



# **HACETTEPE ÜNİVERSİTESİ**

**GMT351 SPATIAL DATA MANAGEMENT**

**FINAL PROJECT**

**SILA GERÇEK 21967503**

**DOĞA GERÇEK 21967497**

**ŞEREF YİĞİT YÜKSEL 2200674004**

## **Structure of the Report**

1. Definiton and Motivation
2. Goals and Objectives
3. Methodology
4. Background
5. Requirement Analysis
6. Preliminary design
7. Project planning and management
8. Developed System
9. Conclusion
10. References

## **Definiton and Motivation**

As students studying at Hacettepe University, one of the main purposes of the data management course, which is to establish the relationship between data and better learn their management, includes a list of the communities in Hacettepe University, organizing events in the communities in detail, and providing information about these events such as time, location and organizer a website was made by us. Our main motive and expectation in this regard is that such a structure would truly be advantageous for students, offer ease, and maybe even give college students a chance to grow in many different areas, including social activities.

## **Goals and Objectives**

Our main objective is to make the project as convenient and accessible as possible within its entire content. Convenience and accessibility are the top priorities for many visitors to these websites, particularly when it comes to projects, communities, and events they wish to participate in or apply for. If a person visits a website and the interface has an untidy or unclean appearance, he will probably leave and attempt another method. As a result, we made an effort to design a practical and functional website with a simple user interface and a solid database with relationships and constraints.

## **Methodology**

We had some requirements while begining the Project. At the backend, PostgreSQL was must be installed and working and furthermore Postman is an API (Application Programming Interface) development platform for testing and modifying APIs however its optional.

We chose to utilize C sharp because visual studio is a tool that supports all widely used languages. We needed visual studio for front end web development.

## University Life

The university component is the easiest way for people to get social and intellectual credentials. It is also where many young people develop their identities, discover their passions, and gravitate toward them. Numerous seminars, symposiums, and technical excursions are planned. Volunteer opportunities are arranged through various businesses or the government. takes part in a variety of science competitions. Students cannot always be informed of everything in a university with so many departments. In comparison to other universities, Hacettepe is a very advanced institution, and it is a sizable institution with a wide range of academic specialties. It not only houses several towns but also a vast array of objects. A student at Hacettepe will undoubtedly discover a group that piques his interest. In conclusion, academia is a distinctive setting for socializing. So, after all, university is a unique place to socialize and getting network.

## Database Management Systems

A database management system (DBMS) is essentially nothing more than a computerized data-keeping system. Users of the system are given facilities to perform several kinds of operations on such a system for either manipulation of the data in the database or the management of the database structure itself. Database Management Systems (DBMSs) are categorized according to their data structures or types.

There are several types of databases that can be used on a mainframe to utilize inverted list, hierarchic, network, or relational. We are going to use relational DBMS at that project. At that point we have to ask ‘What is the relational Database Management System?’

A relational database is a type of database that stores and provides access to data points that are related to one another. Relational databases are based on the relational model, an intuitive, straightforward way of representing data in tables. In a relational database, each row in the table is a record with a unique ID called the key. The columns of the table hold attributes of the data, and each record usually has a value for each attribute, making it easy to establish the relationships among data points.

*Well, what about PostgreSQL?*

The most advanced and widely used open source database management system due to its dependability, scalability, stability, and security is PostgreSQL. Most firms, especially new ones, choose PostgreSQL as one of their go-to, dependable database platforms for backend development.

PostgreSQL is an open-source, enterprise-grade, advanced object-relational database system that supports both relational (SQL) and non-relational (JSON) querying. It leverages and extends the SQL language with additional features that enable it to handle complex data workloads with high efficiency.

## **Web-Based Development**

A web application is an interactive program that runs on a web server and is accessed through a web browser. A web app is built so that the user interface provides data back to the development team that designed it. This data offers insights into customer interests, usage, and preferences that can prove invaluable to product and marketing strategies. The data can also inform optimization and other client-centered aspects of the mobile app or desktop applications.

A big difference between web applications and webpages is that user experience dictates web application design. Traditional web design is based on server-side programmers making decisions about what might enhance usability. In contrast, a web application has an API (Application Programming Interface) that takes in large-scale data from the user side and then funnels that information into automation.

## **Analysis**

It was requested that we create a website with the specifications and features shown above. We required some prerequisites for this. The backend, which serves as the project's backbone, had to be made first. Postgresql was largely installed and operating because we had already conducted table-based studying in our relational database course. We required Visual Studio and C Sharp for the frontend. It was asked of us to establish an organization on this basic club site by entering the names of community's name, founding year, president, academic advisor, and website address with the appropriate community. The task at hand was to use Visual Studio's C sharp functionality to code while building a postgresql database.

