

SESSION WILL BE DIVIDED INTO

1. Understanding what are functions in SQL
2. Scalar functions in SQL
3. Starting with NUMERIC FUNCTIONS
4. Starting with DATE FUNCTIONS
5. Attaching the previous sheet operators
6. Writing lots of queries
7. Closing the session

SECTION 1

What Are Functions In SQL?

FUNCTIONS IN SQL

- SQL **functions** are used to perform operations on data.
- Functions can be applied to values or columns in SQL queries to manipulate and retrieve data in various formats.
- These functions make SQL queries more powerful and efficient.
- SQL functions are typically divided into two main categories
 - **Single-Row (Scalar) Functions:** Operate on a single value and return a single result.
 - **Aggregate Functions:** Operate on multiple values and return a single aggregated result.

SECTION 1

What Are Functions In SQL?

FUNCTIONS IN SQL

- **Single-Row (Scalar) Functions:** Operate on a single value and return a single result.

SECTION 2

Scalar Functions In SQL

FUNCTIONS IN SQL

- **Single-Row (Scalar) Functions:** Operate on a single value and return a single result.
- Total types of Single-Row (Scalar) functions:
 - String functions
 - Numeric Functions
 - Date Functions
 - Conversion Functions

SECTION 3

Numeric Functions

- Numeric functions

Sr. No	Function Name	Description	Syntax
1.	ABS()	Returns the absolute value of the numeric col passed	ABS(column)
2.	CEIL()	Returns the upper value of the decimal number	CIEL(column)
3.	FLOOR()	Returns the lower value of the decimal number	FLOOR(column)
4.	MOD()	Returns the remainder of input, <expr1> divided by <expr2>	MOD(<expr1>,<expr2>)
5.	ROUND()	Rounds the decimal number to given point	ROUND(col, number)
6	DIV0()	Performs division like the division operator (/), but returns 0 when the divisor is 0 (rather than reporting an error).	DIV0(<DIVIDEND>, <DIVISOR>)
7	DIVO0NULL()	Performs division like the division operator (/), but returns 0 when the divisor is 0 or NULL (rather than reporting an error or returning NULL).	DIV0NULL(<DIVIDEND>,<DIVISOR>)
8	SQRT()	Returns the Square root of col.	SQRT(<expr>)
9	SQUARE()	Returns the Square of col	SQUARE(<expr>)

SECTION 4

Date Functions

- Date functions – Basic Functions

Sr. No	Function Name	Description	Syntax
1.	CURRENT_DATE()	Returns the current date	CURRENT_DATE()
2.	CURRENT_ TIME()	Returns the current time	CURRENT_TIME()
3.	CURRENT_TIME STAMP()	Returns the current date & time	CURRENT_TIMESTAMP()
4.	DATE()	Extracts the date part from datetime or timestamp	DATE(CURRENT_TIMESTAMP())
5.	TIME()	Extracts the time part from datetime or timestamp	TIME(CURRENT_TIMESTAMP())
6	YEAR	Extracts Year part from date	YEAR(date)
7	MONTH()	Extracts Month part from date	MONTH(date)
8	DAY()	Extracts Day part from date	DAY(date)
9	HOUR()	Returns the Hour part	HOUR(TIMESTAMP())
10	MINUTE()	Returns the Minute part	MINUTE(TIMESTAMP())
11	SECONDS()	Returns the Seconds part	SECONDS(TIMESTAMP())

SECTION 4

Date Functions

- Date functions – Advance Functions

Sr. No	Function Name	Description	Syntax
1.	DATEDIFF()	Returns the difference between two dates, based on parameter	DATEDIFF(parameter, date1, date2)
2.	DATEADD()	Adds a specific value to the date or time part.	DATEADD(parameter, value, date)
3.	ADD_MONTHS()	Adds months to the specific date column	ADD_MONTHS(date, value)
4.	MONTHS_BETWEEN()	Returns the months between two dates	DATE(CURRENT_TIMESTAMP())
5.	TIME()	Extracts the time part from datetime or timestamp	TIME(CURRENT_TIMESTAMP())
6	YEAR	Extracts Year part from date	YEAR(date)
7	MONTH()	Extracts Month part from date	MONTH(date)
8	DAY()	Extracts Day part from date	DAY(date)
9	HOUR()	Returns the Hour part	HOUR(TIMESTAMP())
10	MINUTE()	Returns the Minute part	MINUTE(TIMESTAMP())
11	SECONDS()	Returns the Seconds part	SECONDS(TIMESTAMP())

SECTION 5

OPERATORS IN SQL

- Arithmetic Operator

Sr. No	Operator Name	Description
1.	+	Used for Addition
2.	-	Used for Subtraction
3.	*	Used for Multiplication
4.	/	Used for Division
5.	%	Used for modulus (Reminder)

- Logical Operators

Sr. No	Operator Name	Description
1.	AND	True, if both conditions True
2.	OR	True, if either condition True
3.	NOT	Reverses the condition

SECTION 5

OPERATORS IN SQL

- Logical Operator

Sr. No	Operator Name	Description
1.	=	Equal to
2.	!= or <>	Not Equal to
3.	>	Greater Than
4.	<	Less Than
5.	>=	Greater Than or equal to
6.	<=	Less Than or equal to
7.	LIKE	PATTERN MACHING
8.	IN	Checks if any value matches from the list
9	IS NULL	Checks if value is null
10.	BETWEEN	Checks if value is in between given range