Programming Language - C#

Database Connectivity in C#

Connecting to a database

- Connection to a database requires a connection string.

- Connection string specifies information about a data source and the means of connecting to it.

- It is passed in code to an underlying driver or provider to initiate the connection.

- Whilst commonly used for a database connection, the data source could also be a spreadsheet or text file.

- Each database has its own properties, its own server, name and type of login information, using which you can connect to the database to read/write the data from it.

SqlConnection

- SqlConnection class is to connect to the SQL Database

- The SqlConnection Object is used to handle the part of physical communication between the C# application and the SQL Server Database.

```
connetionString="Data Source=ServerName;
Initial Catalog=DatabaseName;User ID=UserName;Password=Password"
```
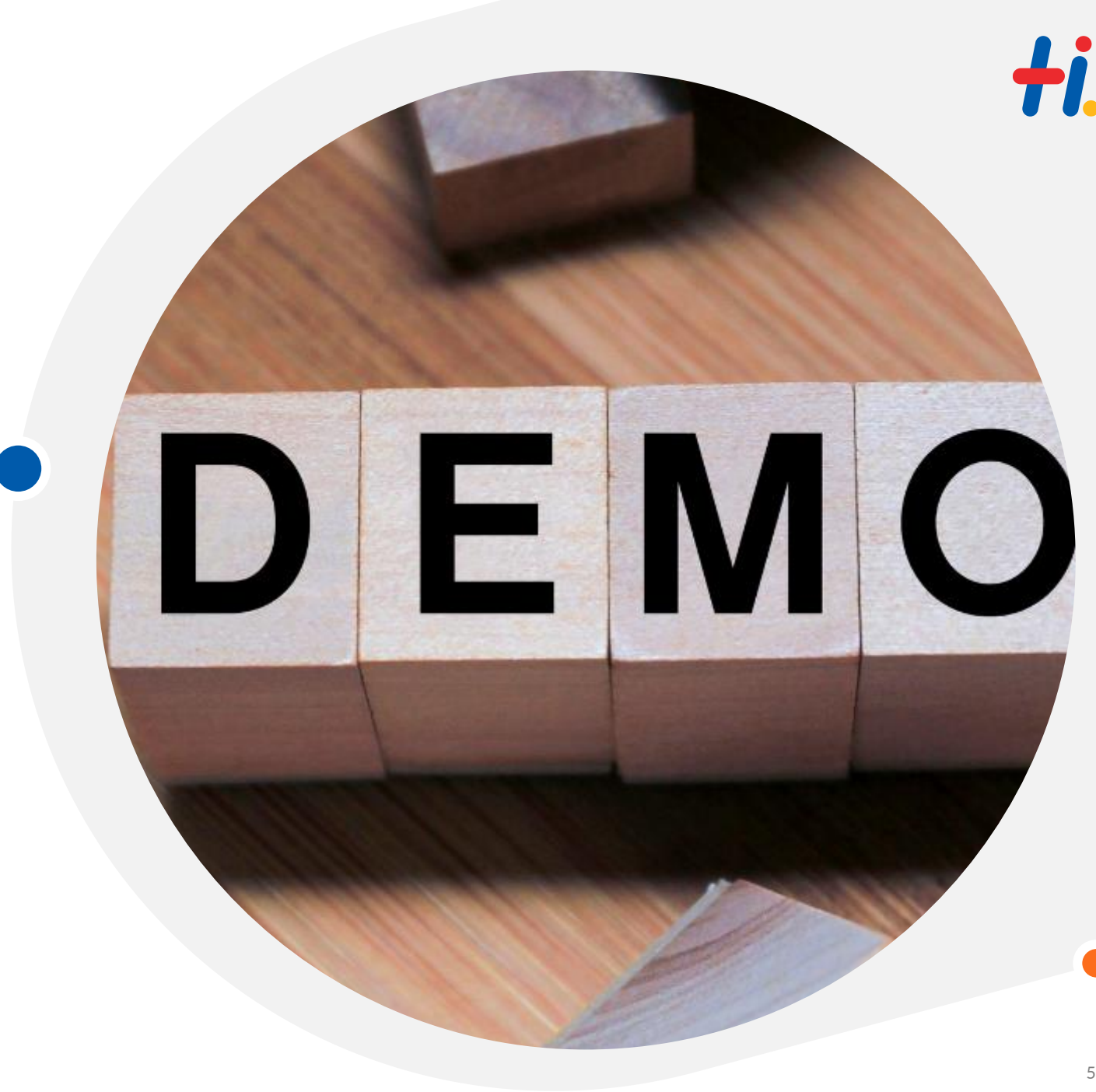
- An instance of the SqlConnection class in C# has supported the Data Provider for SQL Server Database.

- The SqlConnection instance takes Connection String as argument and pass the value to the Constructor statement.

SQL Commands

- SQL Commands will execute with the help of the Connection Object and retrieve or manipulate the data in the database.

- Once the Database activities is over , Connection should be closed and release the Data Source resources

- SQL Query created using StringBuilder object and then passing the SQL Query to SqlCommand instace and execute it.

- Similarly, to Update the values in database you can build SQL Query and execute it.

- While creating real-world application, we use Entity-Framework with .NET or EF Core with .NET Core to connect to database.

- This method gives us better grasp to connect and query database, with extra level of security.

Demo

Thank you

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