CRUD & Intro to String Function - SQL SESSION - 4

05 July 2024 14:34

CRUD - SQL Session 4

```
mysql> CREATE TABLE cats
    -> (
    ->   cat_id INT AUTO_INCREMENT,
    ->   name   VARCHAR(100),
    ->   breed  VARCHAR(100),
    ->   age    INT,
    ->   PRIMARY KEY (cat_id)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> DESC cats;
+--------+--------------+------+-----+---------+----------------+
| Field  | Type         | Null | Key | Default | Extra          |
+--------+--------------+------+-----+---------+----------------+
| cat_id | int          | NO   | PRI | NULL    | auto_increment |
| name   | varchar(100) | YES  |     | NULL    |                |
| breed  | varchar(100) | YES  |     | NULL    |                |
| age    | int          | YES  |     | NULL    |                |
+--------+--------------+------+-----+---------+----------------+
4 rows in set (0.00 sec)
```

```
mysql> INSERT INTO cats(name, breed, age)
    -> VALUES ('Ringo', 'Tabby', 4),
    ->        ('Cindy', 'Maine Coon', 10),
    ->        ('Dumbledore', 'Maine Coon', 11),
    ->        ('Egg', 'Persian', 4),
    ->        ('Misty', 'Tabby', 13),
    ->        ('George Michael', 'Ragdoll', 9),
    ->        ('Jackson', 'Sphynx', 7);
Query OK, 7 rows affected (0.02 sec)
Records: 7  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM cats;
+--------+----------------+------------+------+
| cat_id | name           | breed      | age  |
+--------+----------------+------------+------+
|      1 | Ringo          | Tabby      |    4 |
|      2 | Cindy          | Maine Coon |   10 |
|      3 | Dumbledore     | Maine Coon |   11 |
|      4 | Egg            | Persian    |    4 |
|      5 | Misty          | Tabby      |   13 |
|      6 | George Michael | Ragdoll    |    9 |
|      7 | Jackson        | Sphynx     |    7 |
+--------+----------------+------------+------+
```

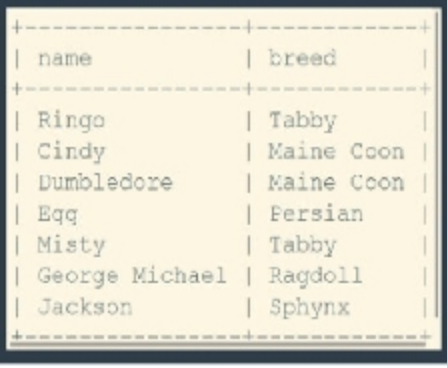
QUICK CHALLENGE :

QUICK CHALLENGE :

Write the SQL that selects the following:

```
+--------+
| cat_id |
+--------+
|      1 |
|      2 |
|      3 |
|      4 |
|      5 |
|      6 |
|      7 |
+--------+
```

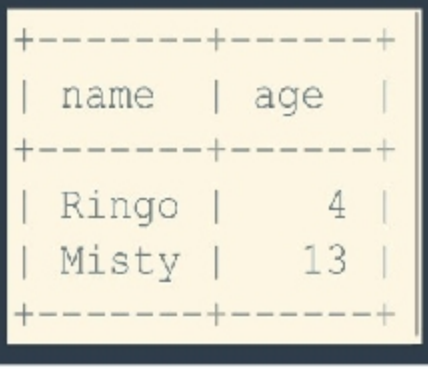
Write the SQL that selects the following:



```
+----------------+------------+
| name           | breed      |
+----------------+------------+
| Ringo          | Tabby      |
| Cindy          | Maine Coon |
| Dumbledore     | Maine Coon |
| Egg            | Persian    |
| Misty          | Tabby      |
| George Michael | Ragdoll    |
| Jackson        | Sphynx     |
+----------------+------------+
```

Write the SQL that selects the following:

(Just the Tabby cats)



```
+-------+------+
| name  | age  |
+-------+------+
| Ringo |    4 |
| Misty |   13 |
+-------+------+
```

