CSE3055 Database Systems Web Report

Prepared for: CSE3055 Database Systems Term Project

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Web Project Description

The purpose of this web project is to use our database system. The name of the project is "Request Portal" and the chosen database system technology is MSSQL. For the web part of the project, we used these technologies:

- Microsoft.AspNetCore.App 7.0.1
- Microsoft.NETCore.App 7.0.1
- Microsoft.EntityFrameworkCore.SqlServer 7.0.1
- Microsoft.EntityFrameworkCore.Tools 7.0.1
- Microsoft.VisualStudio.Web.CodeGeneration.Design 7.0.1
- Bootstrap 5.3.0-alpha1

We used ASP.NET Core MVC for UI of the project. It renders UI on the server and uses a Model-View-Controller (MVC) architectural pattern. The MVC pattern separates an app into three main groups of components: Models, Views and Controllers. User requests are routed to a controller. The controller chooses the view to display to the user and provides it with any model data it requires.
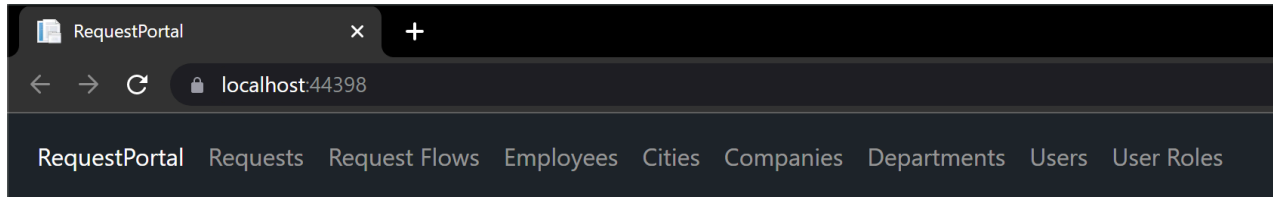
Connecting Database

Since our project is a database-first project, we reverse engineered. Using the connection string, we wrote a script to the package manager console and it created the context and the models automatically. An example of this script:

Scaffold-DbContext "Server=.\Server; Database=RequestPortal; Trusted_Connection=True; Encrypt=False;" Microsoft.EntityFrameworkCore.SqlServer -OutputDir RequestPortalDB

After connecting the database, we created our controllers and views. Since we have our models, we can easily use that models with Entity Framework to manipulate the data.

Pages

There are eight main pages. They can be reached by using the navigation bar at the top of the page. These are Requests, Request Flows, Employees, Cities, Companies, Departments, Users and User Roles.

Navigation Bar

Inside the pages, there are some components like title, buttons and table. In each page, there is a title of the page, there are buttons for create, edit, detail and delete operations, there is a table that shows the data of that table in database.

Requests

Create New

RequestType	CreateDate	Explanation	EmployeeSsn	
1	12/30/2022 5:46:00 PM	Izin ihtiyacim bulunmaktadir.	20	Edit | Details | Delete
2	12/30/2022 5:46:00 PM	Seyahat ihtiyacim bulunmaktadir.	21	Edit | Details | Delete
3	12/30/2022 5:46:00 PM	Avans ihtiyacim bulunmaktadir.	22	Edit | Details | Delete
4	12/30/2022 5:46:00 PM	Egitim talebi ihtiyacim bulunmaktadir.	23	Edit | Details | Delete
5	12/30/2022 5:46:00 PM	Mesai talebi ihtiyacim bulunmaktadir.	24	Edit | Details | Delete

Requests Page

Employees

Create New

FirstName	LastName	PhoneNumber	Mail	City	Company	Department	ManagerSsnNavigation	User	
Özde	Acarkan	905461342341	ozde.acarkan@hotmail.com	1	1	1		1	Edit | Details | Delete
Atahan	Adanir	905465262960	atahan.adanir@hotmail.com	2	2	2		2	Edit | Details | Delete
Bestami	Agiragaç	905463136783	bestami.agiragaç@hotmail.com	3	3	3		3	Edit | Details | Delete
Aykanat	Agiroglu	905462705997	aykanat.agiroglu@hotmail.com	4	4	4		4	Edit | Details | Delete
Sennur	Agnar	905463126649	sennur.agnar@hotmail.com	5	5	5		5	Edit | Details | Delete

Employees Page

Buttons

When we use the buttons, new pages are opened for their purposes. They can be used to create new row for the tables or to edit an existing row. In addition, a row details can be seen by clicking the details button and any row can be deleted by using the delete button in the end of that row. As a result, there are four additional pages for each main page. There are thirty two pages in total. All adding, editing and deleting operations are done in the database that connected to the project.

Create
Request

RequestType

Explanation

EmployeeSsn

Create

Back to List

Create Page

Edit
Request

RequestType

1

CreateDate

12/30/2022 05:46 PM

Explanation

Izin ihtiyacim bulunmaktadir.

EmployeeSsn

20

Save

Back to List

Edit Page

Details
Request

RequestType	1
CreateDate	12/30/2022 5:46:00 PM
Explanation	Izin ihtiyacim bulunmaktadir.
EmployeeSsn	20

Edit | Back to List

Details Page

Delete
Are you sure you want to delete this?
Request

RequestType	1
CreateDate	12/30/2022 5:46:00 PM
Explanation	Izin ihtiyacim bulunmaktadir.
EmployeeSsn	20

Delete | Back to List

Delete Page