- Usability Requirements

After creating the initial prototype, effort should be given to create a structure that can be easily altered if the users find that it is ineffective or unappealing. We have a simple website, thus it passed the usability test. On the other hand, it features a straightforward interface and few options because the Hacettepe University students are the clear target audience.

- Reliability Requirements

For the users of a system it is the reliability of the system as a whole that is meaningful. But already this criterion was not an issue because the website we developed did not request any data that might compromise the security of the user's personal information.

- Performance

A website's performance is measured by such as number of factors, including connection time, DNS lookup time, time to first render, and time to last byte. Because it was a

straightforward community site with few characteristics, our website performed well as well.

- Implementation

An open-to-use website that can do anything in terms of implementation.

- Interoperability

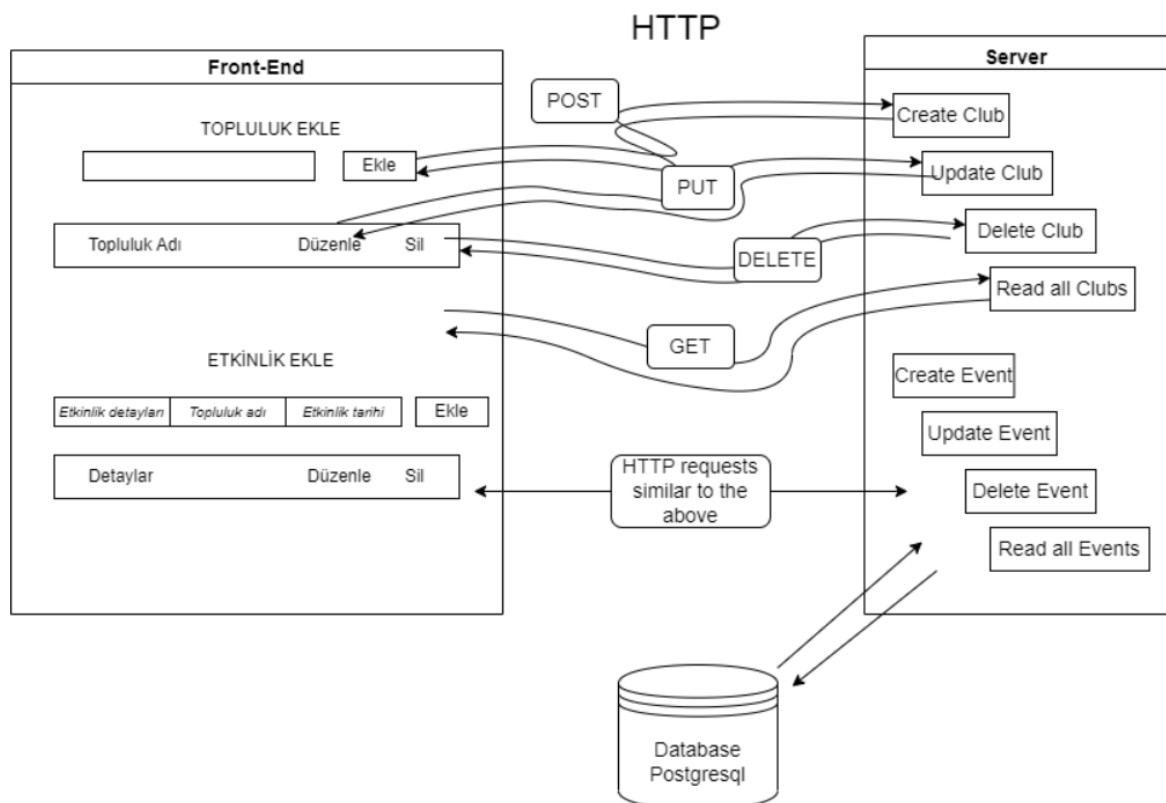
In the sea of non-functional requirements, interoperability is defined as how easily a system can share information and exchange data with other systems and external hardware. We can add, remove and change the data we want. that is, it works with the database.

### Preliminary design

We already had a rough design for our community website. There were 5 different parameters in total. These are the community's name, founding year, president, academic advisor, and website address. The first time you access the website, the title will make you feel safe in your surroundings before you enter the necessary information about the club. then fill in the blanks with the required information.

### Project planning and management

We came together as group friends. By inputting the github URL shared in the system, we entered our user credentials to form our own group. After that, we examined the instruction on website construction and realized what we needed.





