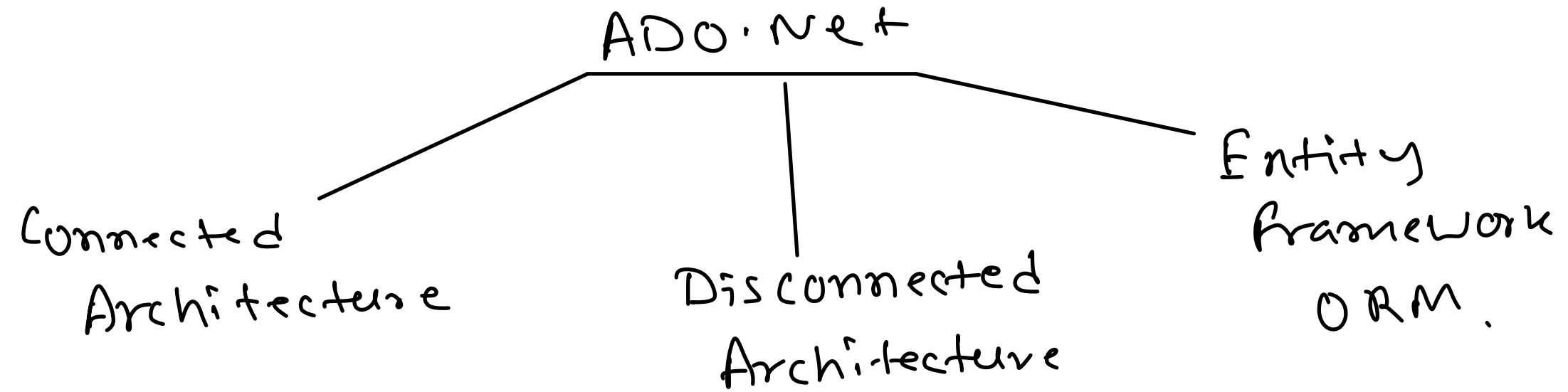


1. Basics
2. OOP
3. Events & Delegates
4. Collections, Generic, Generic Collection
5. File IO and Serialization
6. Custom Attributes
7. Class Library Files (.dll)
8. Access modifier
9. Reflection - intelllicence, ORM (custom)
10. CSharp Features
11. LINQ. - collection.
12. ADO.NET

12. ADO.NET :- A FW to access SQL Server Database.  
Architecture.



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MySQL → SQL queries Syntax,  
db  
Oracle → PL-SQL Query Syntax,  
db  
MS SQL → T-SQL Query Syntax  
db

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MS SQL Server.

1] SQL Express Edition :- Free Db for .Net developers for development purpose.

It has default Name :-

LocalDB \ MSSQLLocalDB.

---

2] Standard Paid SQL Server ✓ BVSSQLDb  
UN : SA → custom per developer  
PWD : SA → custom paid copy.

MS SQL Server:—

Server = (LocalDB)\MSSQLLocalDB ;

Data Source = BVSDb ;

Database = IETDb ; (master)

Initial Catalogue = myDb ;

Integrated Security = True [Windows Authentication]

Username = mugdha ; password = mugdha

Editor :-

Microsoft SQL Server Management  
Studio 19

Visual Studio 2024 Editor

T-SQL  $\xleftrightarrow{\text{to}}$  .NET app.  
 SQL Express  $\xleftrightarrow{\text{to}}$  C#, MVC Web App, Console.

Standard .Net :- System.Data.SqlClient.dll

.NETCore :- Microsoft.Data.SqlClient.dll  $\rightarrow$  package external.

SQL Express Db  
 class  
SqlConnection  
 $\hookrightarrow$  connect to Db  
 class  
SqlCommand  
 $\hookrightarrow$  T-sql query fire  
SqlDataReader  
 $\hookrightarrow$  Reads the records from db

S.D. OleDb.dll  
 mySQL, Excel

OleDbConnection

OleDbCommand

OleDbDataReader

S.D. Odbc.dll  
 For pro...

OdbcConnection

OdbcCommand

OdbcDataReader

System. Data. SqlClient.dll } ADO.NET  
Microsoft. Data. SqlClient.dll

## Connected Architecture -

```
SqlConnection con =  
    new Sql (" ");  
con.Open();
```

```
con.Close();
```

This is developer's  
responsibility to open  
and close the connection

## Disconnected Architecture.

```
SqlConnection con =  
    new SqlConnection (" ");
```

```
SqlDataAdapter da  
    = new SqlDataAdapter (con);
```

SqlCommand Builder  
+ Cda



class Emp

ADO.NET

SqlDataReader

reader

[1] [1]

[1]  
[12]  
[NYC]

Name

reader[1]

Adv.

reader[2]

table: Emp

Id	Name	Address
1	KS	NYC
2	BS	NJ

[1]  
Id.  
reader[0]

DataSet is a  
Collection of DataTables

table - Emp

<del>Id</del>	<del>Name</del>	Address
1	HJ	NY
2	HG	NJ
3	TH	LA

Net  
DataSet.  
Class

class DataTable. dt =  
new DataTable();

Id	Name	Address
1	HJ	NY
2	HG	NJ
3	TH	LA

class DataRow dr =  
new DataRow();

DataTable

(dt)

collection  
of  
Data  
Rows

dr1 : [col1, col2, col3]  
dr2 : [col1, col2, col3]  
dr3 : [col1, col2, col3]

.Net RAM

DataRow is a collection of DataColumn's  
DataTable is a collection of DataRows