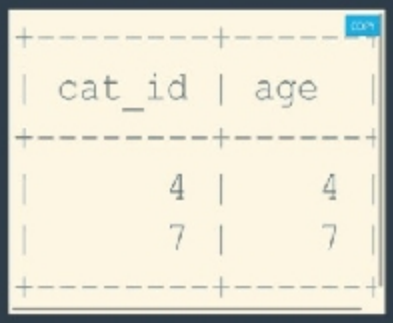
```
mysql> SELECT name, age FROM cats WHERE breed = "Tabby";
+-------+------+
| name  | age  |
+-------+------+
| Ringo |    4 |
| Misty |   13 |
+-------+------+
2 rows in set (0.00 sec)
```

Write the SQL that selects the following:

```
2 rows in set (0.00 sec)
```

Write the SQL that selects the following:

cat_id is same as age



cat_id	age
4	4
7	7

```
mysql> SELECT cat_id , age from Cats where cat_id = age;
+--------+------+
| cat_id | age  |
+--------+------+
|      4 |    4 |
|      7 |    7 |
+--------+------+
```

Aliases use "AS" Keyword to rename the columns.

```
mysql> SELECT cat_id AS id, name FROM cats;
+----+----------------+
| id | name           |
+----+----------------+
|  1 | Ringo          |
|  2 | Cindy          |
|  3 | Dumbledore     |
|  4 | Egg            |
|  5 | Misty          |
|  6 | George Michael |
|  7 | Jackson        |
+----+----------------+
7 rows in set (0.00 sec)
```

UPDATE COMMAND :

```
mysql> UPDATE Cats SET breed = "Short Hair"
    -> WHERE breed = "Tabby";
Query OK, 2 rows affected (0.01 sec)
```

Note:

Important : Use

```
mysql> UPDATE Cats SET breed = "Short Hair"
    -> WHERE breed = "Tabby";
Query OK, 2 rows affected (0.01 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> SELECT * FROM cats;
+--------+----------------+------------+------+
| cat_id | name           | breed      | age  |
+--------+----------------+------------+------+
|      1 | Ringo          | Short Hair |    4 |
|      2 | Cindy          | Maine Coon |   10 |
|      3 | Dumbledore     | Maine Coon |   11 |
|      4 | Egg            | Persian    |    4 |
|      5 | Misty          | Short Hair |   13 |
|      6 | George Michael | Ragdoll    |    9 |
|      7 | Jackson        | Sphynx     |    7 |
+--------+----------------+------------+------+
7 rows in set (0.00 sec)
```

Note:

Important : Use Where clause to avoid updating all data in a particular column

```
mysql> UPDATE cats SET age=14
    -> WHERE name='Misty';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM cats;
+--------+----------------+------------+------+
| cat_id | name           | breed      | age  |
+--------+----------------+------------+------+
|      1 | Ringo          | Short Hair |    4 |
|      2 | Cindy          | Maine Coon |   10 |
|      3 | Dumbledore     | Maine Coon |   11 |
|      4 | Egg            | Persian    |    4 |
|      5 | Misty          | Short Hair |   14 |
|      6 | George Michael | Ragdoll    |    9 |
|      7 | Jackson        | Sphynx     |    7 |
+--------+----------------+------------+------+
7 rows in set (0.00 sec)
```

Change Jackson's name to "Jack"

```
mysql> UPDATE cats SET name = "JACK"
    -> WHERE name = "Jackson"
    -> ;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM cats;
+--------+----------------+------------+------+
| cat_id | name           | breed      | age  |
+--------+----------------+------------+------+
|      1 | Ringo          | Short Hair |    4 |
|      2 | Cindy          | Maine Coon |   10 |
|      3 | Dumbledore     | Maine Coon |   11 |
|      4 | Egg            | Persian    |    4 |
|      5 | Misty          | Short Hair |   14 |
|      6 | George Michael | Ragdoll    |    9 |
|      7 | JACK           | Sphynx     |    7 |
+--------+----------------+------------+------+
7 rows in set (0.00 sec)
```

```
7 rows in set (0.00 sec)
```

