Tp 4 – Database

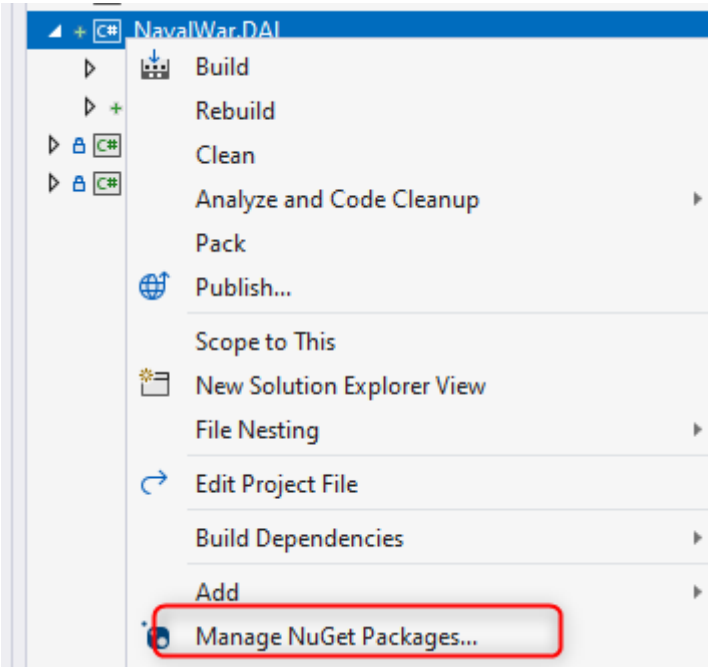
Exercice

Objectif : Gérer vos joueurs via la database

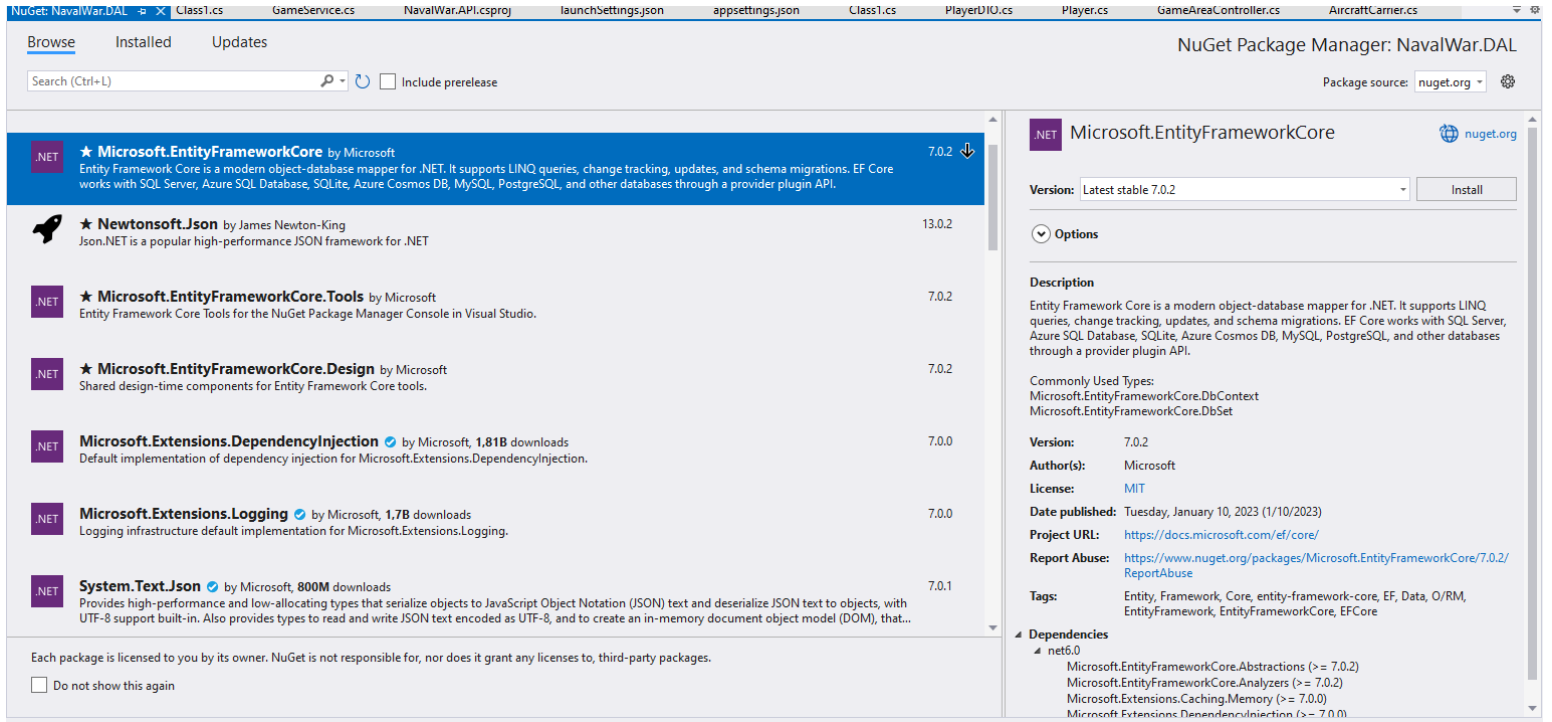
- Créer le projet de type bibliothèque de classe « *.DAL »
- Dans votre DAL
  - Configurer votre DbContext
  - Créer au moins une entitée « Player »
- Dans votre API
  - Configurer DbContext dans program
- Faire une migration sur votre LocalDB
- Faire un repository afin de
  - Créer / Update / Delete un « Player »
- Depuis un appel HTTP sur un controleur
  - Créer un Player en BDD
  - Update / Delete sur un ID
  - **ATTENTION,** on doit obligatoirement passer par la couche Business !!

