida       |
+-------------------------------------------+--------------+
7 rows in set (0.00 sec)
```



```
7 rows in set (0.00 sec)

mysql> SELECT title, author_fname FROM books WHERE author_fname LIKE 'da%';
+-------------------------------------------+--------------+
| title                                     | author_fname |
+-------------------------------------------+--------------+
| A Hologram for the King: A Novel          | Dave         |
| The Circle                                | Dave         |
| A Heartbreaking Work of Staggering Genius | Dave         |
| Oblivion: Stories                         | David        |
| Consider the Lobster                      | David        |
| 10% Happier                               | Dan          |
+-------------------------------------------+--------------+
6 rows in set (0.00 sec)
```

problems.sql

```
mysql> SELECT title FROM books WHERE title LIKE '%the';
Empty set (0.00 sec)

mysql> SELECT title FROM books WHERE title LIKE '%the%';
+-----------------------------------------+
| title                                   |
+-----------------------------------------+
| The Namesake                            |
| A Hologram for the King: A Novel        |
| The Circle                              |
| The Amazing Adventures of Kavalier & Clay |
| Consider the Lobster                    |
| Lincoln In The Bardo                    |
+-----------------------------------------+
6 rows in set (0.00 sec)
```

Like 2

LIKE

```
WHERE stock_quantity LIKE '____'
```

Yes, that is 4 underscores

```
mysql> SELECT title, stock_quantity FROM books WHERE stock_quantity LIKE '____';
+---------------------+----------------+
| title               | stock_quantity |
+---------------------+----------------+
| Lincoln In The Bardo |           1000 |
+---------------------+----------------+
1 row in set (0.00 sec)
```

American phone book style

```
| Where I'm Calling From: Selected Stories                |             12 |
| White Noise                                             |             49 |
| Cannery Row                                             |             95 |
| Consider the Lobster                                    |             92 |
| 10% Happier                                             |             29 |
+---------------------------------------------------------+----------------+
13 rows in set (0.00 sec)

mysql> (235)234-0987  LIKE '(___)___-____'
```

But What If...

I'm searching for a book with a '%' in it

I'm searching for a book with an '_' in it

```
WHERE title LIKE '%\%%'
```

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

mysql> SELECT title FROM books WHERE title LIKE '%\%%';
+-------------+
| title       |
+-------------+
| 10% Happier |
+-------------+
1 row in set (0.00 sec)
```

```
mysql> SELECT title FROM books WHERE title LIKE '%\%%';
+-------------+
| title       |
+-------------+
| 10% Happier |
+-------------+
1 row in set (0.00 sec)

mysql> SELECT title FROM books WHERE title LIKE '%\_%';
+------------+
| title      |
+------------+
| fake_book  |
+------------+
1 row in set (0.00 sec)
```

Exercises

1

Select All Story Collections

Titles That contain 'stories'

```
+-----------------------------------------------------+
| title                                               |
+-----------------------------------------------------+
| What We Talk About When We Talk About Love: Stories |
| Where I'm Calling From: Selected Stories            |
| Oblivion: Stories                                   |
+-----------------------------------------------------+
```

```
1 SELECT title FROM books WHERE title LIKE '%stories';
```

2

Find The Longest Book

Print Out the Title and Page Count

```
+-----------------------------------------+-------+
| title                                   | pages |
+-----------------------------------------+-------+
| The Amazing Adventures of Kavalier & Clay |   634 |
+-----------------------------------------+-------+
```

```
1 -- SELECT title FROM books WHERE title LIKE '%stories%';
2
3 SELECT title, pages FROM books ORDER BY pages;
```

```
2
3 SELECT title, pages FROM books ORDER BY pages DESC LIMIT 1;
```

3

Print a summary containing the title and year, for the 3 most recent books

```
+--------------------------------+
| summary                        |
+--------------------------------+
| Lincoln In The Bardo - 2017    |
| Norse Mythology - 2016         |
| 10% Happier - 2014             |
+--------------------------------+
```

```
4
5
6 SELECT CONCAT(title, ' - ', released_year) FROM books;
```

```sql
SELECT CONCAT(title, ' - ', released_year) AS summary FROM books;
```

```sql
SELECT
    CONCAT(title, ' - ', released_year) AS summary
FROM books ORDER BY released_year;
```

```sql
SELECT
    CONCAT(title, ' - ', released_year) AS summary
FROM books ORDER BY released_year DESC;
```

```sql
SELECT
    CONCAT(title, ' - ', released_year) AS summary
FROM books ORDER BY released_year DESC LIMIT 3;
```

4

Find all books with an author_lname that contains a space(" ")

title	author_lname
Oblivion: Stories	Foster Wallace
Consider the Lobster	Foster Wallace

```sql
-- SELECT
--     CONCAT(title, ' - ', released_year) AS summary
-- FROM books ORDER BY released_year DESC LIMIT 3;

SELECT title, author_lname FROM books WHERE author_lname LIKE '% %';
```

