Reference card

SQL functions and CFC commands

Miscellaneous functions

Miscellaneous functions are **supporting functions** in SQL that can be used with various data types.

CAST()

Converts a value from its current data type into a specified data type.

```
SELECT
    CAST(expression AS datatype)
FROM
    Table_name;
```

CONVERT()

Another function that converts a value from its current data type into a specified data type.

```
SELECT
    CONVERT(value, datatype)
FROM
    Table_name;
```

IFNULL()

Returns a specified value if the given expression is null. Otherwise, it returns the value of the expression itself.

```
SELECT
    IFNULL(expression, alternative_value)
FROM
    Table_name;
```

NULLIF()

Compares two expressions and returns `NULL` if they are equal. Otherwise, the first expression is returned.

```
SELECT
    NULLIF(expression1, expression2)
FROM
    Table_name;
```

ISNULL()

Determines if an expression is `NULL` or not. If the expression is `NULL`, it returns `1`. Otherwise, it returns `0`.

```
SELECT
    ISNULL(expression)
FROM
    Table_name;
```

COALESCE()

Evaluates expressions from left to right, returning the first non-`NULL` value or `NULL` if all expressions are `NULL`.

```
SELECT
    COALESCE(value1, value1, ...)
FROM
    Table_name;
```

String functions

String functions are used to **manipulate** and **format string data types** to ensure consistency.

UPPER()

Converts a string to uppercase.

```
SELECT
    UPPER(string) AS Alias
FROM
    Table_name;
```

LOWER()

Converts a string to lowercase.

```
SELECT
    LOWER(string) AS Alias
FROM
    Table_name;
```

LTRIM()

Removes leading spaces from the left end of a string.

```
SELECT
    LTRIM(string) AS Alias
FROM
    Table_name;
```

RTRIM()

Removes trailing spaces from the right end of a string.

```
SELECT
    RTRIM(string) AS Alias
FROM
    Table_name;
```

LENGTH()

Determines the length (number of characters) of a string.

```
SELECT
    LENGTH(string) AS Alias
FROM
    Table_name;
```

POSITION()

Returns the position (index) of the first occurrence of a substring within a string.

```
SELECT
    POSITION(string IN string) AS Alias
FROM
    Table_name;
```

LEFT()

Extracts a specified number of characters from the leftmost side of a string.

```
SELECT
    LEFT(string, length) AS Alias
FROM
    Table_name;
```

RIGHT()

Extracts a specified number of characters from the rightmost side of a string.

```
SELECT
    RIGHT(string, length) AS Alias
FROM
    Table_name;
```

SUBSTRING()

Extracts a substring from a string.

```
SELECT
    SUBSTRING(string, start_position, length)
    AS Alias
FROM
    Table_name;
```

CONCAT()

Concatenates or joins multiple strings together.

```
SELECT
    CONCAT(string1, string2, ...)
    AS Alias
FROM
    Table_name;
```

REPLACE()

Replaces all occurrences of a specified substring within a string with a new substring.

```
SELECT
    REPLACE(string, search_string, replacement_string) AS Alias
FROM
    Table_name;
```

Datetime functions

Datetime functions allow **manipulation** and **calculation** of **date** and **time values**.

CURRENT_DATE()

Returns the current date without the time component. The function is specific to MySQL .

```
SELECT
    CURRENT_DATE() AS Current_date;
```

NOW()

Returns the current date and time from the system. The function is specific to MySQL.

```
SELECT
    NOW() AS Current_date;
```

CURRENT_TIMESTAMP()

Returns the current date and time from the system. The function is specific to MySQL.

```
SELECT
    CURRENT_TIMESTAMP() AS Current_timestamp;
```

DAY()

Returns the day of the month for a specified date.

```
SELECT
    DAY(date_expression) AS Alias;
FROM
    Table_name;
```

MONTH()

Returns the month for a specified date.

```
SELECT
    MONTH(date_expression) AS Alias;
FROM
    Table_name;
```

YEAR()

Returns the year for a specified date.

```
SELECT
    YEAR(date_expression) AS Alias;
FROM
    Table_name;
```

DATEDIFF()

Calculates the difference between two dates.

```
SELECT
    DATEDIFF(date_part, start_date, end_date)
    AS Alias;
FROM
    Table_name;
```

DATE_ADD()

Adds a specified interval to a date or datetime value.

```
SELECT
    DATE_ADD(date, INTERVAL value INTERVAL_UNIT)
    AS Alias;
FROM
    Table_name;
```

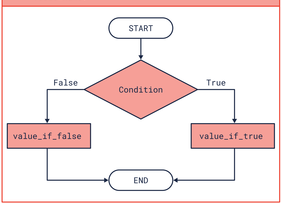
Control flow functions

Control flow functions are used to implement **conditional logic** and **control the flow of execution** within SQL queries. They allow us to perform different actions or return different values **based on specific conditions**.

IF()

Evaluates a condition and returns a particular value if a condition is TRUE, or another value if a condition is FALSE.

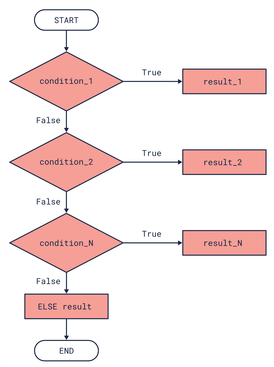
```
SELECT
    IF(condition, value_if_true, value_if_false)
FROM
    Table_name;
```



Searched CASE statement

A list of conditions are evaluated to either TRUE or FALSE.

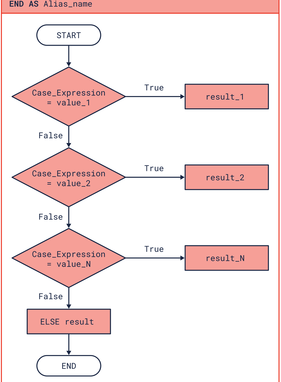
```
CASE Case_Expression
     WHEN condition_1 THEN result_1
     WHEN condition_2 THEN result_2
     WHEN condition_N THEN result_N
     ELSE result
END AS Alias_name
```



Simple CASE statement

A list of values are compared to a given CASE expression.

```
CASE Case_Expression
     WHEN value_1 THEN result_1
     WHEN value_2 THEN result_2
     WHEN value_N THEN result_N
     ELSE result
END AS Alias_name
```



Nested conditional statements

One or more conditional statements, like the IF and CASE control flow functions, within another conditional statement.

Nested IF statement:	The use of an **IF function inside** of another **IF function**.
Nested IF and CASE statement:	The use of an **IF function inside** of another **CASE function**.