MySQL Built-In Functions (LAB Lecture)

Department of Information Technology
Database Systems II (IT226)
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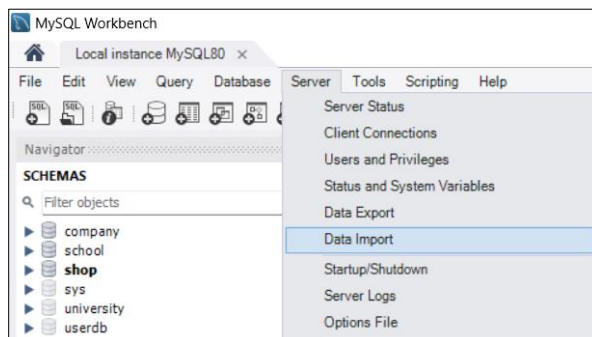   - REPLACE()
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MySQL String Functions

Function	Description
CHAR_LENGTH( )	Returns the length of a string (in characters)
CONCAT( )	Adds two or more expressions (strings) together
CONCAT_WS( )	Adds two or more expressions (strings) together with a separator
POSITION( )	Returns the position of the first occurrence of a substring in a string
REPLACE( )	Replaces all occurrences of a substring within a string, with a new substring
STRCMP( )	Compares two strings
TRIM( )	Removes leading and trailing spaces from a string

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Importing Database Schema and Data

- If you have the SQL script file of a ready database, you can import the database including all tables schema and data in your MySQL Workbench instance.
- For example, we have an SQL script file of college database that has only one table, teacher table.
- Import database named **college** in MySQL Workbench.

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Importing Database Schema and Data

- Import database named **college** in MySQL Workbench.
- Check **teacher** table.

Teacher

TID	FirstName	MiddleName	LastName	Age	AcademicRank	FeedbackScore
1	Ahmed	Ali	Mustafa	52	Lecturer	3.93
2	Sarhang	Muhammad	Amin	36	Assistant Lecturer	4.27
3	Kani	Kaywan	Abdullah	40	Lecturer	3.62
4	Saya	Ahmed	Rahim	33	Assistant Lecturer	4.59

Let's Try String Functions!

- Use a suitable function in a SELECT query to get the following output.

Teacher

TID	FirstName	MiddleName	LastName	Age	AcademicRank	FeedbackScore
1	Ahmed	Ali	Mustafa	52	Lecturer	3.93
2	Sarhang	Muhammad	Amin	36	Assistant Lecturer	4.27
3	Kani	Kaywan	Abdullah	40	Lecturer	3.62
4	Saya	Ahmed	Rahim	33	Assistant Lecturer	4.59

Output

TID	FullName
1	Ahmed_Ali_Mustafa
2	Sarhang_Muhammad_Amin
3	Kani_Kaywan_Abdullah
4	Saya_Ahmed_Rahim

You can use **CONCAT( )** or **CONCAT_WS( )** Functions.

```
select TID, concat(FirstName , '_' , MiddleName , '_' , LastName) AS FullName
from Teacher;
```

```
select TID, concat_ws('_' , FirstName , MiddleName , LastName) AS FullName
from Teacher;
```

Let's Try String Functions!

- Use a suitable function in a SELECT query to replace all **Lecturer** substrings with **Professor** in the query output.

Teacher

TID	FirstName	MiddleName	LastName	Age	AcademicRank	FeedbackScore
1	Ahmed	Ali	Mustafa	52	Lecturer	3.93
2	Sarhang	Muhammad	Amin	36	Assistant Lecturer	4.27
3	Kani	Kaywan	Abdullah	40	Lecturer	3.62
4	Saya	Ahmed	Rahim	33	Assistant Lecturer	4.59

Output

TID	FirstName	Age	replacedRank
1	Ahmed	52	Professor
2	Sarhang	36	Assistant Professor
3	Kani	40	Professor
4	Saya	33	Assistant Professor

```
select TID, FirstName, Age, replace(AcademicRank, 'Lecturer', 'Professor') AS replacedRank
from Teacher;
```

Let's Try String Functions!

- Use a suitable function in a SELECT query to compare all academic ranks with '**Assistant Lecturer**' term, so a column is added (**IsItAssistantLecturer**) in the output that shows whether the **AcademicRank** of each teacher is '**Assistant Lecturer**' or not.
- If the value of this column is 0, it means the academic rank of the teacher is 'Assistant Lecturer'.

Teacher

TID	FirstName	MiddleName	LastName	Age	AcademicRank	FeedbackScore
1	Ahmed	Ali	Mustafa	52	Lecturer	3.93
2	Sarhang	Muhammad	Amin	36	Assistant Lecturer	4.27
3	Kani	Kaywan	Abdullah	40	Lecturer	3.62
4	Saya	Ahmed	Rahim	33	Assistant Lecturer	4.59

Output

TID	FirstName	IsItAssistantLecturer
1	Ahmed	1
2	Sarhang	0
3	Kani	1
4	Saya	0

```
select TID, FirstName, strcmp(AcademicRank, 'Assistant Lecturer') AS IsItAssistantLecturer
from Teacher;
```