Change Ringo's breed to "British Shorthair"

```
mysql> UPDATE cats SET breed = "British Short Hair"
    -> WHERE name = "Ringo";
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM cats;
+--------+----------------+--------------------+------+
| cat_id | name           | breed              | age  |
+--------+----------------+--------------------+------+
|      1 | Ringo          | British Short Hair |    4 |
|      2 | Cindy          | Maine Coon         |   10 |
|      3 | Dumbledore     | Maine Coon         |   11 |
|      4 | Egg            | Persian            |    4 |
|      5 | Misty          | Short Hair         |   14 |
|      6 | George Michael | Ragdoll            |    9 |
|      7 | JACK           | Sphynx             |    7 |
+--------+----------------+--------------------+------+
7 rows in set (0.00 sec)
```

Update both Maine Coons' ages to be 12

```
mysql> UPDATE cats SET age = 12
    -> WHERE breed = "Maine Coon";
Query OK, 2 rows affected (0.01 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> SELECT * FROM cats;
+--------+----------------+--------------------+------+
| cat_id | name           | breed              | age  |
+--------+----------------+--------------------+------+
|      1 | Ringo          | British Short Hair |    4 |
|      2 | Cindy          | Maine Coon         |   12 |
|      3 | Dumbledore     | Maine Coon         |   12 |
|      4 | Egg            | Persian            |    4 |
|      5 | Misty          | Short Hair         |   14 |
|      6 | George Michael | Ragdoll            |    9 |
|      7 | JACK           | Sphynx             |    7 |
+--------+----------------+--------------------+------+
7 rows in set (0.00 sec)
```

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

DELETE Command :

```
mysql> DELETE FROM cats WHERE name='Egg';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM cats;
+--------+---------------+--------------------+------+
| cat_id | name          | breed              | age  |
+--------+---------------+--------------------+------+
|      1 | Ringo         | British Short Hair |    4 |
|      2 | Cindy         | Maine Coon         |   12 |
|      3 | Dumbledore    | Maine Coon         |   12 |
|      5 | Misty         | Short Hair         |   14 |
|      6 | George Michael | Ragdoll           |    9 |
|      7 | JACK          | Sphynx             |    7 |
+--------+---------------+--------------------+------+
6 rows in set (0.00 sec)
```

DELETE all 4 year old cats

```
mysql> DELETE FROM cats WHERE age = 4;
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM cats;
+--------+---------------+------------+------+
| cat_id | name          | breed      | age  |
+--------+---------------+------------+------+
|      2 | Cindy         | Maine Coon |   12 |
|      3 | Dumbledore    | Maine Coon |   12 |
|      5 | Misty         | Short Hair |   14 |
|      6 | George Michael | Ragdoll   |    9 |
|      7 | JACK          | Sphynx     |    7 |
+--------+---------------+------------+------+
5 rows in set (0.00 sec)
```

DELETE cats whose age is the same as their cat_id

```
mysql> DELETE FROM cats WHERE age = cat_id;
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM cats;
+--------+---------------+------------+------+
| cat_id | name          | breed      | age  |
+--------+---------------+------------+------+
```

```
+--------+---------------+-----------+------+
| cat_id | name          | breed     | age  |
+--------+---------------+-----------+------+
|      2 | Cindy         | Maine Coon |   12 |
|      3 | Dumbledore    | Maine Coon |   12 |
|      5 | Misty         | Short Hair |   14 |
|      6 | George Michael | Ragdoll   |    9 |
+--------+---------------+-----------+------+
4 rows in set (0.00 sec)
```

DELETE all cats 🙀

```
mysql> DELETE FROM Cats;
Query OK, 4 rows affected (0.00 sec)

mysql> SELECT * FROM cats;
Empty set (0.00 sec)
```

QUICK CHALLENGE - COMPLETE CRUD OPERATION :

Create a new database shirts_db

```
mysql> CREATE DATABASE shirts_db;
Query OK, 1 row affected (0.02 sec)

mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| employee           |
| information_schema |
| mysql              |
| performance_schema |
| shirts_db          |
| soap_store         |
+--------------------+
6 rows in set (0.02 sec)

mysql> USE shirts_db;
Database changed
```

```
mysql> USE shirts_db;
Database changed
```

Create a new table shirts

Primary Key

shirt_id	article	color	shirt_size	last_worn
1	t-shirt	white	S	10
2	t-shirt	green	S	200
3	polo shirt	black	M	10
4	tank top	blue	S	50
5	t-shirt	pink	S	0
6	polo shirt	red	M	5
7	tank top	white	S	200
8	tank top	blue	M	15

