

Practical MySQL

Session 6

Functions and Stored Procedures

Session Overview

- Describe the usage of stored routines
- Explain different types of functions
- Outline the uses of stored procedures and functions
- Explain the use of functions in MySQL
- Explain how functions are created

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Introduction to Functions in MySQL

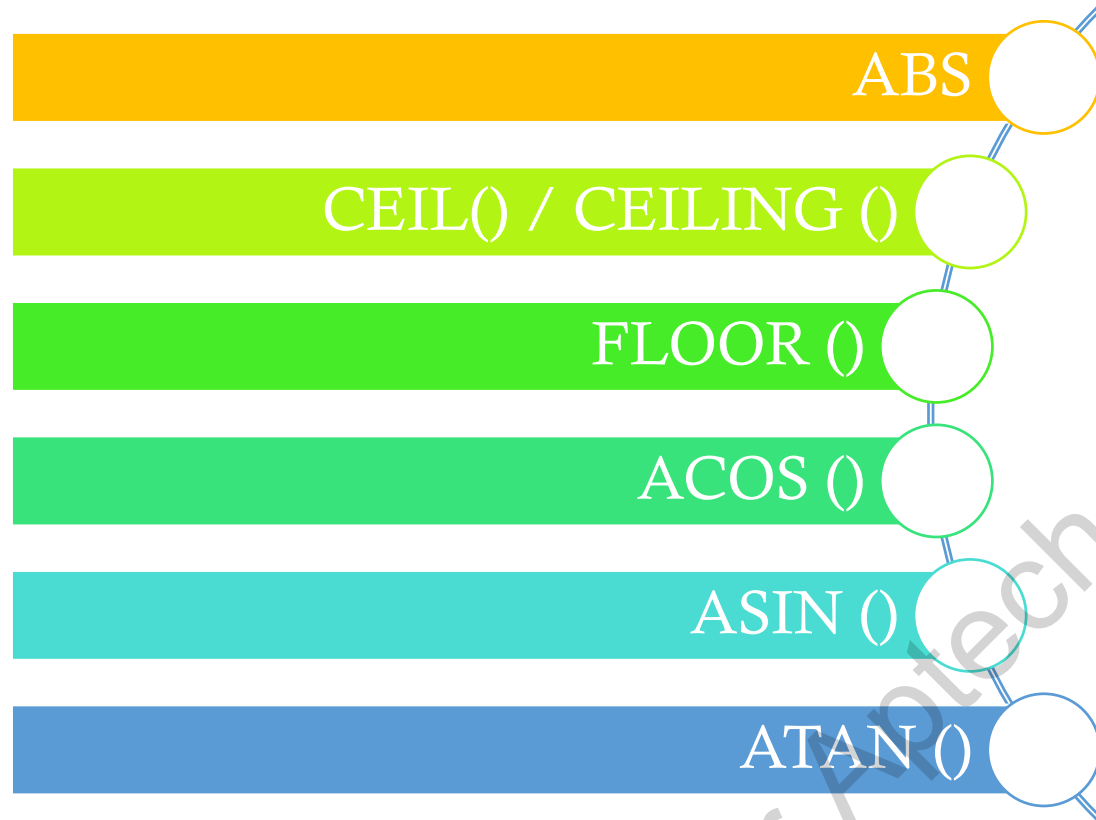
Functions in MySQL can be defined as a program that performs independent operations

Built in functions in MySQL:

- Mathematical functions
- Numeric functions
- Date/Time functions
- Null functions

Users are free to create user-defined functions depending on the requirement

Math Functions



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Text and String Functions

ASCII (c)

CHAR
-LENGTH (str) /
CHARACTER_LENGTH (str)

CONCAT (str1 ,str2
.....)

INSERT (str1 , pos,
num, str2)

LCASE (str) /
LOWER (str)

UCASE (str) /
UPPER (str)

