# Data Retrieval Techniques



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# Module Overview



#### **Basics of SELECT statement**

- SELECT Column\_List
- FROM Table\_Name
- WHERE Filter\_Condition
- ORDER BY Column\_List
- LIMIT Row\_Limit



#### Demo



**MySQL** Server

MySQL Workbench

Sample Database sakila

OR

**MySQL** installer for Windows



### Basic Syntax of the SELECT Statement

**SELECT**Column\_List

FROM
Table\_Name

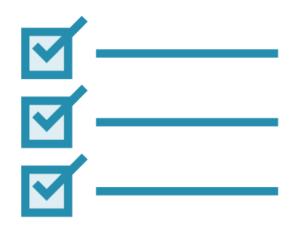
WHERE Filter\_Condition

ORDER BY Column\_List

**LIMIT**Row\_Limit



#### Beginning SELECT Statements



Retrieve static value

Retrieve all the data from table

Retrieve all the data ordered by single column

Retrieve selected columns from table

Retrieve the data with filter condition

Retrieve the data with filter condition and ordered by columns

Retrieve empty result set





# Retrieve column names using aliases



## SELECT clause - Arithmetic Expressions

Retrieve values based on arithmetic expressions

Multiplication

\*

Division

DIV

Modulo

% or MOD

Addition

+

Subtraction

-



#### SELECT clause - Various Functions

#### Retrieve results based on function



Retrieve distinct values from table (remove duplicates)



#### WHERE clause

**SELECT** \*

FROM TableName

SELECT Col1, Col2, Col3

FROM TableName

SELECT Col1, Col2, Col3

FROM TableName

WHERE
Col1 = 'SomeValue'



## SELECT clause - Arithmetic Expressions

#### WHERE clause comparison operators

Equal =

Less than

Greater than
>

Less than or Equal to

**Greater than** or Equal to

>=

Not equal <> or !=

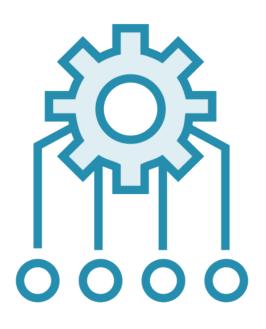


# WHERE clause - Logical Operators

Operator	Description
AND	True if all conditions are True
OR	True if any one condition is True
NOT	Negate Logic



## WHERE clause - Other Operators and Phrases



#### WHERE clause other operators

- IN (and NOT IN)
- BETWEEN (and NOT BETWEEN)
- LIKE (and NOT LIKE)
  - Wildcard %
  - Wildcard \_

#### **NULL** clause

- IS NULL clause
- IS NOT NULL clause



## ORDER BY clause

Sequence

Ascending Descending

**Single Column** 

**Multi Column** 

**Expression** 

Alias

**Column Number** 



## LIMIT clause

**Retrieving Top Rows** 

**Retrieving Rows from offset** 



# Module Summary



SELECT clause — columns list in the resultset

FROM clause — table names from which the query retrieves the data

WHERE clause — conditions to match for rows to qualify for resultset

ORDER BY clause — sort order and sequence for resultset

LIMIT clause — number of rows resultset returns and offset

Use column names in SELECT statement

Using aliases improves readability

Use various comparison and logical operator in WHERE clause to retrieve rows relevant to application

Use ORDER BY clause if you want your result ordered