('t-shirt', 'white', 'S', 10),
('t-shirt', 'green', 'S', 200),
('polo shirt', 'black', 'M', 10),
('tank top', 'blue', 'S', 50),
('t-shirt', 'pink', 'S', 0),
('polo shirt', 'red', 'M', 5),
('tank top', 'white', 'S', 200),
('tank top', 'blue', 'M', 15)

```
mysql> CREATE TABLE shirts(
    ->  shirt_id INT PRIMARY KEY auto_increment,
    ->      article varchar(100),
    ->      color varchar(50) ,
    ->      shirt_size char(1),
    ->      last_worn int
    -> );
```

```
    ->     shirt_size char(1),
    ->     last_worn int
    -> );
Query OK, 0 rows affected (0.07 sec)

mysql> DESC shirts;
+------------+-------------+------+-----+---------+----------------+
| Field      | Type        | Null | Key | Default | Extra          |
+------------+-------------+------+-----+---------+----------------+
| shirt_id   | int         | NO   | PRI | NULL    | auto_increment |
| article    | varchar(100)| YES  |     | NULL    |                |
| color      | varchar(50) | YES  |     | NULL    |                |
| shirt_size | char(1)     | YES  |     | NULL    |                |
| last_worn  | int         | YES  |     | NULL    |                |
+------------+-------------+------+-----+---------+----------------+
5 rows in set (0.01 sec)
```

```
mysql> INSERT INTO shirts(article , color, shirt_size , last_worn)
    -> VALUES('t-shirt', 'white', 'S', 10),
    -> ('t-shirt', 'green', 'S', 200),
    -> ('polo shirt', 'black', 'M', 10),
    -> ('tank top', 'blue', 'S', 50),
    -> ('t-shirt', 'pink', 'S', 0),
    -> ('polo shirt', 'red', 'M', 5),
    -> ('tank top', 'white', 'S', 200),
    -> ('tank top', 'blue', 'M', 15);
Query OK, 8 rows affected (0.02 sec)
Records: 8  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM shirts;
+----------+------------+-------+------------+-----------+
| shirt_id | article    | color | shirt_size | last_worn |
+----------+------------+-------+------------+-----------+
|        1 | t-shirt    | white | S          |        10 |
|        2 | t-shirt    | green | S          |       200 |
|        3 | polo shirt | black | M          |        10 |
|        4 | tank top   | blue  | S          |        50 |
|        5 | t-shirt    | pink  | S          |         0 |
|        6 | polo shirt | red   | M          |         5 |
|        7 | tank top   | white | S          |       200 |
|        8 | tank top   | blue  | M          |        15 |
+----------+------------+-------+------------+-----------+
```

Add A New Shirt

Purple polo shirt, size M last worn 50 days ago

```
mysql> INSERT into shirts(article , color , shirt_size , last_worn)
    -> VALUES('polo shirt' , 'purple' , 'M' , 50);
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM shirts;
+----------+------------+--------+------------+-----------+
| shirt_id | article    | color  | shirt_size | last_worn |
+----------+------------+--------+------------+-----------+
|        1 | t-shirt    | white  | S          |        10 |
|        2 | t-shirt    | green  | S          |       200 |
```

```
| shirt_id | article    | color  | shirt_size | last_worn |
+----------+------------+--------+------------+-----------+
|        1 | t-shirt    | white  | S          |        10 |
|        2 | t-shirt    | green  | S          |       200 |
|        3 | polo shirt | black  | M          |        10 |
|        4 | tank top   | blue   | S          |        50 |
|        5 | t-shirt    | pink   | S          |         0 |
|        6 | polo shirt | red    | M          |         5 |
|        7 | tank top   | white  | S          |       200 |
|        8 | tank top   | blue   | M          |        15 |
|        9 | polo shirt | purple | M          |        50 |
+----------+------------+--------+------------+-----------+
9 rows in set (0.01 sec)
```

SELECT all shirts

But Only Print Out Article and Color

```
mysql> SELECT article , color FROM shirts;
+------------+--------+
| article    | color  |
+------------+--------+
| t-shirt    | white  |
| t-shirt    | green  |
| polo shirt | black  |
| tank top   | blue   |
| t-shirt    | pink   |
| polo shirt | red    |
| tank top   | white  |
| tank top   | blue   |
| polo shirt | purple |
+------------+--------+
9 rows in set (0.00 sec)
```

