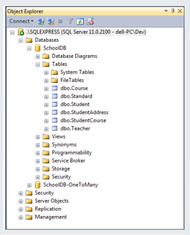
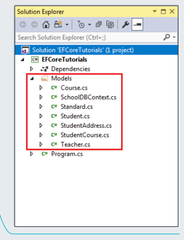
.Net basic

- today topic
  - 1-advances of dependency injection
  - 2-entity framework core
  - 3-backend structure
- sources
  - entity framework
    - https://docs.microsoft.com/en-us/ef/core/
  - create model from existing database
    - http://www.entityframeworktutorial.net/efcore/create-model-for-existing-database-in-ef-core.aspx
  - dependency injection
    - https://medium.freecodecamp.org/a-quick-intro-to-dependency-injection-what-it-is-and-when-to-use-it-7578c84fa88f
  - source code of day 4
    - https://github.com/tridorje/sql-performace/tree/master/SqlPerformance4
- entity framework core framework
  - when using?
    - generate a model from an existing database
      - db first
        - from db



        - to model



    - create a database from your model
      - code first
        - reverse of db first
    - Want to operate with database more easy?
      - linq

LINQ Method Syntax:

```
using (var ctx = new SchoolDBEntities())
{
    var student = ctx.Students
                    .Where(s => s.StudentName == "Bill")
                    .FirstOrDefault<Student>();
}
```

EF 6 executes the following SQL query in the database for the above LINQ query.

```
SELECT TOP (1)
[Extent1].[StudentID] AS [StudentID],
[Extent1].[StudentName] AS [StudentName],
[Extent1].[StandardId] AS [StandardId]
FROM [dbo].[Student] AS [Extent1]
WHERE 'Bill' = [Extent1].[StudentName]
```

        - join
        - filter
        - group by
        - .....
      - sql query

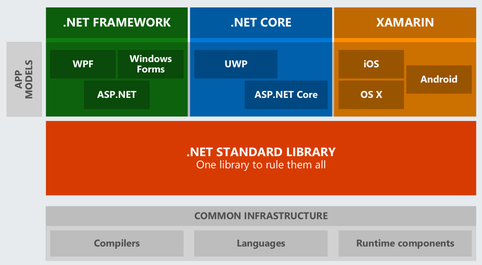
```
var ckQuerry = "SELECT CASE WHEN EXISTS ( SELECT [AppUserRoles].[RoleId] FROM [AppUserRoles] WHERE ([AppUserRoles].[RoleId] = @role)
bool result = false;

try
{
    var temp = await _context.Database.ExecuteSqlCommandAsync(
        ckQuerry,
        new SqlParameter("@role", role),
        new SqlParameter("@userID", userID)
    );
    result = true;
}
catch (Exception ex)
{

    Console.WriteLine("Message = {1}", ex.Message);

}
```

  - advances
    - open source
    - cross platform
      - window
      - linux
      - macos
  - some useful command
    - Add-Migration Inital -context AppDbContext
    - update-database -verbose -context AppDbContext
    - Update-Database -verbose quanHeMotNhieuCuaUserVoiCompanyVaRole -context AppDbContext
    - Remove-Migration -context AppDbContext
  - backend structure



.Net Standard library

    - backend
      - 2- Application

      - 3- Domain
        - data

        - data.ef

      - 4 - Infrastructure

  - dependency injection
    - example

- Project1
  - web application
- Project2
  - window form app2
- Project3

  - window form app1