Tips

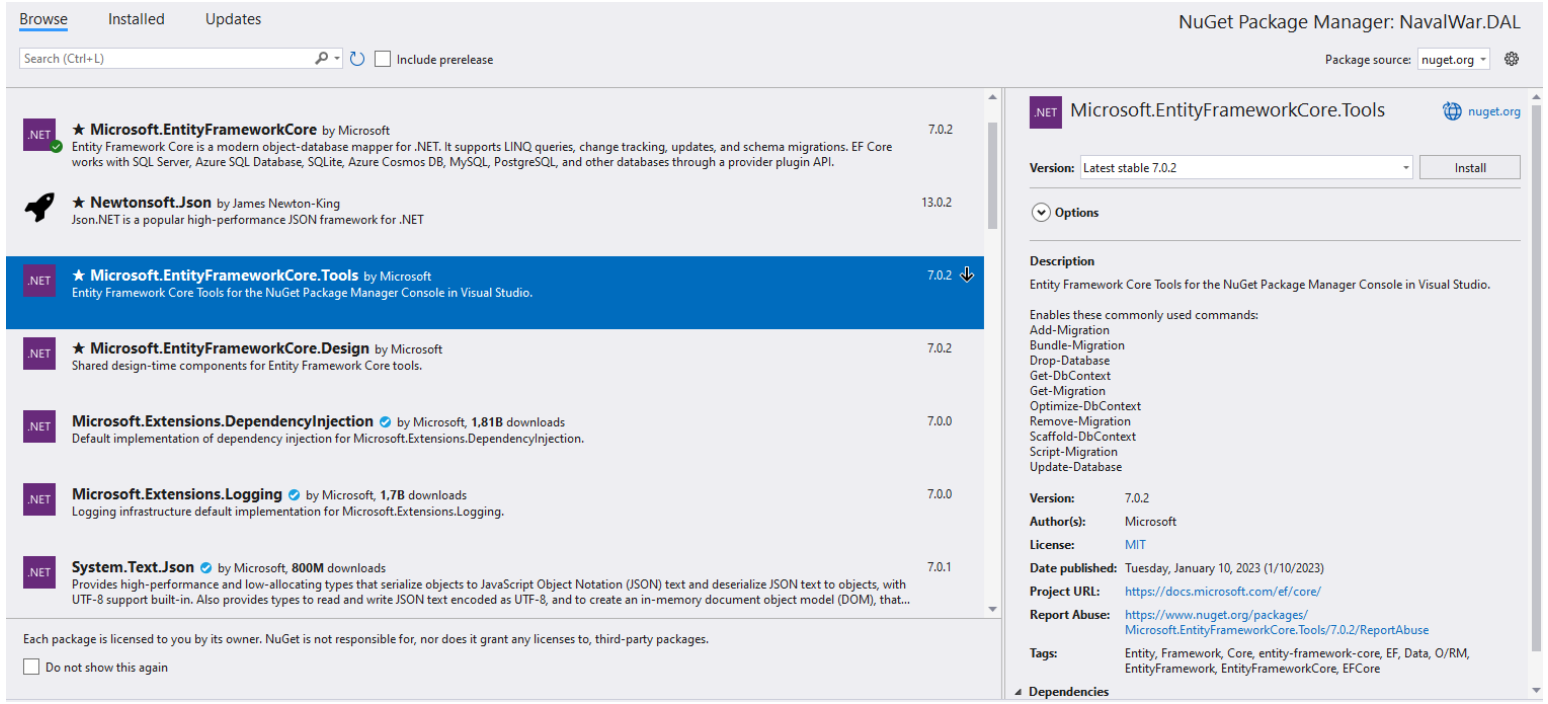
EFCore - install



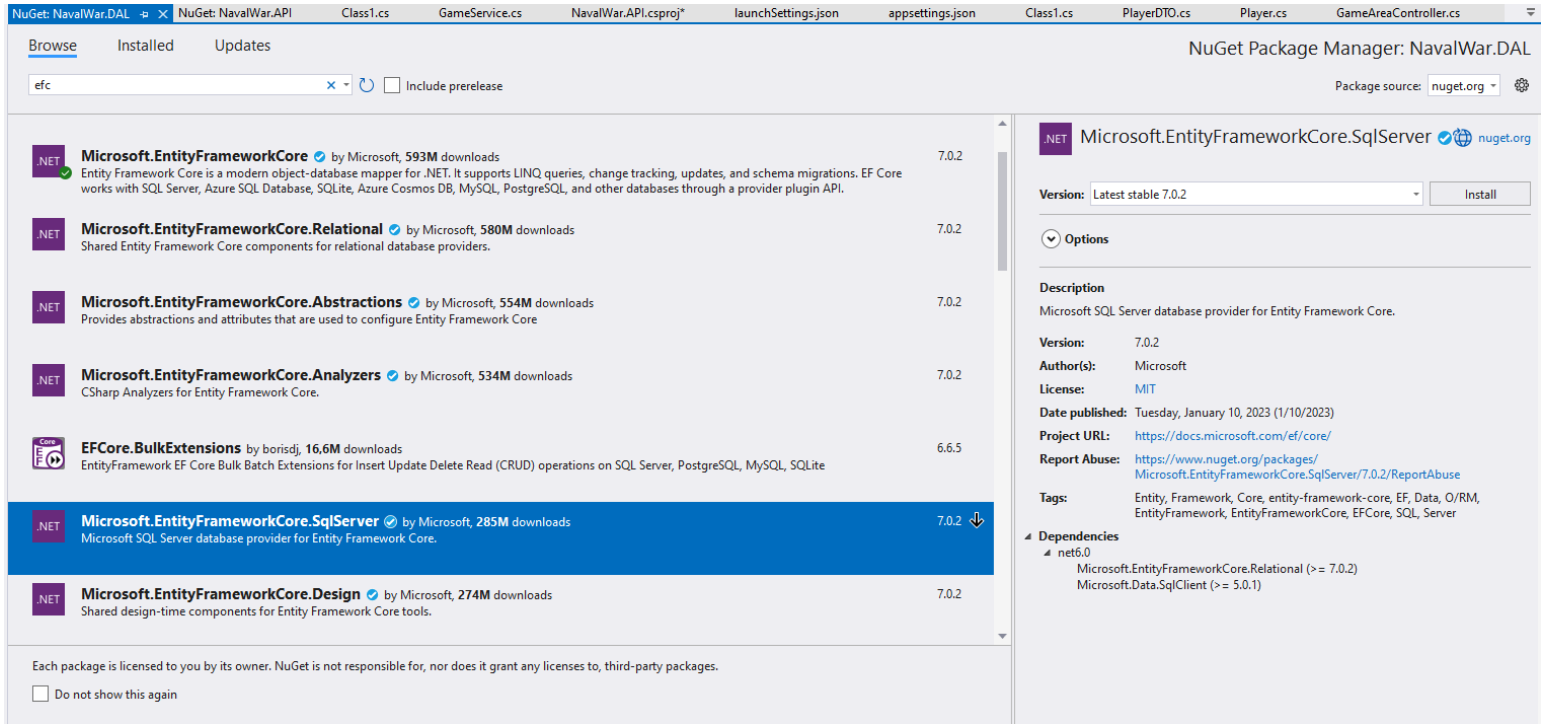
EFCore - install



EFCore - install



EFCore - install



Entity Player

```
namespace NavalWar.DAL.Models
{

    2 references | 0 changes | 0 authors, 0 changes
    public class Player
    {
        [Key]
        0 references | 0 changes | 0 authors, 0 changes
        public int ID { get; set; }
        0 references | 0 changes | 0 authors, 0 changes
        public string Name { get; set; }
        /// <summary>
        /// Navigation property for foreign key
        /// </summary>
        1 reference | 0 changes | 0 authors, 0 changes
        public List<Session> Sessions { get; set; }


    }
}
```

DB context config

```
7 references | 0 changes | 0 authors, 0 changes
public class NavalContext : DbContext
{

    0 references | 0 changes | 0 authors, 0 changes
    public NavalContext(DbContextOptions<NavalContext> options) : base(options)
    {
    }

    0 references | 0 changes | 0 authors, 0 changes
    public DbSet<Player> Players { get; set; }
    1 reference | 0 changes | 0 authors, 0 changes
    public DbSet<Session> Sessions { get; set; }

    0 references | 0 changes | 0 authors, 0 changes
    protected override void OnModelCreating(ModelBuilder modelBuilder)
    {
        modelBuilder.Entity<Player>()
            .ToTable("Player")
            .HasMany(p => p.Sessions)
            ;

        modelBuilder.Entity<Session>()
            .ToTable("Session")
            ;
    }
```