SELECT all medium shirts

Print Out Everything But not shirt_id

```
mysql> SELECT article , color , shirt_size , last_worn FROM shirts
    -> Where shirt_size = "M";
+------------+--------+------------+-----------+
| article    | color  | shirt_size | last_worn |
+------------+--------+------------+-----------+
| polo shirt | black  | M          |        10 |
| polo shirt | red    | M          |         5 |
| tank top   | blue   | M          |        15 |
| polo shirt | purple | M          |        50 |
+------------+--------+------------+-----------+
```

```
| tank top   | blue   | M          |          15 |
| polo shirt | purple | M          |          50 |
+------------+--------+------------+-------------+
4 rows in set (0.00 sec)
```

Update all polo shirts

Change their size to L

```
mysql> UPDATE shirts SET shirt_size = 'L' WHERE article = 'polo shirt';
Query OK, 3 rows affected (0.01 sec)
Rows matched: 3  Changed: 3  Warnings: 0

mysql> SELECT * FROM shirts;
+----------+------------+--------+------------+-----------+
| shirt_id | article    | color  | shirt_size | last_worn |
+----------+------------+--------+------------+-----------+
|        1 | t-shirt    | white  | S          |        10 |
|        2 | t-shirt    | green  | S          |       200 |
|        3 | polo shirt | black  | L          |        10 |
|        4 | tank top   | blue   | S          |        50 |
|        5 | t-shirt    | pink   | S          |         0 |
|        6 | polo shirt | red    | L          |         5 |
|        7 | tank top   | white  | S          |       200 |
|        8 | tank top   | blue   | M          |        15 |
|        9 | polo shirt | purple | L          |        50 |
+----------+------------+--------+------------+-----------+
9 rows in set (0.00 sec)
```

Update the shirt last worn 15 days ago

Change last_worn to 0

```
mysql> Update shirts SET last_worn = 0 WHERE last_worn = 15;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM shirts;
+----------+------------+--------+------------+-----------+
| shirt_id | article    | color  | shirt_size | last_worn |
+----------+------------+--------+------------+-----------+
|        1 | t-shirt    | white  | S          |        10 |
|        2 | t-shirt    | green  | S          |       200 |
|        3 | polo shirt | black  | L          |        10 |
|        4 | tank top   | blue   | S          |        50 |
|        5 | t-shirt    | pink   | S          |         0 |
|        6 | polo shirt | red    | L          |         5 |
```

```
|         3 | polo shirt | black  | L          |          10 |
|         4 | tank top   | blue   | S          |          50 |
|         5 | t-shirt    | pink   | S          |           0 |
|         6 | polo shirt | red    | L          |           5 |
|         7 | tank top   | white  | S          |         200 |
|         8 | tank top   | blue   | M          |           0 |
|         9 | polo shirt | purple | L          |          50 |
+-----------+------------+--------+------------+-------------+
9 rows in set (0.00 sec)
```

Update all white shirts

Change size to 'XS' and color to 'off white'

```
mysql> Update shirts SET shirt_size = 'XS' , color = 'off white'
    -> Where color = 'white';
```

Delete all old shirts

Last worn 200 days ago

```
mysql> DELETE FROM shirts WHERE last_worn = 200;
Query OK, 2 rows affected (0.01 sec)

mysql> SELECT * FROM shirts;
+-----------+------------+--------+------------+-------------+
| shirt_id  | article    | color  | shirt_size | last_worn   |
+-----------+------------+--------+------------+-------------+
|         1 | t-shirt    | white  | S          |          10 |
|         3 | polo shirt | black  | L          |          10 |
|         4 | tank top   | blue   | S          |          50 |
|         5 | t-shirt    | pink   | S          |           0 |
|         6 | polo shirt | red    | L          |           5 |
|         8 | tank top   | blue   | M          |           0 |
|         9 | polo shirt | purple | L          |          50 |
+-----------+------------+--------+------------+-------------+
7 rows in set (0.00 sec)
```

