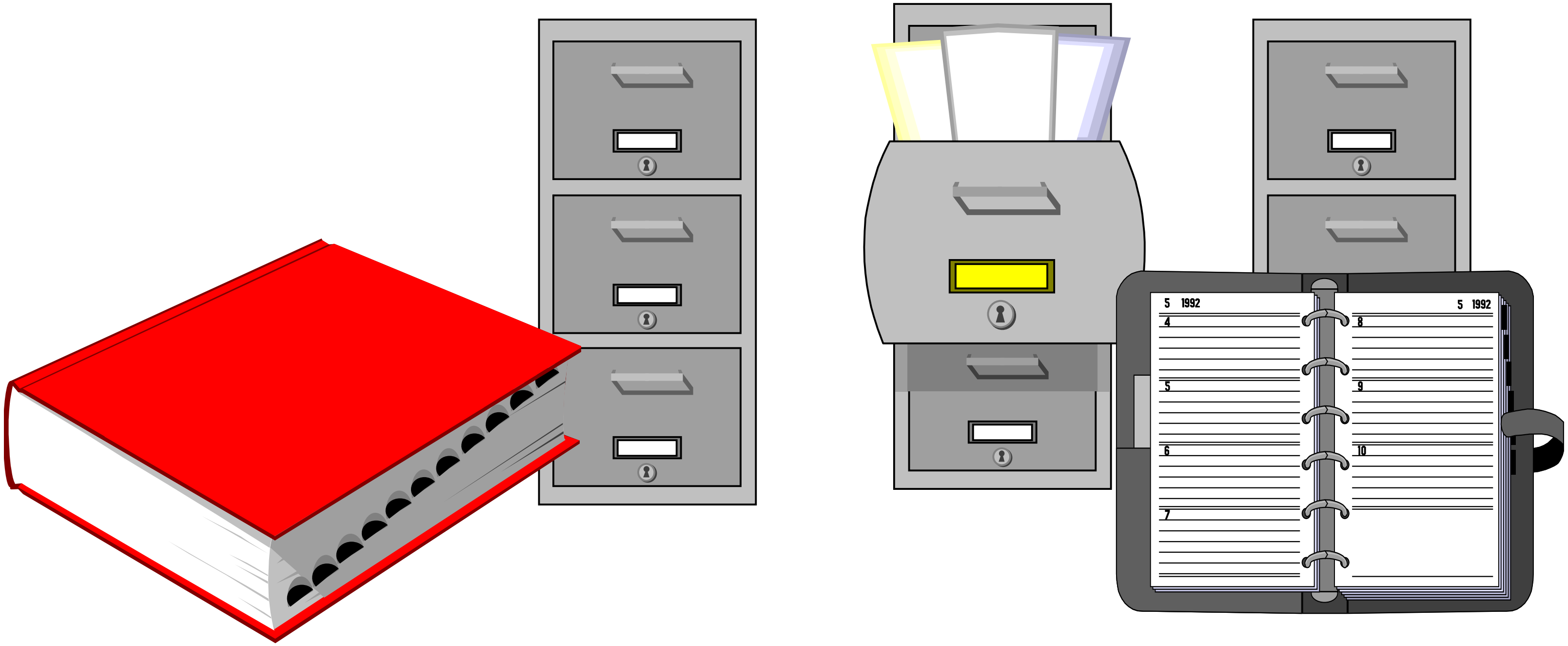
Introduction to Programming

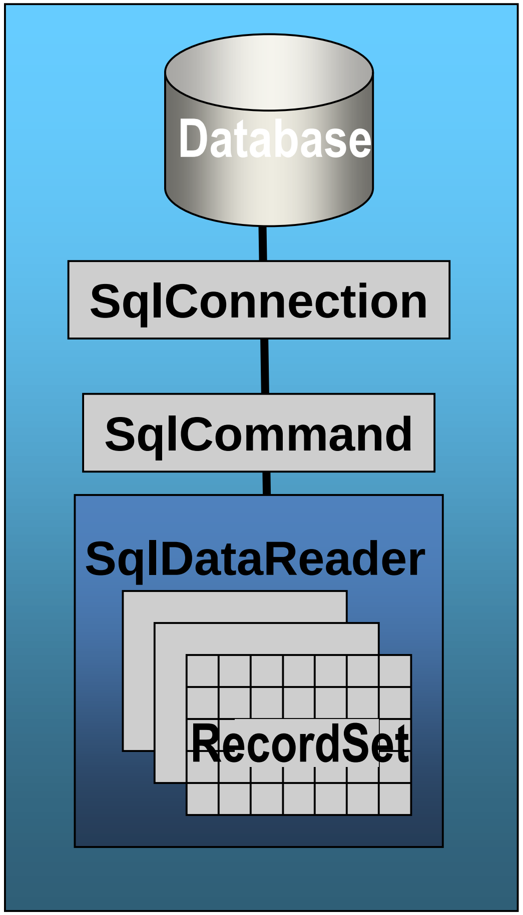
Lecture 9 – ADO I - DataReader

Semester II

ADO.NET



OVERVIEW



- **SqlConnection** - connects
  to the DB

- **SqlCommand** - executes
sql commands

- **SqlDataReader** - reads
  records from the
  SqlCommand

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SqlConnection(C#)

```
System.Data.SqlClient.SqlConnection sqlConnection1;
sqlConnection1 = new
       System.Data.SqlClient.SqlConnection(@"Data Source=HOME-
PC\SQLEXPRESS;Initial Catalog=asp;Integrated Security=True"
 );
```

- Data Source = ‘ServerName’
- Initial Catalog= ‘DatabaseName’