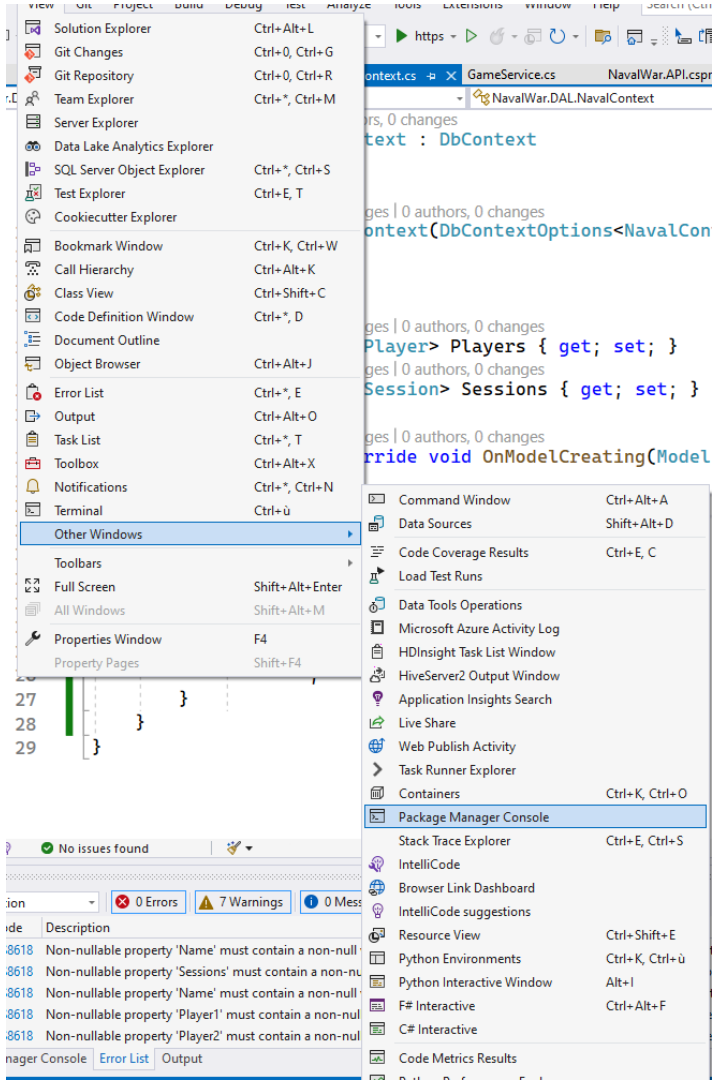
Repository Config

```
1 reference | 0 changes | 0 authors, 0 changes
public class SessionRepository : ISessionRepository
{
    private readonly NavalContext _context;
    0 references | 0 changes | 0 authors, 0 changes
    public SessionRepository(NavalContext context)
    {

        _context = context;
    }

    0 references | 0 changes | 0 authors, 0 changes
    public SessionDto GetSession(int id)
    {
        try
        {
            var session = _context.Sessions.FirstOrDefault(x => x.ID == id);
            return session.ToDto();
        }
        catch (Exception)
        {

            throw;
        }

    }
```

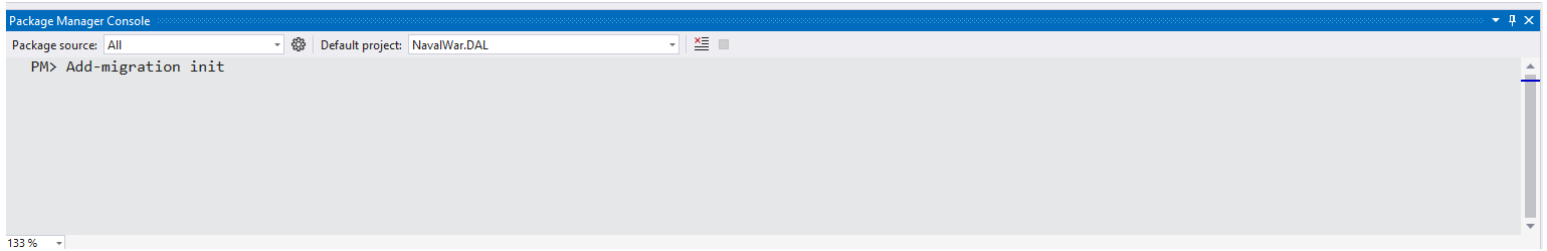
DbContext COnfig

```
// Add services to the container.

builder.Services.AddControllers();
// Learn more about configuring Swagger/OpenAPI at https://aka.ms/aspnetcore/swashbuckle
builder.Services.AddEndpointsApiExplorer();
builder.Services.AddSwaggerGen();
//EFCore Options
builder.Services.AddDbContext<NavalContext>(options =>
    options.UseSqlServer("Server=(localdb)\\mssqllocaldb;Database=NavalWar;Trusted_Connection=True;MultipleActiveResultSets=true"));

//add your dependencies
builder.Services.AddScoped<IGameService, GameService>();
```