Kurumsal	+	<b>Öğrenci Toplulukları</b>
Öğrenci	+	
Hakkında	+	
Duyurular		
<a href="#">Satınalma İlanları</a>		
<a href="#">Etkinlikler</a>		1) ACM Bilişim Topluluğu <b>Kuruluş Yılı</b> : 2012 <b>Topluluk Başkanı</b> : Sefa KARABAŞ <b>Akademik Danışmanı</b> : Dr. Öğr. Üyesi Adnan ÖZSOY <b>Web Adresi</b> : □
<a href="#">Yemek Listesi</a>		2) Aikido Topluluğu <b>Kuruluş Yılı</b> : 1998 <b>Topluluk Başkanı</b> : Dilan AKYOL <b>Akademik Danışmanı</b> : Doç.Dr. Murat Timur BUDAK <b>Web Adresi</b> : □
<a href="#">Vegan ve Kumanya Menüsü</a>		3) Aile ve Tüketici Topluluğu <b>Kuruluş Yılı</b> : 2008 <b>Topluluk Başkanı</b> : Pınar AYGÜN <b>Akademik Danışmanı</b> : Doç. Dr. M. Serhat ÖZTÜRK / Arş. Gör. Birgül ÇİÇEK <b>Web Adresi</b> : □

Otherwise, we had research for Hacettepe University's clubs on the platform which Hacettepe University, Department of Health, Culture and Sports. This figure provided us with a reference about what parameters we need.

Then we started coding in C# on our visual studio screen by following these steps:

- Gather Requirements
- Structure Web Design and Architecture
- Build the Website
- Testing and Deployment
- Support and Maintenance

In this process, c sharp tutorials, which we will share in the future references section, helped us. We received assistance for this from the visualsutido.com, stackoverflow tutorial for c# programming with visual studio.

After receiving the aforementioned backend and frontend specifications, we generated our code utilizing our coding skills and based on the github coding.

## Developed System

<https://www.youtube.com/watch?v=3t0rU5Yo4nM&list=PLi1BmHvgBkxIYweLR52cRJnit4AEEugn4>

