**Constraints used in SQL**:

* [NOT NULL](https://www.w3schools.com/sql/sql_notnull.asp) - Ensures that a column cannot have a NULL value
* [UNIQUE](https://www.w3schools.com/sql/sql_unique.asp) - Ensures that all values in a column are different
* [PRIMARY KEY](https://www.w3schools.com/sql/sql_primarykey.asp) - A combination of a NOT NULL and UNIQUE. Uniquely identifies each row in a table
* [FOREIGN KEY](https://www.w3schools.com/sql/sql_foreignkey.asp) - Prevents actions that would destroy links between tables
* [CHECK](https://www.w3schools.com/sql/sql_check.asp) - Ensures that the values in a column satisfies a specific condition
* [DEFAULT](https://www.w3schools.com/sql/sql_default.asp) - Sets a default value for a column if no value is specified
* [CREATE INDEX](https://www.w3schools.com/sql/sql_create_index.asp) - Used to create and retrieve data from the database very quickly

**SQL Aggregate Functions**

SQL aggregate functions return a single value, calculated from values in a column.

Useful aggregate functions:

* AVG() - Returns the average value
* COUNT() - Returns the number of rows
* FIRST() - Returns the first value
* LAST() - Returns the last value
* MAX() - Returns the largest value
* MIN() - Returns the smallest value
* SUM() - Returns the sum

**SQL Scalar functions**

SQL scalar functions return a single value, based on the input value.

Useful scalar functions:

* UCASE() - Converts a field to upper case
* LCASE() - Converts a field to lower case
* MID() - Extract characters from a text field
* LEN() - Returns the length of a text field
* ROUND() - Rounds a numeric field to the number of decimals specified
* NOW() - Returns the current system date and time
* FORMAT() - Formats how a field is to be displayed

**Entity Framework**

Entity Framework is an Object Relational Mapper (ORM). This ORM provides developers to automate the mechanism of storing & accessing the data from the database.

Most developers use the traditional way of data access using the ADO.NET framework by writing a Data access layer class for performing CRUD (Create, Read, Update, Delete) operations. These processes are time-consuming because we need to write custom queries for all these operations and then need to call them by creating an object of classes and dispose them properly. Microsoft came up with new data accessing mechanism called "**Entity Framework**”