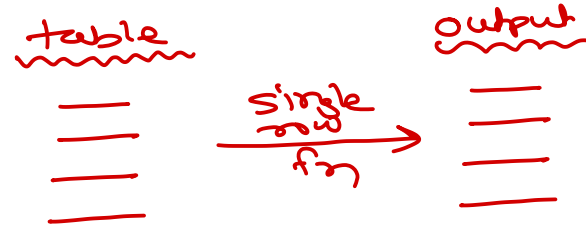# MySQL RDBMS

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SQL functions

- RDBMS provides many built-in functions to process the data.
- These functions can be classified as:
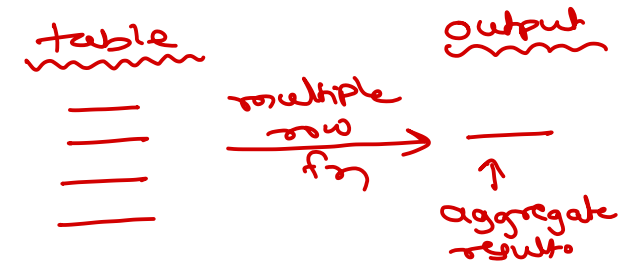   - Single row functions
        - One row input produce one row output.
        - e.g. ABS(), CONCAT(), IFNULL(), …
    - Multi-row or Group functions
        - Values from multiple rows are aggregated to single value.
        - e.g. SUM(), MIN(), MAX(), …
- These functions can also be categorized based on data types or usage.
    - Numeric functions
    - String functions
    - Date and Time functions
    - Control flow functions
    - Information functions
    - Miscellaneous functions

Numeric & String functions

- ABS()
- POWER()
- ROUND(), FLOOR(), CEIL()

- ASCII(), CHAR()
- CONCAT()
- SUBSTRING()
- LOWER(), UPPER()
- TRIM(), LTRIM(), RTRIM()
- LPAD(), RPAD()
- REGEXP_LIKE()

Date-Time and Information functions

- VERSION()
- USER(), DATABASE()

- MySQL supports multiple date time related data types
  - DATE (3), TIME (3), DATETIME (5), TIMESTAMP (4), YEAR (1)
- SYSDATE(), NOW()
- DATE(), TIME()
- DAYOFMONTH(), MONTH(), YEAR(), HOUR(), MINUTE(), SECOND(), …
- DATEDIFF(), DATE_ADD(), TIMEDIFF()
- MAKEDATE(), MAKETIME()

Control and NULL and List functions

- NULL is special value in RDBMS that represents absence of value in that column.
- NULL values do not work with relational operators and need to use special operators.
- Most of functions return NULL if NULL value is passed as one of its argument.
- ISNULL()
- IFNULL()
- NULLIF()
- COALESCE()

- GREATEST(), LEAST()

- IF(condition, true-value, false-value)

Thank you!

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