## S1 - ADO.NET

## 921 - 06.03.2025

Data Cycle:

1. Connect to the data
2. Prepare the application to receive the data
3. Fetch the data
4. Display the data
5. Modify the data & validate the data
6. Save

DataSet

- local in-memory cache

- working even if the DB connection is closed

- relational structure

- Properties: Tables, Relations

- Methods: Clear(), HasChanges()

SqlConnection

- Properties: ConnectionString, ConnectionTimeout

- Methods: Open(), Close()

SqlConnection sqlConn = new SqlConnection(“Data Source=sqlServerName; Initial Catalog=DBname; Intergrated Security= True; TrustServerCertificate= True”)

SSPI - Security Supported Provider Interface -- log with Windows credentials

User\_Id=userid; Password=pass

Try {

SqlConnection sqlConn = new SqlConnection(“Data …

sqlConn.Open()

…..

} catch (SqlException err) {

… handle the errors

} finally {

sqlConn.Close();

}

Using (SqlConnection sqlConn = new SqlConnection(“Data … )

{

sqlConn.Open()

…

}

If SqlException has a severity > 19: the DB connection is automatically closed !!!

SqlCommand

- execute SQL statements or stored procedures

- Methods: ExecuteScalar() - first row + first col of the result set

ExecuteReader() - returns SqlDataReader obj used to iterate over the result set

ExecuteNonQuery()

- properties: CommandText, CommandType.Text (default), CommandType.StoredProcedure, CommandTimeout

SqlDataAdapter

- bridge between DataSet and the SQL Server DB

- Properties: SelectCommand (used for fill method)

InsertCommand, UpdateCommand, DeleteCommand (used for Update method)

- Methods: Update(), Fill()