<https://www.youtube.com/watch?v=i1TSR37mDgE>

During the project process, we benefited from these training videos and the tutorials that we will share below.

```
1 @model Topluluk.Models.OgrenciTopluluklari
2
3 @{
4     ViewData["Title"] = "Create";
5 }
6
7 <h4>Öğrenci Toplulukları</h4>
8 <hr />
9 <div class="row">
10     <div class="col-md-4">
11         <form asp-action="Create">
12             <div asp-validation-summary="ModelOnly" class="text-danger"></div>
13             <div class="form-group">
14                 <label asp-for="Isim" class="control-label"></label>
15                 <input asp-for="Isim" class="form-control" />
16                 <span asp-validation-for="Isim" class="text-danger"></span>
17             </div>
18             <div class="form-group">
19                 <label asp-for="KurulusYili" class="control-label"></label>
20                 <input asp-for="KurulusYili" class="form-control" />
21                 <span asp-validation-for="KurulusYili" class="text-danger"></span>
22             </div>
23             <div class="form-group">
24                 <label asp-for="ToplulukBaskani" class="control-label"></label>
25                 <input asp-for="ToplulukBaskani" class="form-control" />
26                 <span asp-validation-for="ToplulukBaskani" class="text-danger"></span>
27             </div>
28             <div class="form-group">
29                 <label asp-for="AkademikDanismani" class="control-label"></label>
30                 <input asp-for="AkademikDanismani" class="form-control" />
31                 <span asp-validation-for="AkademikDanismani" class="text-danger"></span>
32             </div>
33         </form>
34     </div>
35 </div>
36
37 <div>
38     <a asp-action="Index">Listeye Dön</a>
39 </div>
40
41 @section Scripts {
42     @{await Html.RenderPartialAsync("_ValidationScriptsPartial");}
43 }
44
```

```
22 </div>
23 <div class="form-group">
24     <label asp-for="ToplulukBaskani" class="control-label"></label>
25     <input asp-for="ToplulukBaskani" class="form-control" />
26     <span asp-validation-for="ToplulukBaskani" class="text-danger"></span>
27 </div>
28 <div class="form-group">
29     <label asp-for="AkademikDanismani" class="control-label"></label>
30     <input asp-for="AkademikDanismani" class="form-control" />
31     <span asp-validation-for="AkademikDanismani" class="text-danger"></span>
32 </div>
33 <div class="form-group">
34     <label asp-for="WebAdresi" class="control-label"></label>
35     <input asp-for="WebAdresi" class="form-control" />
36     <span asp-validation-for="WebAdresi" class="text-danger"></span>
37 </div>
38 <div class="form-group">
39     <input type="submit" value="Create" class="btn btn-primary" />
40 </div>
41 </form>
42 </div>
43 </div>
44
45 <div>
46     <a asp-action="Index">Listeye Dön</a>
47 </div>
48
49 @section Scripts {
50     @{await Html.RenderPartialAsync("_ValidationScriptsPartial");}
51 }
52
```



```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk
Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml _Layout.cshtml Program.cs OgrrenciToplulu...riController.cs OgrrenciTopluluklan.cs
1 @model Topluluk.Models.OgrrenciTopluluklari
2
3 @{
4     ViewData["Title"] = "Delete";
5 }
6
7 <h3>Bunu silmek istediğinizden emin misiniz?</h3>
8 <div>
9     <h4>Öğrenci Toplulukları</h4>
10    <hr />
11    <dl class="row">
12        <dt class="col-sm-2">
13            @Html.DisplayNameFor(model => model.Isim)
14        </dt>
15        <dd class="col-sm-10">
16            @Html.DisplayFor(model => model.Isim)
17        </dd>
18        <dt class="col-sm-2">
19            @Html.DisplayNameFor(model => model.KurulusYili)
20        </dt>
21        <dd class="col-sm-10">
22            @Html.DisplayFor(model => model.KurulusYili)
23        </dd>
24        <dt class="col-sm-2">
25            @Html.DisplayNameFor(model => model.ToplulukBaskani)
26        </dt>
27        <dd class="col-sm-10">
28            @Html.DisplayFor(model => model.ToplulukBaskani)
29        </dd>
30        <dt class="col-sm-2">
31            @Html.DisplayNameFor(model => model.AkademikDanismani)
32        </dt>
33        <dd class="col-sm-10">
34            @Html.DisplayFor(model => model.AkademikDanismani)
35        </dd>
36    </dl>
37
38    <form asp-action="Delete">
39        <input type="hidden" asp-for="Id" />
40        <input type="submit" value="Delete" class="btn btn-danger" /> |
41        <a asp-action="Index">Listeye Dön</a>
42    </form>
43 </div>
```

```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk
Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml _Layout.cshtml Program.cs OgrrenciToplulu...riController.cs OgrrenciTopluluklan.cs