5

Find The 3 Books With The Lowest Stock

Select title, year, and stock

title	released_year	stock_quantity
American Gods	2001	12
Where I'm Calling From: Selected Stories	1989	12
What We Talk About When We Talk About Love: Stories	1981	23

```sql
-- SELECT title, author_lname FROM books WHERE author_lname LIKE '% %';

SELECT title, released_year, stock_quantity
FROM books ORDER BY stock_quantity;
```

```sql
-- SELECT title, author_lname FROM books WHERE author_lname LIKE '% %';

SELECT title, released_year, stock_quantity
FROM books ORDER BY stock_quantity LIMIT 3;
```

6

Print title and author_lname, sorted first by author_lname and then by title

title	author_lname
What We Talk About When We Talk About Love: Stories	Carver
Where I'm Calling From: Selected Stories	Carver
The Amazing Adventures of Kavalier & Clay	Chabon
White Noise	DeLillo
A Heartbreaking Work of Staggering Genius	Eggers
A Hologram for the King: A Novel	Eggers
The Circle	Eggers
Consider the Lobster	Foster Wallace
Oblivion: Stories	Foster Wallace
American Gods	Gaiman
Coraline	Gaiman
Norse Mythology	Gaiman
10% Happier	Harris
fake_book	Harris
Interpreter of Maladies	Lahiri
The Namesake	Lahiri
Lincoln In The Bardo	Saunders
Just Kids	Smith
Cannery Row	Steinbeck

```
11
12 -- SELECT title, released_year, stock_quantity
13 -- FROM books ORDER BY stock_quantity LIMIT 3;
14
15 SELECT title, author_lname
16 FROM books;
```

```
11
12 -- SELECT title, released_year, stock_quantity
13 -- FROM books ORDER BY stock_quantity LIMIT 3;
14
15 SELECT title, author_lname
16 FROM books ORDER BY author_lname;
```

```
12 -- SELECT title, released_year, stock_quantity
13 -- FROM books ORDER BY stock_quantity LIMIT 3;
14
15 SELECT title, author_lname
16 FROM books ORDER BY author_lname, title;
```

```
12 -- SELECT title, released_year, stock_quantity
13 -- FROM books ORDER BY stock_quantity LIMIT 3;
14
15 SELECT title, author_lname
16 FROM books ORDER BY author_lname, title;
```

7

Make This Happen...

Sorted Alphabetically By Last Name

yell
MY FAVORITE AUTHOR IS RAYMOND CARVER!
MY FAVORITE AUTHOR IS RAYMOND CARVER!
MY FAVORITE AUTHOR IS MICHAEL CHABON!
MY FAVORITE AUTHOR IS DON DELILLO!
MY FAVORITE AUTHOR IS DAVE EGGERS!
MY FAVORITE AUTHOR IS DAVE EGGERS!
MY FAVORITE AUTHOR IS DAVE EGGERS!
MY FAVORITE AUTHOR IS DAVID FOSTER WALLACE!
MY FAVORITE AUTHOR IS DAVID FOSTER WALLACE!
MY FAVORITE AUTHOR IS NEIL GAIMAN!
MY FAVORITE AUTHOR IS NEIL GAIMAN!
MY FAVORITE AUTHOR IS NEIL GAIMAN!
MY FAVORITE AUTHOR IS FREIDA HARRIS!
MY FAVORITE AUTHOR IS DAN HARRIS!
MY FAVORITE AUTHOR IS JHUMPA LAHIRI!
MY FAVORITE AUTHOR IS JHUMPA LAHIRI!
MY FAVORITE AUTHOR IS GEORGE SAUNDERS!
MY FAVORITE AUTHOR IS PATTI SMITH!
MY FAVORITE AUTHOR IS JOHN STEINBECK!

```
22 SELECT
23     CONCAT(
24         'MY FAVORITE AUTHOR IS ',
25         author_fname,
26         ' ',
27         author_lname,
28         '!'
29     )
30 FROM books;
```

distinct.sql
exercises.sql
limit.sql
order_by.sql
testing
book_code.sql
book_data.sql
exercises.sql
first_file.sql
like.sql
problems.sql
22 SELECT
23 CONCAT(
24 'MY FAVORITE AUTHOR IS ',
25 author_fname,
26 ' ',
27 author_lname,
28 '!'
29) AS yell
30 FROM books;

refining_selections
distinct.sql
exercises.sql
limit.sql
order_by.sql
testing
book_code.sql
book_data.sql
exercises.sql
first_file.sql
like.sql
problems.sql
22 SELECT
23 CONCAT(
24 'MY FAVORITE AUTHOR IS ',
25 UPPER(author_fname),
26 ' ',
27 UPPER(author_lname),
28 '!'
29) AS yell
30 FROM books;

distinct.sql
exercises.sql
limit.sql
order_by.sql
testing
book_code.sql
book_data.sql
exercises.sql
first_file.sql
like.sql
problems.sql
21
22 SELECT
23 CONCAT(
24 'MY FAVORITE AUTHOR IS ',
25 UPPER(author_fname),
26 ' ',
27 UPPER(author_lname),
28 '!'
29) AS yell
30 FROM books ORDER BY author_lname;