Objective:

Learn what ORM is and how it works. Learn Basic EF Core functionality. Learn how to embed EF Core in any .NET application. Learn about DB-first and Code-first approaches. Learn about using Fluent API to build entities and relations.

Theory:

- https://docs.microsoft.com/en-us/ef/core/

Task:

Deadline: 4 days

Requirements:

All tasks should be implemented with simple console applications, no web apps required.

- Learn basic concepts around ORMs and EF Core in particular.
- Setup application with EF Core configuration.
- Create entities and configure relations using Fluent API.
- Create migrations and generate DB based on Fluent API configuration.

As a result you should have a console application with configured EF Core setup, list of models and migrations to follow code-first implementation.

Answer all of these questions to be prepared:

1. What is ORM and how does it work? What are available instruments to work with a database in .NET?
2. What is ADO.NET technology? What is LinqToSql and what is EF? What is the Dapper library?
3. What are the main classes EF Core provides to work with DB?
4. What are two main ways of describing models and relations in EF Core? What are the main differences between them?

5. What is the navigation property in terms of EF? What are the naming conventions when using navigation properties?
6. How to configure different types of relationships using EF? (1to1, 1toM, MtoM)
7. Why would you need to declare your navigation properties as virtual? What is the technical explanation behind this?
8. What is migration and why would you need it?
9. What are the advantages and disadvantages of code first approach over the database first?