19 @Html.DisplayNameFor(model => model.KurulusYili)
20 </dt>
21 <dd class="col-sm-10">
22     @Html.DisplayFor(model => model.KurulusYili)
23 </dd>
24 <dt class="col-sm-2">
25     @Html.DisplayNameFor(model => model.ToplulukBaskani)
26 </dt>
27 <dd class="col-sm-10">
28     @Html.DisplayFor(model => model.ToplulukBaskani)
29 </dd>
30 <dt class="col-sm-2">
31     @Html.DisplayNameFor(model => model.AkademikDanismani)
32 </dt>
33 <dd class="col-sm-10">
34     @Html.DisplayFor(model => model.AkademikDanismani)
35 </dd>
36 <dt class="col-sm-2">
37     @Html.DisplayNameFor(model => model.WebAdresi)
38 </dt>
39 <dd class="col-sm-10">
40     @Html.DisplayFor(model => model.WebAdresi)
41 </dd>
42 </dl>
43
44 <form asp-action="Delete">
45     <input type="hidden" asp-for="Id" />
46     <input type="submit" value="Delete" class="btn btn-danger" /> |
47     <a asp-action="Index">Listeye Dön</a>
48 </form>
49 </div>
50
```



```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk
Create.cshtml Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml _Layout.cshtml Program.cs OgrenciToplulu...riController.cs OgrenciTopluluklari.cs
1 @model Topluluk.Models.OgrenciTopluluklari
2
3 @{
4     ViewData["Title"] = "Details";
5 }
6
7 <div>
8     <h4>OgrenciTopluluklari</h4>
9     <hr />
10    <dl class="row">
11        <dt class="col-sm-2">
12            @Html.DisplayNameFor(model => model.Isim)
13        </dt>
14        <dd class="col-sm-10">
15            @Html.DisplayFor(model => model.Isim)
16        </dd>
17        <dt class="col-sm-2">
18            @Html.DisplayNameFor(model => model.KurulusYili)
19        </dt>
20        <dd class="col-sm-10">
21            @Html.DisplayFor(model => model.KurulusYili)
22        </dd>
23        <dt class="col-sm-2">
24            @Html.DisplayNameFor(model => model.ToplulukBaskani)
25        </dt>
26        <dd class="col-sm-10">
27            @Html.DisplayFor(model => model.ToplulukBaskani)
28        </dd>
29        <dt class="col-sm-2">
30            @Html.DisplayNameFor(model => model.AkademikDanismani)
31        </dt>
32        <dd class="col-sm-10">
33            @Html.DisplayFor(model => model.AkademikDanismani)
34        </dd>
35    </dl>
36    <div>
37        <a asp-action="Edit" asp-route-id="@Model?.Id">Düzenle</a> |
38        <a asp-action="Index">Listeye Dön</a>
39    </div>
40 </div>
```

```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk
Create.cshtml Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml _Layout.cshtml Program.cs OgrenciToplulu...riController.cs OgrenciTopluluklari.cs
16 </dd>
17 <dt class="col-sm-2">
18     @Html.DisplayNameFor(model => model.KurulusYili)
19 </dt>
20 <dd class="col-sm-10">
21     @Html.DisplayFor(model => model.KurulusYili)
22 </dd>
23 <dt class="col-sm-2">
24     @Html.DisplayNameFor(model => model.ToplulukBaskani)
25 </dt>
26 <dd class="col-sm-10">
27     @Html.DisplayFor(model => model.ToplulukBaskani)
28 </dd>
29 <dt class="col-sm-2">
30     @Html.DisplayNameFor(model => model.AkademikDanismani)
31 </dt>
32 <dd class="col-sm-10">
33     @Html.DisplayFor(model => model.AkademikDanismani)
34 </dd>
35 <dt class="col-sm-2">
36     @Html.DisplayNameFor(model => model.WebAdresi)
37 </dt>
38 <dd class="col-sm-10">
39     @Html.DisplayFor(model => model.WebAdresi)
40 </dd>
41 </dl>
42 </div>
43 <div>
44     <a asp-action="Edit" asp-route-id="@Model?.Id">Düzenle</a> |
45     <a asp-action="Index">Listeye Dön</a>
46 </div>
47
```

```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk Topluluk Web
Create.cshtml Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml _Layout.cshtml Program.cs OgrenciTopluluk...riController.cs OgrenciTopluluklari.cs
1 @model Topluluk.Models.OgrenciTopluluklari
2
3 @{
4     ViewData["Title"] = "Edit";
5 }
6
7 <h4>OgrenciTopluluklari</h4>
8 <hr />
9 <div class="row">
10     <div class="col-md-4">
11         <form asp-action="Edit">
12             <div asp-validation-summary="ModelOnly" class="text-danger"></div>
13             <input type="hidden" asp-for="Id" />
14             <div class="form-group">
15                 <label asp-for="Isim" class="control-label"></label>
16                 <input asp-for="Isim" class="form-control" />
17                 <span asp-validation-for="Isim" class="text-danger"></span>
18             </div>
19             <div class="form-group">
20                 <label asp-for="KurulusYili" class="control-label"></label>
21                 <input asp-for="KurulusYili" class="form-control" />
22                 <span asp-validation-for="KurulusYili" class="text-danger"></span>
23             </div>
24             <div class="form-group">