Delete all tank tops

```
mysql> SELECT * FROM shirts;
+-----------+------------+--------+------------+-------------+
| shirt_id  | article    | color  | shirt_size | last_worn   |
+-----------+------------+--------+------------+-------------+
|         1 | t-shirt    | white  | S          |          10 |
|         3 | polo shirt | black  | L          |          10 |
```

```
|        1 | t-shirt    | white  | S          |         10 |
|        3 | polo shirt | black  | L          |         10 |
|        5 | t-shirt    | pink   | S          |          0 |
|        6 | polo shirt | red    | L          |          5 |
|        9 | polo shirt | purple | L          |         50 |
+----------+------------+--------+------------+------------+
5 rows in set (0.00 sec)
```

Delete all shirts

```
mysql> DELETE FROM shirts;
Query OK, 5 rows affected (0.00 sec)

mysql> SELECT * FROM shirts;
Empty set (0.00 sec)
```

Note : Delete command only delete the data not the structure.

```
mysql> DESC shirts;
+------------+--------------+------+-----+---------+----------------+
| Field      | Type         | Null | Key | Default | Extra          |
+------------+--------------+------+-----+---------+----------------+
| shirt_id   | int          | NO   | PRI | NULL    | auto_increment |
| article    | varchar(100) | YES  |     | NULL    |                |
| color      | varchar(50)  | YES  |     | NULL    |                |
| shirt_size | char(1)      | YES  |     | NULL    |                |
| last_worn  | int          | YES  |     | NULL    |                |
+------------+--------------+------+-----+---------+----------------+
5 rows in set (0.00 sec)
```

Drop the entire shirts table

In order to remove the structure , we have to use DROP command.

```
mysql> DROP TABLE shirts;
Query OK, 0 rows affected (0.04 sec)

mysql> SHOW tables;
Empty set (0.00 sec)
```

```
mysql> SHOW tables;
Empty set (0.00 sec)
```