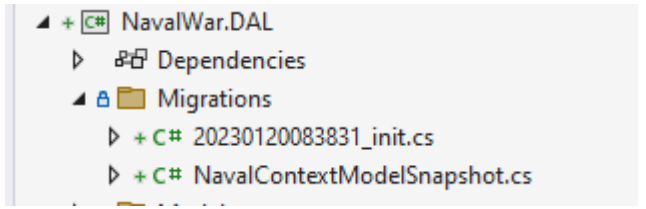
Migrations


Solution Explorer Ctrl+Alt+L
Git Changes Ctrl+0, Ctrl+G
Git Repository Ctrl+0, Ctrl+R
Team Explorer Ctrl+*, Ctrl+M
Server Explorer
Data Lake Analytics Explorer
SQL Server Object Explorer Ctrl+*, Ctrl+S
Test Explorer Ctrl+E, T
Cookiecutter Explorer
Bookmark Window Ctrl+K, Ctrl+W
Call Hierarchy Ctrl+Alt+K
Class View Ctrl+Shift+C
Code Definition Window Ctrl+*, D
Document Outline
Object Browser Ctrl+Alt+J
Error List Ctrl+*, E
Output Ctrl+Alt+O
Task List Ctrl+*, T
Toolbox Ctrl+Alt+X
Notifications Ctrl+*, Ctrl+N
Terminal Ctrl+ù
Other Windows
Toolbars
Full Screen Shift+Alt+Enter
All Windows Shift+Alt+M
Properties Window F4
Property Pages Shift+F4
Command Window Ctrl+Alt+A
Data Sources Shift+Alt+D
Code Coverage Results Ctrl+E, C
Load Test Runs
Data Tools Operations
Microsoft Azure Activity Log
HDInsight Task List Window
HiveServer2 Output Window
Application Insights Search
Live Share
Web Publish Activity
Task Runner Explorer
Containers Ctrl+K, Ctrl+O
Package Manager Console
Stack Trace Explorer Ctrl+E, Ctrl+S
IntelliCode
Browser Link Dashboard
IntelliCode suggestions
Resource View Ctrl+Shift+E
Python Environments Ctrl+K, Ctrl+ù
Python Interactive Window Alt+I
F# Interactive Ctrl+Alt+F
C# Interactive
Code Metrics Results
GameService.cs
NavalWar.API.cspr
NavalWar.DAL.NavalContext
text : DbContext
ontext(DbContextOptions<NavalCon
Player> Players { get; set; }
Session> Sessions { get; set; }
rride void OnModelCreating(Model
No issues found
0 Errors
7 Warnings
Description
Non-nullable property 'Name' must contain a non-null
Non-nullable property 'Sessions' must contain a non-nu
Non-nullable property 'Name' must contain a non-null
Non-nullable property 'Player1' must contain a non-nul
Non-nullable property 'Player2' must contain a non-nul
Error List
Output