25                 <label asp-for="ToplulukBaskani" class="control-label"></label>
26                 <input asp-for="ToplulukBaskani" class="form-control" />
27                 <span asp-validation-for="ToplulukBaskani" class="text-danger"></span>
28             </div>
29             <div class="form-group">
30                 <label asp-for="AkademikDanismani" class="control-label"></label>
31                 <input asp-for="AkademikDanismani" class="form-control" />
32                 <span asp-validation-for="AkademikDanismani" class="text-danger"></span>
33             </div>
34         </form>
35     </div>
36 </div>
100% No issues found Ln: 1 Ch: 43
```

```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk Topluluk Web
Create.cshtml Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml _Layout.cshtml Program.cs OgrenciTopluluk...riController.cs OgrenciTopluluklari.cs
22 <span asp-validation-for="KurulusYili" class="text-danger"></span>
23 </div>
24 <div class="form-group">
25     <label asp-for="ToplulukBaskani" class="control-label"></label>
26     <input asp-for="ToplulukBaskani" class="form-control" />
27     <span asp-validation-for="ToplulukBaskani" class="text-danger"></span>
28 </div>
29 <div class="form-group">
30     <label asp-for="AkademikDanismani" class="control-label"></label>
31     <input asp-for="AkademikDanismani" class="form-control" />
32     <span asp-validation-for="AkademikDanismani" class="text-danger"></span>
33 </div>
34 <div class="form-group">
35     <label asp-for="WebAdresi" class="control-label"></label>
36     <input asp-for="WebAdresi" class="form-control" />
37     <span asp-validation-for="WebAdresi" class="text-danger"></span>
38 </div>
39 <div class="form-group">
40     <input type="submit" value="Save" class="btn btn-primary" />
41 </div>
42 </form>
43 </div>
44 </div>
45
46 <div>
47     <a asp-action="Index">Listeye Dön</a>
48 </div>
49
50 @section Scripts {
51     @await Html.RenderPartialAsync("_ValidationScriptsPartial");
52 }
53
Package Manager Console Output
```

```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk
Create.cshtml Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml Layout.cshtml Program.cs ÖğrenciTopluluk...riController.cs ÖğrenciTopluluklari.cs
1 @model IEnumerable<Topluluk.Models.ÖğrenciTopluluklari>
2
3 @{
4     ViewData["Title"] = "Öğrenci Toplulukları";
5 }
6
7 <p>
8     <a asp-action="Create">Ekle</a>
9 </p>
10 <table class="table">
11 <thead>
12 <tr>
13 <th>
14     @Html.DisplayNameFor(model => model.Isim)
15 </th>
16 <th>
17     @Html.DisplayNameFor(model => model.KurulusYili)
18 </th>
19 <th>
20     @Html.DisplayNameFor(model => model.ToplulukBaskani)
21 </th>
22 <th>
23     @Html.DisplayNameFor(model => model.AkademikDanismani)
24 </th>
25 <th>
26     @Html.DisplayNameFor(model => model.WebAdresi)
27 </th>
28 </tr>
29 </thead>
30 <tbody>
31 @foreach (var item in Model)
32 {
33     <tr>
34         <td>@Html.DisplayFor(modelItem => item.Isim)</td>
35         <td>@Html.DisplayFor(modelItem => item.KurulusYili)</td>
36         <td>@Html.DisplayFor(modelItem => item.ToplulukBaskani)</td>
37         <td>@Html.DisplayFor(modelItem => item.AkademikDanismani)</td>
38         <td>@Html.DisplayFor(modelItem => item.WebAdresi)</td>
39         <td>
40             <a asp-action="Edit" asp-route-id="@item.Id">Düzenle</a> |
41             <a asp-action="Details" asp-route-id="@item.Id">Detaylar</a> |
42             <a asp-action="Delete" asp-route-id="@item.Id">Sil</a>
43         </td>
44     </tr>
45 }
46 </tbody>
47 </table>
```

```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk
Create.cshtml Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml Layout.cshtml Program.cs ÖğrenciTopluluk...riController.cs ÖğrenciTopluluklari.cs
28 <th></th>
29 </tr>
30 </thead>
31 <tbody>
32 @foreach (var item in Model)
33 {
34     <tr>
35         <td>
36             @Html.DisplayFor(modelItem => item.Isim)
37         </td>
38         <td>
39             @Html.DisplayFor(modelItem => item.KurulusYili)
40         </td>
41         <td>
42             @Html.DisplayFor(modelItem => item.ToplulukBaskani)
43         </td>
44         <td>
45             @Html.DisplayFor(modelItem => item.AkademikDanismani)
46         </td>
47         <td>
48             @Html.DisplayFor(modelItem => item.WebAdresi)
49         </td>
50         <td>
51             <a asp-action="Edit" asp-route-id="@item.Id">Düzenle</a> |
52             <a asp-action="Details" asp-route-id="@item.Id">Detaylar</a> |
53             <a asp-action="Delete" asp-route-id="@item.Id">Sil</a>
54         </td>
55     </tr>
56 }
57 </tbody>
58 </table>
59
```

