

Lecture Notes – String Functions-Length

Section 1: Lecture Summary

The lecture covers the **LENGTH** function in MySQL for determining string lengths, applicable to literal strings or column values like FirstName from employee table. It demonstrates queries filtering employees by name length comparisons, names starting with R and limited to five letters using **LIKE**, and six-figure payments from eCommerceDB by casting decimal Amount to char and checking length of nine characters due to decimal places.

Section 2: Key Concepts and Explanations

LENGTH function returns the number of characters in a string, working in MySQL as **LENGTH()** with both complete strings and columns supported. Variations like **LEN** exist in other databases but **LENGTH** is used here. For numeric columns like Amount (decimal) in Payments, convert to string using **CAST(amount AS CHAR)** before applying **LENGTH** to count digits including decimal places. Use **WHERE** clause with **LENGTH** comparisons (**>**, **<=**) and combine with **LIKE** for pattern matching like first name starting with 'R%'. **CAST** function converts data types, e.g., **AS CHAR** for string length checks on numbers.

Section 3: Example Code and Use Cases

From companyDB employee table (assuming FirstName, LastName varchar):

```
SELECT FirstName, LENGTH(FirstName) FROM employee;
```

Displays all first names with their lengths.

```
SELECT FirstName, LastName  
FROM employee  
WHERE LENGTH(LastName) > LENGTH(FirstName);
```

Shows employees where last name is longer than first name, e.g., Varun Kulkarni, Yash Kamble.

```
SELECT FirstName, LastName  
FROM employee
```

```
WHERE FirstName LIKE 'R%'  
AND LENGTH(FirstName) <= 5;
```

Lists employees with first name starting with R and length at most 5.

From eCommerceDB Payments table:

```
SELECT OrderID, PaymentID, Amount  
FROM Payments  
WHERE LENGTH(CAST(Amount AS CHAR)) = 9;
```

Finds payments with six-figure amounts (length 9 after casting due to .00 decimals).

Section 4: Key Takeaways

****LENGTH**** measures string character count and works on varchar columns directly. Cast numeric decimals to CHAR for length checks, accounting for decimal places. Combine with ****WHERE****, ****LIKE****, and comparisons for filtering. Save queries as .sql script files for reference using File > Save Script in MySQL Workbench.