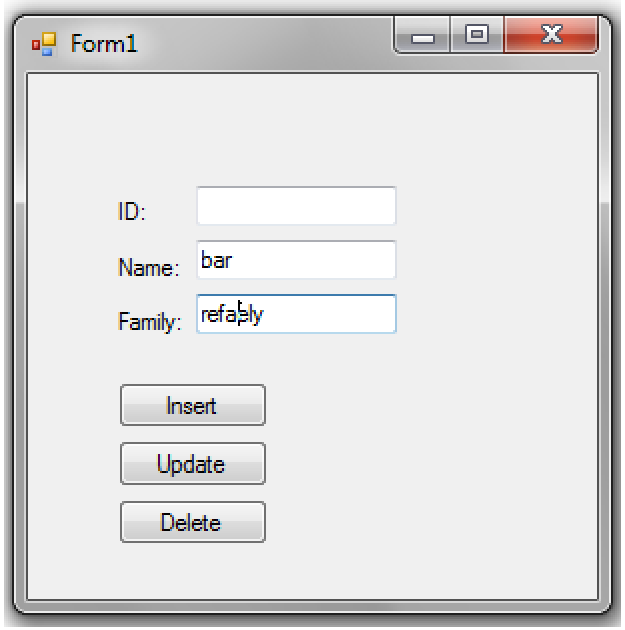
SqlCommand(C#)

```
System.Data.SqlClient.SqlCommand sqlCommand1;
sqlCommand1 = new SqlCommand("SELECT * FROM tbUser ORDER BY
ID",sqlConnection1);
sqlCommand1.Connection.Open();
sqlCommand1.ExecuteNonQuery(); //(returns the number of rows
affected)
sqlCommand1.Connection.Close();
```

- For none query: Insert, Update and Delete

Example : NoneQuery

- Implement the example together in class to learn the DB connection and the separation of the DB layer from the UI layer

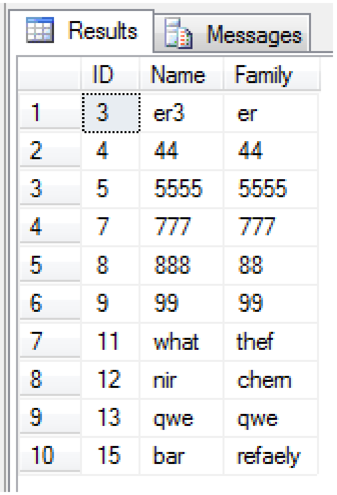


Form1

ID:

Name: bar

Family: refaely



	ID	Name	Family
1	3	er3	er
2	4	44	44
3	5	5555	5555
4	7	777	777
5	8	888	88
6	9	99	99
7	11	what	thef
8	12	nir	chem
9	13	qwe	qwe
10	15	bar	refaely

SqlDataReader(C#)

- All DataReaders (SqlDataReader, OleDbDataReader) are connected to the database (until the Close()).
  - Reads only one record at a time.
  - Does not remember previous record. Forward-only stream reading.
  - Can’t perform sorting, filtering or counting of the resulting set.
  - A minimal memory usage.

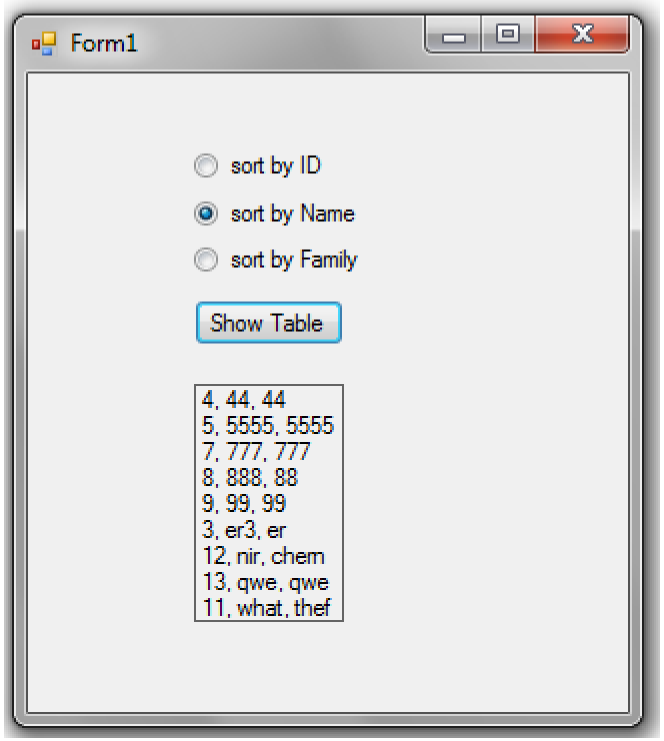
SqlDataReader(C#)

```
System.Data.SqlClient.SqlDataReader SqlDataReader1;
SqlDataReader1 = sqlCommand1.ExecuteReader(); //instead of
ExecuteNonQuery()
SqlDataReader1.Read(); // -> returns true if there are records
to read, false otherwise
```

```
SqlDataReader1["id"];// get the value for the Field named ‘id’.
SqlDataReader1[2];// get the value for the Field indexed 2.
SqlDataReader1.Close();
```

Example : Query

- Implement the example together in class to learn the DB connection and the separation of the DB layer from the UI layer



○ sort by ID

● sort by Name

○ sort by Family

```
4, 44, 44
5, 5555, 5555
7, 777, 777
8, 888, 88
9, 99, 99
3, er3, er
12, nir, chem
13, qwe, qwe
11, what, thef
```