STRING FUNCTIONS :

```
CREATE TABLE books
 (
  book_id INT AUTO_INCREMENT,
  title VARCHAR(100),
  author_fname VARCHAR(100),
  author_lname VARCHAR(100),
  released_year INT,
  stock_quantity INT,
  pages INT,
  PRIMARY KEY(book_id)
 );

INSERT INTO books (title, author_fname, author_lname, released_year, stock_quantity, pages)
VALUES
('The Namesake', 'Jhumpa', 'Lahiri', 2003, 32, 291),
('Norse Mythology', 'Neil', 'Gaiman',2016, 43, 304),
('American Gods', 'Neil', 'Gaiman', 2001, 12, 465),
('Interpreter of Maladies', 'Jhumpa', 'Lahiri', 1996, 97, 198),
('A Hologram for the King: A Novel', 'Dave', 'Eggers', 2012, 154, 352),
('The Circle', 'Dave', 'Eggers', 2013, 26, 504),
('The Amazing Adventures of Kavalier & Clay', 'Michael', 'Chabon', 2000, 68, 634),
('Just Kids', 'Patti', 'Smith', 2010, 55, 304),
('A Heartbreaking Work of Staggering Genius', 'Dave', 'Eggers', 2001, 104, 437),
('Coraline', 'Neil', 'Gaiman', 2003, 100, 208),
('What We Talk About When We Talk About Love: Stories', 'Raymond', 'Carver', 1981, 23, 176),
("Where I'm Calling From: Selected Stories", 'Raymond', 'Carver', 1989, 12, 526),
('White Noise', 'Don', 'DeLillo', 1985, 49, 320),
('Cannery Row', 'John', 'Steinbeck', 1945, 95, 181),
('Oblivion: Stories', 'David', 'Foster Wallace', 2004, 172, 329),
('Consider the Lobster', 'David', 'Foster Wallace', 2005, 92, 343);
```

```
mysql> DESC books;
+---------------+--------------+------+-----+---------+----------------+
| Field         | Type         | Null | Key | Default | Extra          |
+---------------+--------------+------+-----+---------+----------------+
| book_id       | int          | NO   | PRI | NULL    | auto_increment |
| title         | varchar(100) | YES  |     | NULL    |                |
| author_fname  | varchar(100) | YES  |     | NULL    |                |
| author_lname  | varchar(100) | YES  |     | NULL    |                |
| released_year | int          | YES  |     | NULL    |                |
```

```
| book_id       | int          | NO   | PRI | NULL | auto_increment |
| title         | varchar(100) | YES  |     | NULL |                |
| author_fname  | varchar(100) | YES  |     | NULL |                |
| author_lname  | varchar(100) | YES  |     | NULL |                |
| released_year | int          | YES  |     | NULL |                |
| stock_quantity| int          | YES  |     | NULL |                |
| pages         | int          | YES  |     | NULL |                |
+---------------+--------------+------+-----+------+----------------+
7 rows in set (0.01 sec)

mysql> SELECT * FROM books;
+---------+-----------------------------------------------------+--------------+--------------+---------------+----------------+-------+
| book_id | title                                               | author_fname | author_lname | released_year | stock_quantity | pages |
+---------+-----------------------------------------------------+--------------+--------------+---------------+----------------+-------+
|       1 | The Namesake                                        | Jhumpa       | Lahiri       |          2003 |             32 |   291 |
|       2 | Norse Mythology                                     | Neil         | Gaiman       |          2016 |             43 |   304 |
|       3 | American Gods                                       | Neil         | Gaiman       |          2001 |             12 |   465 |
|       4 | Interpreter of Maladies                             | Jhumpa       | Lahiri       |          1996 |             97 |   198 |
|       5 | A Hologram for the King: A Novel                    | Dave         | Eggers       |          2012 |            154 |   352 |
|       6 | The Circle                                          | Dave         | Eggers       |          2013 |             26 |   504 |
|       7 | The Amazing Adventures of Kavalier & Clay           | Michael      | Chabon       |          2000 |             68 |   634 |
|       8 | Just Kids                                           | Patti        | Smith        |          2010 |             55 |   304 |
|       9 | A Heartbreaking Work of Staggering Genius           | Dave         | Eggers       |          2001 |            104 |   437 |
|      10 | Coraline                                            | Neil         | Gaiman       |          2003 |            100 |   208 |
|      11 | What We Talk About When We Talk About Love: Stories | Raymond      | Carver       |          1981 |             23 |   176 |
|      12 | Where I'm Calling From: Selected Stories            | Raymond      | Carver       |          1989 |             12 |   526 |
|      13 | White Noise                                         | Don          | DeLillo      |          1985 |             49 |   320 |
|      14 | Cannery Row                                         | John         | Steinbeck    |          1945 |             95 |   181 |
|      15 | Oblivion: Stories                                   | David        | Foster Wallace |        2004 |            172 |   329 |
|      16 | Consider the Lobster                                | David        | Foster Wallace |        2005 |             92 |   343 |
+---------+-----------------------------------------------------+--------------+--------------+---------------+----------------+-------+
16 rows in set (0.02 sec)
```

USE OF CONCAT :

```
mysql> SELECT CONCAT(author_fname , author_lname) FROM books;
+---------------------------------------+
| CONCAT(author_fname , author_lname)   |
+---------------------------------------+
| JhumpaLahiri                          |
| NeilGaiman                            |
| NeilGaiman                            |
| JhumpaLahiri                          |
| DaveEggers                            |
| DaveEggers                            |
| MichaelChabon                         |
| PattiSmith                            |
| DaveEggers                            |
| NeilGaiman                            |
| RaymondCarver                         |
| RaymondCarver                         |
| DonDeLillo                            |
| JohnSteinbeck                         |
| DavidFoster Wallace                   |
| DavidFoster Wallace                   |
+---------------------------------------+
16 rows in set (0.01 sec)

mysql> SELECT CONCAT(author_fname , author_lname) AS 'Full Name' FROM books;
+----------------------+
| Full Name            |
+----------------------+
| JhumpaLahiri         |
| NeilGaiman           |
| NeilGaiman           |
| JhumpaLahiri         |
| DaveEggers           |
| DaveEggers           |
| MichaelChabon        |
| PattiSmith           |
| DaveEggers           |
| NeilGaiman           |
```