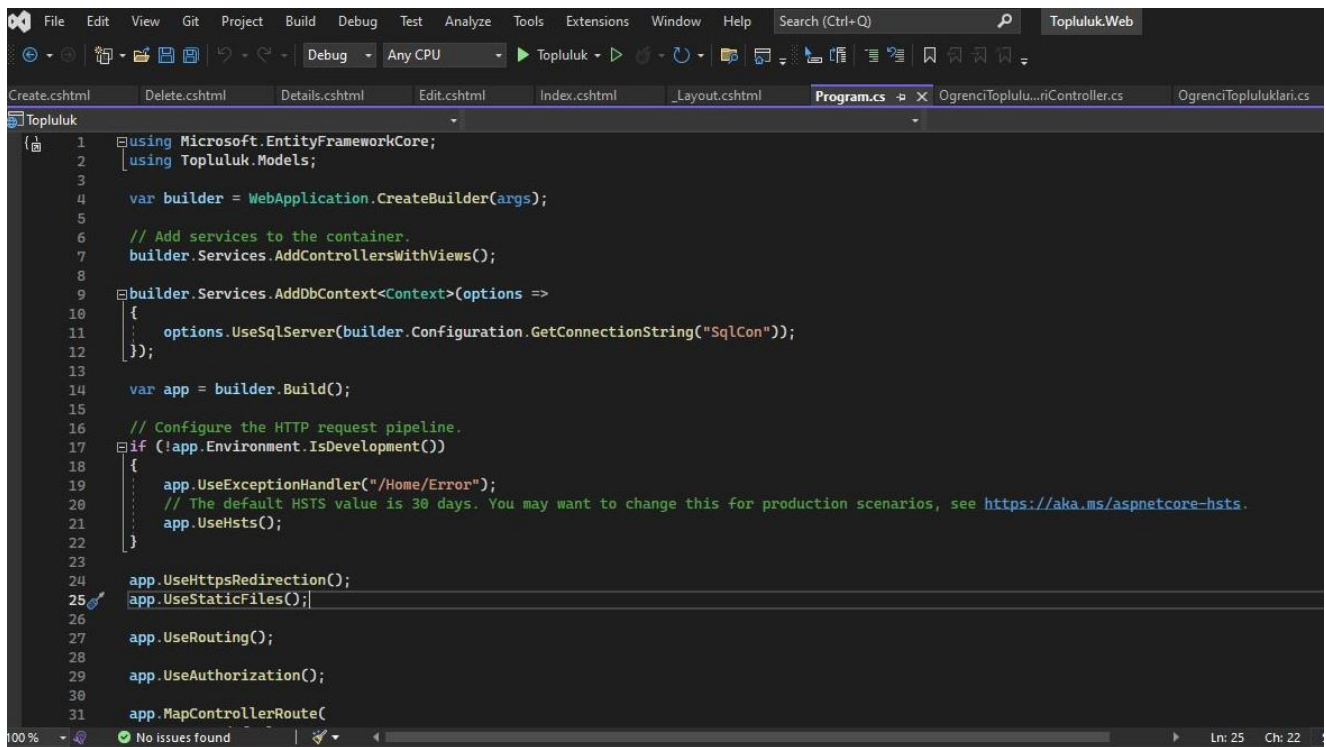


```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk Topluluk.OğrenciTopluluklari
Create.cshtml Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml Layout.cshtml Program.cs ÖğrenciTopluluklariController.cs ÖğrenciTopluluklari.cs

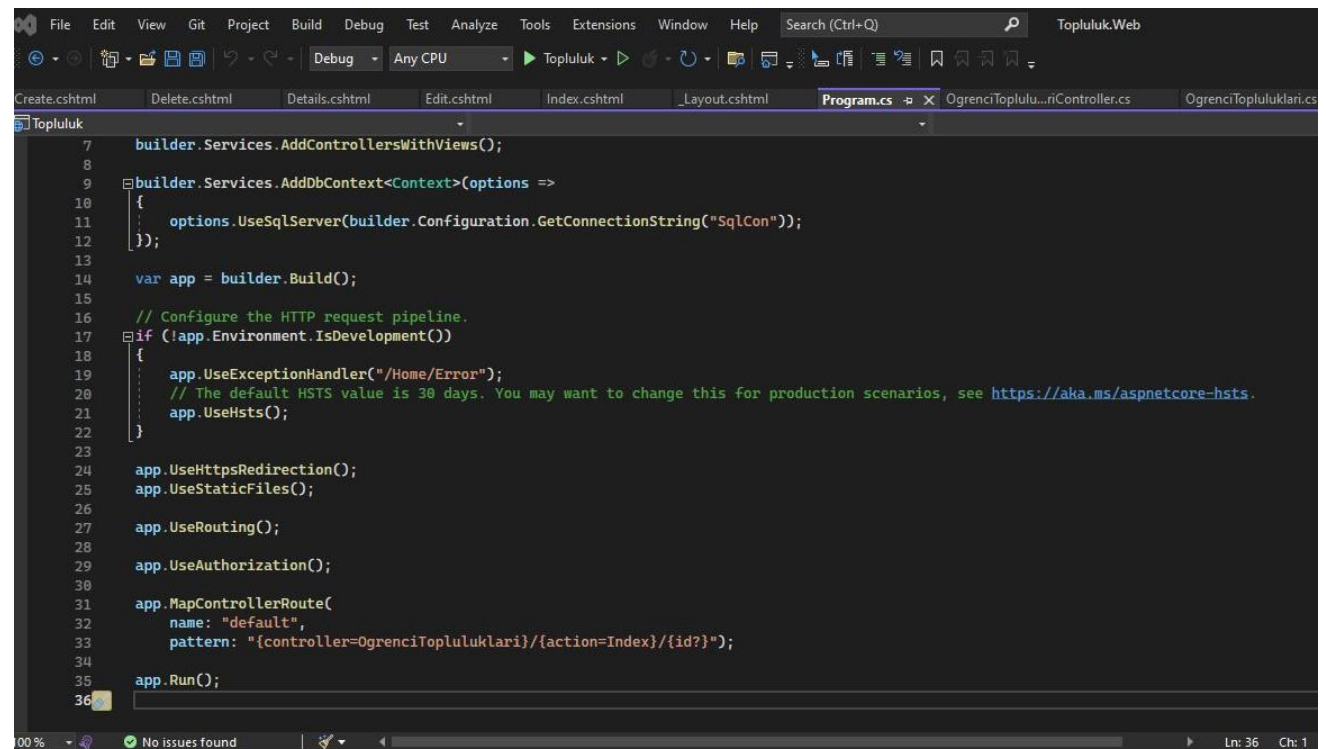
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <meta charset="utf-8" />
5 <meta name="viewport" content="width=device-width, initial-scale=1.0" />
6 <title>@ViewData["Title"] - Hacettepe</title>
7 <link rel="stylesheet" href="~/lib/bootstrap/dist/css/bootstrap.min.css" />
8 <link rel="stylesheet" href="~/css/site.css" asp-append-version="true" />
9 <link rel="stylesheet" href="~/Topluluk.styles.css" asp-append-version="true" />
10 </head>
11 <body>
12 <header>
13 <nav class="navbar navbar-light bg-white border-bottom box-shadow mb-3">
14 <div class="container-fluid justify-content-center">
15 <a class="navbar-brand" asp-area="" asp-controller="OğrenciTopluluklari" asp-action="Index">
17 </nav>
18 </header>
19 <div class="container-fluid px-5">
20 <main role="main" class="pb-3">
21 @RenderBody()
22 </main>
23 </div>
24
25 <footer class="border-top footer text-muted">
26 <div class="container">
27 &copy; 2022 - Hacettepe Öğrenci Topluluklari - Sıla GERÇEK, Doğa GERÇEK, Şeref Yiğit YÜKSEL
28 </div>
29 </footer>
30 <script src="~/lib/jquery/dist/jquery.min.js"></script>
31 <script src="~/lib/bootstrap/dist/js/bootstrap.bundle.min.js"></script>
32 <script src="~/js/site.js" asp-append-version="true"></script>
33 @await RenderSectionAsync("Scripts", required: false)
34 </body>
35 </html>
```

```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk Topluluk.OğrenciTopluluklari
Create.cshtml Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml Layout.cshtml Program.cs ÖğrenciTopluluklariController.cs ÖğrenciTopluluklari.cs

5 <meta name="viewport" content="width=device-width, initial-scale=1.0" />
6 <title>@ViewData["Title"] - Hacettepe</title>