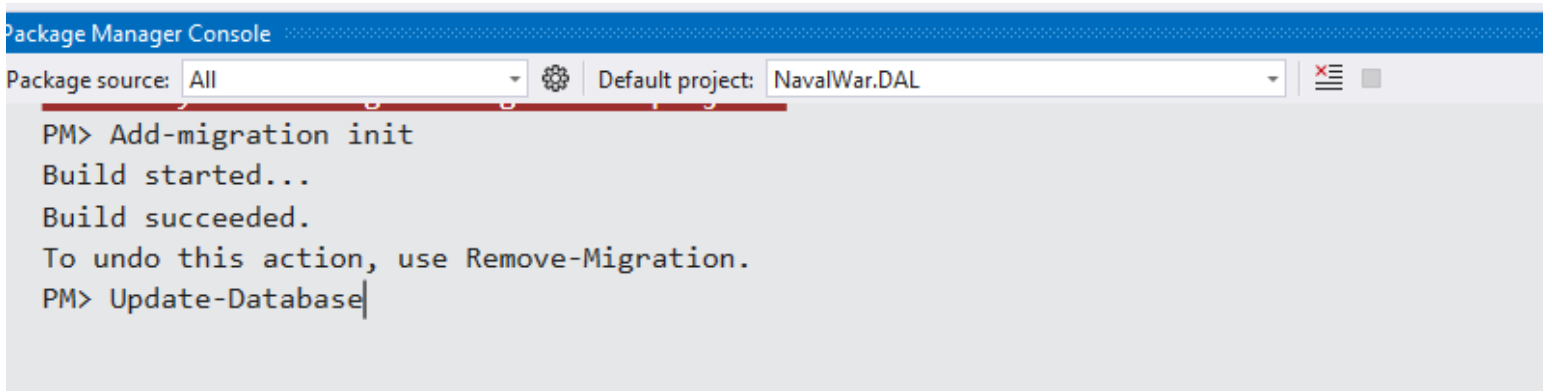
Migrations

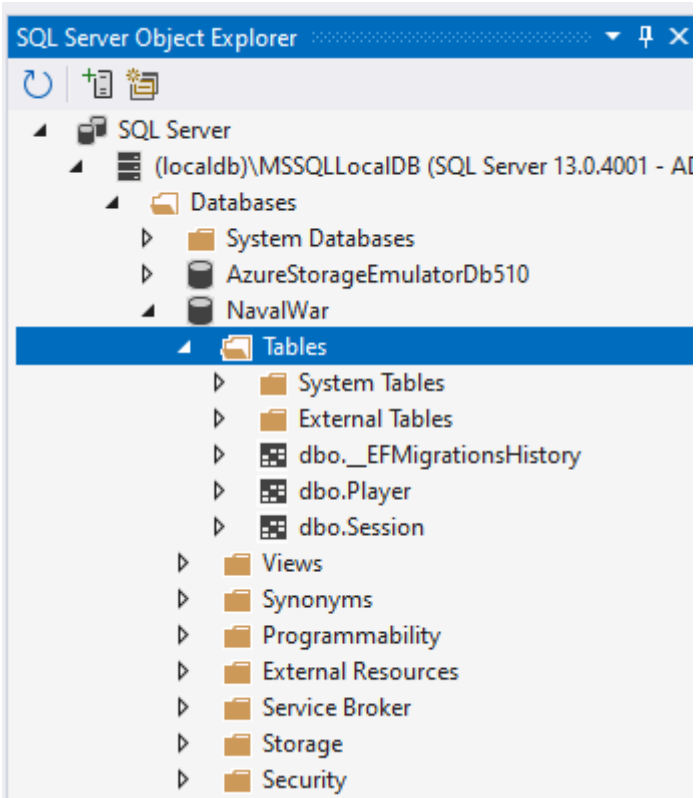

Package Manager Console
Package source: All
Default project: NavalWar.DAL
PM> Add-migration init
133 %

Migrations


NavalWar.DAL
Dependencies
Migrations
20230120083831_init.cs
NavalContextModelSnapshot.cs

Migrations


Package Manager Console
Package source: All
Default project: NavalWar.DAL
PM> Add-migration init
Build started...
Build succeeded.
To undo this action, use Remove-Migration.
PM> Update-Database


SQL Server Object Explorer
SQL Server
(localdb)\MSSQLLocalDB (SQL Server 13.0.4001 - AD
Databases
System Databases
AzureStorageEmulatorDb510
NavalWar
Tables
System Tables
External Tables
dbo.__EFMigrationsHistory
dbo.Player
dbo.Session
Views
Synonyms
Programmability
External Resources
Service Broker
Storage
Security

```
"Server=(localdb)\\mssqllocaldb;Database=<yourDatabase>;Trusted_Connection=True;MultipleActiveResultSets=true"
```