

Introduction in .Net Core -> Lab 6 (Florin Olariu & Dan Nastasa)

Prerequisites:

- a) [SQL Server Express 2016](#)
- b) Entity Framework Core knowledge
- c) Loading patterns

Note: The exercise is meant to show us how to:

- Connect to a SQL Server Instance
- Use Visual Studio to browse SQL Server contents
- Work with Entity Framework Core Migrations
- Write functional tests
- Apply different loading patterns

Exercise:

1. Create the following Domain Model, that gives you the possibility to manage Users within Organizations (1:Many)
 - a) Create the Organization model (Id, Name, Description)
 - b) Create the User model (Id, First name, Last name, Email)
 - c) Add Data Annotations in accordance to the field types
 - d) Create a basic context and generate the tables using migrations
 - e) Create a basic CRUD repository for the Organization
 - f) Using eager and explicit loading respectively, write two methods to return all Organizations, with their specific Users
 - g) Using eager and explicit loading respectively, write two methods that return for an Organization the number of Users assigned
 - h) Expand the Organization model by adding an extra field: ActivityType (mandatory). Run migrations in order to update the current database schema
 - i) Write functional tests to cover 100% of the repository

Note:

1. All exercises are mandatory.
2. You will receive your points at the end of the lab.

Eager/explicit loading hint:

```
var db = new Northwind();
db.Database.Log = new Action<string>(
message = >
{
    WriteLine(message);
});
var query = db.Categories;
// eager loading
// var query = db.Categories.Include("Products");
foreach (var item in query)
{
    // WriteLine(item.CategoryName);
    var products = db.Entry(item).Collection(c => c.Products);
    if (! products.IsLoaded)
    {
        products.Load();
    }

    WriteLine($"{item.CategoryName} has
    {item.Products.Count} products.");
}
```