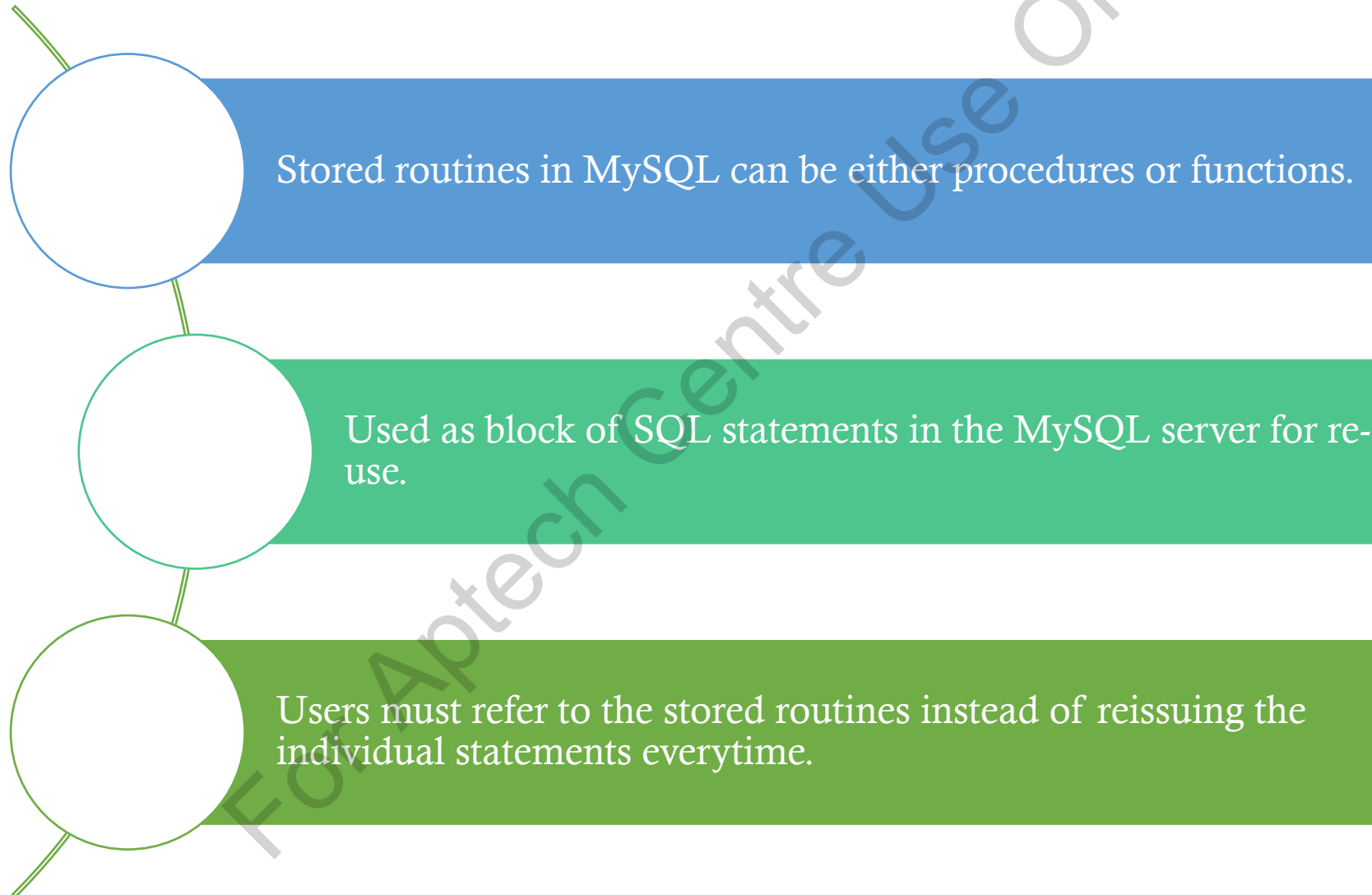
LEFT (str , num)

MID (str, start , len)

LOCATE (str1, str2,
start) / POSITION (str1 IN str2)

REPLACE (str1, str2,
str3)

Using Stored Routines



MySQL NULL Functions

Null functions are used to identify NULL Values.

MySQL
IFNULL()

COALESCE()

Date and Time Functions

DATE_ADD (date, INTERVAL value unit)

ADD TIME (datetime1, datetime2)

CURDATE () / CURRENT_DATE ()

CURTIME () / CURRENT_TIME ()

CURRENT_TIMESTAMP () / NOW ()

DAY (date) / DAYOFMONTH (date)

DAYOFWEEK (date)

TO_DAYS (date)

SUBDATE (date, INTERVAL value unit)

Creating Functions

Basic Syntax to Create a Function:

```
CREATE FUNCTION function_name [(parameter data_type [,  
parameter data_type]))  
RETURNS return_data_type  
BEGIN  
declarations_block  
execution_block  
END;
```

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Drop Function

Basic syntax of DROP Function:

```
DROP FUNCTION function_name;
```

Example:

```
DROP FUNCTION getEmployeeSalary();
```

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MySQL REGEXP_INSTR () Function

Basic Syntax of MySQL REGEXP_INSTR () Function:

```
REGEXP_INSTR(str, expr[, pos[, occurrence[, return_option[,  
match_type]]]])
```

Example:

```
SELECT REGEXP_INSTR('ppp pppp pppppp','p{5}');  
//Returns 10  
SELECT REGEXP_INSTR('lamp chair lamp','lamp');  
//Returns 1
```

MySQL REGEXP_LIKE () Function

Basic syntax of MySQL REGEXP_LIKE () Function:

```
REGEXP_LIKE(str, expr[, match_type])
```

Example:

```
SELECT REGEXP_LIKE('Polish Boat', 'POLISH');//Returns  
1
```

MySQL REGEXP_REPLACE () Function

Basic syntax Of MySQL REGEXP_REPLACE () Function:

```
REGEXP_REPLACE (str1, expr, str2[, pos[, occurrence[, return_option[, match_type]]]])
```

Example:

```
SELECT REGEXP_REPLACE('aaa.devJack.com', 'a', 'w');  
//Returns www.devJwck.com  
SELECT REGEXP_REPLACE('aaaghikaabaa', 'aa', 'i');  
//Returns ia ghikibi
```

Summary

- Various types of functions are present in MySQL Library.
- Mathematical functions help on complex calculations in between codes.
- String functions are essentially used for converting one data type to another data type.
- Date/Time functions allow users to precisely store date/time formatted values.
- Stored routines can be functions as well as procedures.
- REGEXP functions are used for pattern matching.

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