

IS 456 IT Database Systems Management

HOP03 Basic SQLite Functions

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Before You Start

- The directory path shown in screenshots may be different from yours.
- Some steps are not explained in the tutorial. If you are not sure what to do:
 1. Consult the resources listed below.
 2. If you cannot solve the problem after a few tries, ask a TA for help.

Learning Outcomes

Students will be able to:

- Understand the SQLite queries.
- Run queries in SQLite.
- Use inbuilt functions.

02 LENGTH

[world.db]

```
SELECT LENGTH('string');
SELECT Name, LENGTH(Name) AS Len FROM City ORDER BY Len DESC;
```

03 SUBSTR

[album.db]

```
SELECT SUBSTR('this string', 6);
SELECT SUBSTR('this string', 6, 3);
SELECT released,
       SUBSTR(released, 1, 4) AS year,
       SUBSTR(released, 6, 2) AS month,
       SUBSTR(released, 9, 2) AS day
FROM album
ORDER BY released;
```

04 TRIM

```
SELECT TRIM('  string  ');
SELECT LTRIM('  string  ');
SELECT RTRIM('  string  ');
SELECT TRIM('...string...', '.');
```

05 UPPER/LOWER

[world.db]

```
SELECT 'StRiNg' = 'string';
SELECT LOWER('StRiNg') = LOWER('string');
SELECT UPPER('StRiNg') = UPPER('string');
SELECT UPPER(Name) FROM City ORDER BY Name;
SELECT LOWER(Name) FROM City ORDER BY Name;
```

02 DATE/TIME functions

[.memory:]

```
SELECT DATETIME('now');
SELECT DATE('now');
SELECT TIME('now');
SELECT DATETIME('now', '+1 day');
SELECT DATETIME('now', '+3 days');
SELECT DATETIME('now', '-1 month');
SELECT DATETIME('now', '+1 year');
SELECT DATETIME('now', '+3 hours', '+27 minutes', '-1 day', '+3 years');
```

02 typeof

```
SELECT TYPEOF( 1 + 1 );
SELECT TYPEOF( 1 + 1.0 );
SELECT TYPEOF('panda');
SELECT TYPEOF('panda' + 'koala');
```

03 INTEGER division

```
SELECT 1 / 2;
SELECT 1.0 / 2;
SELECT CAST(1 AS REAL) / 2;
```

```
SELECT 17 / 5;  
SELECT 17 / 5, 17 % 5;
```

04 ROUND()

```
SELECT 2.55555;  
SELECT ROUND(2.55555);  
SELECT ROUND(2.55555, 3);  
SELECT ROUND(2.55555, 0);
```

Provide *at least 3* screenshots as part of HOP submission.

Write a **150-word summary** to explain your understandings and findings from this lab assignment.