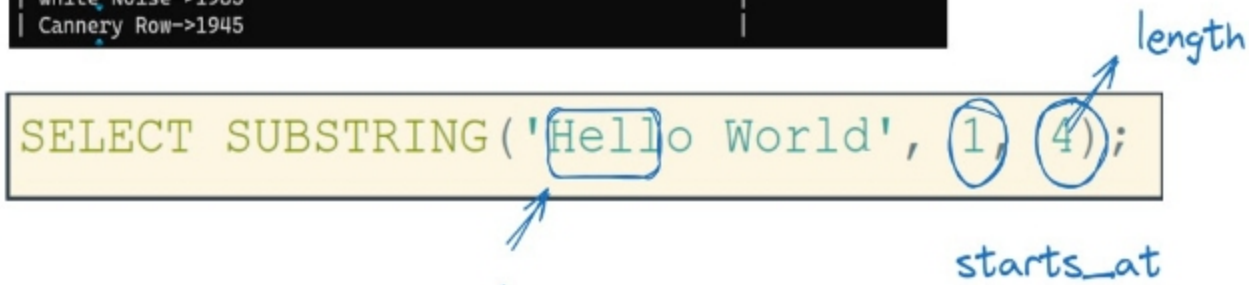
Rename the header.

```
| DaveEggers          |
| NeilGaiman          |
```

```
mysql> SELECT CONCAT(author_fname , " " ,author_lname) AS 'Full Name' FROM books;
+---------------------+
| Full Name           |
+---------------------+
| Jhumpa Lahiri       |
| Neil Gaiman         |
| Neil Gaiman         |
| Jhumpa Lahiri       |
| Dave Eggers         |
| Dave Eggers         |
| Michael Chabon      |
| Patti Smith         |
| Dave Eggers         |
| Neil Gaiman         |
| Raymond Carver      |
| Raymond Carver      |
| Don DeLillo         |
| John Steinbeck      |
| David Foster Wallace |
| David Foster Wallace |
+---------------------+
16 rows in set (0.00 sec)
```

- Use of Concat_WS [WS : Word Separator] :

```
mysql> SELECT CONCAT_WS("->" , title , released_year) AS INFO FROM books;
+-------------------------------------------------------------+
| INFO                                                        |
+-------------------------------------------------------------+
| The Namesake->2003                                          |
| Norse Mythology->2016                                       |
| American Gods->2001                                         |
| Interpreter of Maladies->1996                               |
| A Hologram for the King: A Novel->2012                      |
| The Circle->2013                                            |
| The Amazing Adventures of Kavalier & Clay->2000             |
| Just Kids->2010                                             |
| A Heartbreaking Work of Staggering Genius->2001             |
| Coraline->2003                                              |
| What We Talk About When We Talk About Love: Stories->1981   |
| Where I'm Calling From: Selected Stories->1989              |
| White Noise->1985                                           |
| Cannery Row->1945                                           |
```




```
mysql> SELECT SUBSTRING(title , 1 , 15)
    -> FROM books;
+--------------------------+
| SUBSTRING(title , 1 , 15) |
+--------------------------+
| The Namesake             |
```

```
| SUBSTRING(title , 1 , 15) |
+---------------------------+
| The Namesake              |
| Norse Mythology           |
| American Gods             |
| Interpreter of            |
| A Hologram for            |
| The Circle                |
| The Amazing Adv           |
| Just Kids                 |
| A Heartbreaking           |
| Coraline                  |
| What We Talk Ab           |
| Where I'm Calli           |
| White Noise               |
| Cannery Row               |
| Oblivion: Stori           |
| Consider the Lo           |
+---------------------------+
16 rows in set (0.00 sec)
```

```
mysql> SELECT CONCAT(SUBSTRING(title , 1 , 15), "...") FROM BOOKS;
+-----------------------------------------+
| CONCAT(SUBSTRING(title , 1 , 15), "...") |
+-----------------------------------------+
| The Namesake...                         |
| Norse Mythology...                      |
| American Gods...                        |
| Interpreter of ...                      |
| A Hologram for ...                      |
| The Circle...                           |
| The Amazing Adv...                      |
| Just Kids...                            |
| A Heartbreaking...                      |
| Coraline...                             |
| What We Talk Ab...                      |
| Where I'm Calli...                      |
| White Noise...                          |
| Cannery Row...                          |
| Oblivion: Stori...                      |
| Consider the Lo...                      |
+-----------------------------------------+
16 rows in set (0.00 sec)
```