

## 2.String Functions

```
CREATE TABLE books
(
    book_id INT NOT NULL 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);

SELECT database();

CREATE DATABASE book_shop;

use book_shop;

show tables;

source book_data.sql

DESC books;

SELECT * FROM books;
```

```

SELECT author_fname, author_lname FROM books;

CONCAT(x,y,z) // from slides

CONCAT(column, anotherColumn) // from slides

CONCAT(author_fname, author_lname)

CONCAT(column, 'text', anotherColumn, 'more text')

CONCAT(author_fname, ' ', author_lname)

CONCAT(author_fname, author_lname); // invalid syntax

SELECT CONCAT('Hello', 'World');

SELECT CONCAT('Hello', '...', 'World');

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

SELECT
    CONCAT(author_fname, ' ', author_lname)
    AS 'full name'
FROM books;

SELECT author_fname AS first, author_lname AS last,
    CONCAT(author_fname, ' ', author_lname) AS full
FROM books;

SELECT author_fname AS first, author_lname AS last,
    CONCAT(author_fname, ', ', author_lname) AS full
FROM books;

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

SELECT
    CONCAT_WS(' - ', title, author_fname, author_lname)
FROM books;


SELECT SUBSTRING('Hello World', 1, 4);

SELECT SUBSTRING('Hello World', 7);

SELECT SUBSTRING('Hello World', 3, 8);

SELECT SUBSTRING('Hello World', 3);

SELECT SUBSTRING('Hello World', -3);

SELECT SUBSTRING('Hello World', -7);

SELECT title FROM books;

SELECT SUBSTRING("Where I'm Calling From: Selected Stories", 1, 10);

```

```

SELECT SUBSTRING(title, 1, 10) FROM books;

SELECT SUBSTRING(title, 1, 10) AS 'short title' FROM books;

SELECT SUBSTR(title, 1, 10) AS 'short title' FROM books;

SELECT CONCAT
    (
        SUBSTRING(title, 1, 10),
        '...'
    )
FROM books;

```

source book\_code.sql

```

SELECT CONCAT
    (
        SUBSTRING(title, 1, 10),
        '...'
    ) AS 'short title'
FROM books;

```

source book\_code.sql

```

SELECT REPLACE('Hello World', 'Hell', '%$#@');

SELECT REPLACE('Hello World', 'l', '7');

SELECT REPLACE('Hello World', 'o', '0');

SELECT REPLACE('Hello World', 'o', '*');

SELECT
    REPLACE('cheese bread coffee milk', ' ', ' and ');

SELECT REPLACE(title, 'e ', '3') FROM books;

```

```

-- SELECT
--     CONCAT
--     (
--         SUBSTRING(title, 1, 10),
--         '...'
--     ) AS 'short title'
-- FROM books;

```

```

SELECT
    SUBSTRING(REPLACE(title, 'e', '3'), 1, 10)
FROM books;

```

```

SELECT
    SUBSTRING(REPLACE(title, 'e', '3'), 1, 10) AS 'weird string'
FROM books;

```

```
SELECT REVERSE('Hello World');

SELECT REVERSE('meow meow');

SELECT REVERSE(author_fname) FROM books;

SELECT CONCAT('woof', REVERSE('woof'));

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

```
SELECT CHAR_LENGTH('Hello World');

SELECT author_lname, CHAR_LENGTH(author_lname) AS 'length' FROM books;

SELECT CONCAT(author_lname, ' is ', CHAR_LENGTH(author_lname), ' characters
long') FROM books;
```

```
SELECT UPPER('Hello World');

SELECT LOWER('Hello World');

SELECT UPPER(title) FROM books;

SELECT CONCAT('MY FAVORITE BOOK IS ', UPPER(title)) FROM books;

SELECT CONCAT('MY FAVORITE BOOK IS ', LOWER(title)) FROM books;
```