# Homework: Entity Framework

This document defines the homework assignments from the ["Database Applications" Course @ Software University](https://softuni.bg/trainings/21/Database-Applications-Mar-2015). Please submit as homework a single zip / rar / 7z archive holding the solutions (source code) of all below described problems.

## Show Data from Related Tables

You are given a **MS SQL Server database "Ads"** holding advertisements, organized by categories, towns and users, available as SQL script.

Using **Entity Framework** write a SQL query to select all **ads** from the database and later print their **title**, **status**, **category**, **town** and **user**. Do not use Include(…) for the relationships of the Ads. Check how many SQL commands are executed with the [SQL ExpressProfiler](https://expressprofiler.codeplex.com) (or similar tool).

Add Include(…) to select **statuses**, **categories**, **towns** and **users** along with all **ads**. Compare the number of executed SQL statements and the performance before and after adding Include(…).

Submit as result **both versions of your program**: with and without Include(…). Submit also **screenshots** of the executed queries caught by the SQL ExpressProfiler.

## Play with ToList()

Using Entity Framework select all **ads** from the database, then invoke ToList(), then filter the categories by **status** "**Published**", then select ad **title**, **category** and **town**, then invoke ToList() and finally **order** the ads by **publish** **date**. Rewrite the same in more optimized way and compare the performance.

Submit as result **both versions of your program**: the slow version and the optimized version. Submit also **screenshots** of the executed queries caught by the SQL ExpressProfiler.

## Select Everything vs. Select Certain Columns

Write a program to compare the execution speed between these two scenarios:

* Select **everything** from the Ads table and print the ad title.
* Select the **ad** **title** from Ads table.

Submit as result **both versions of your program**: the slow version and the optimized version.