7 <link rel="stylesheet" href="~/lib/bootstrap/dist/css/bootstrap.min.css" />
8 <link rel="stylesheet" href="~/css/site.css" asp-append-version="true" />
9 <link rel="stylesheet" href="~/Topluluk.styles.css" asp-append-version="true" />
10 </head>
11 <body>
12 <header>
13 <nav class="navbar navbar-light bg-white border-bottom box-shadow mb-3">
14 <div class="container-fluid justify-content-center">
15 <a class="navbar-brand" asp-area="" asp-controller="OğrenciTopluluklari" asp-action="Index">
17 </nav>
18 </header>
19 <div class="container-fluid px-5">
20 <main role="main" class="pb-3">
21 @RenderBody()
22 </main>
23 </div>
24
25 <footer class="border-top footer text-muted">
26 <div class="container">
27 &copy; 2022 - Hacettepe Öğrenci Topluluklari - Sıla GERÇEK, Doğa GERÇEK, Şeref Yiğit YÜKSEL
28 </div>
29 </footer>
30 <script src="~/lib/jquery/dist/jquery.min.js"></script>
31 <script src="~/lib/bootstrap/dist/js/bootstrap.bundle.min.js"></script>
32 <script src="~/js/site.js" asp-append-version="true"></script>
33 @await RenderSectionAsync("Scripts", required: false)
34 </body>
35 </html>
36
```



```
1 using Microsoft.EntityFrameworkCore;
2 using Topluluk.Models;
3
4 var builder = WebApplication.CreateBuilder(args);
5
6 // Add services to the container.
7 builder.Services.AddControllersWithViews();
8
9 builder.Services.AddDbContext<Context>(options =>
10 {
11     options.UseSqlServer(builder.Configuration.GetConnectionString("SqlCon"));
12 });
13
14 var app = builder.Build();
15
16 // Configure the HTTP request pipeline.
17 if (!app.Environment.IsDevelopment())
18 {
19     app.UseExceptionHandler("/Home/Error");
20     // The default HSTS value is 30 days. You may want to change this for production scenarios, see https://aka.ms/aspnetcore-hsts.
21     app.UseHsts();
22 }
23
24 app.UseHttpsRedirection();
25 app.UseStaticFiles();
26
27 app.UseRouting();
28
29 app.UseAuthorization();
30
31 app.MapControllerRoute(
```

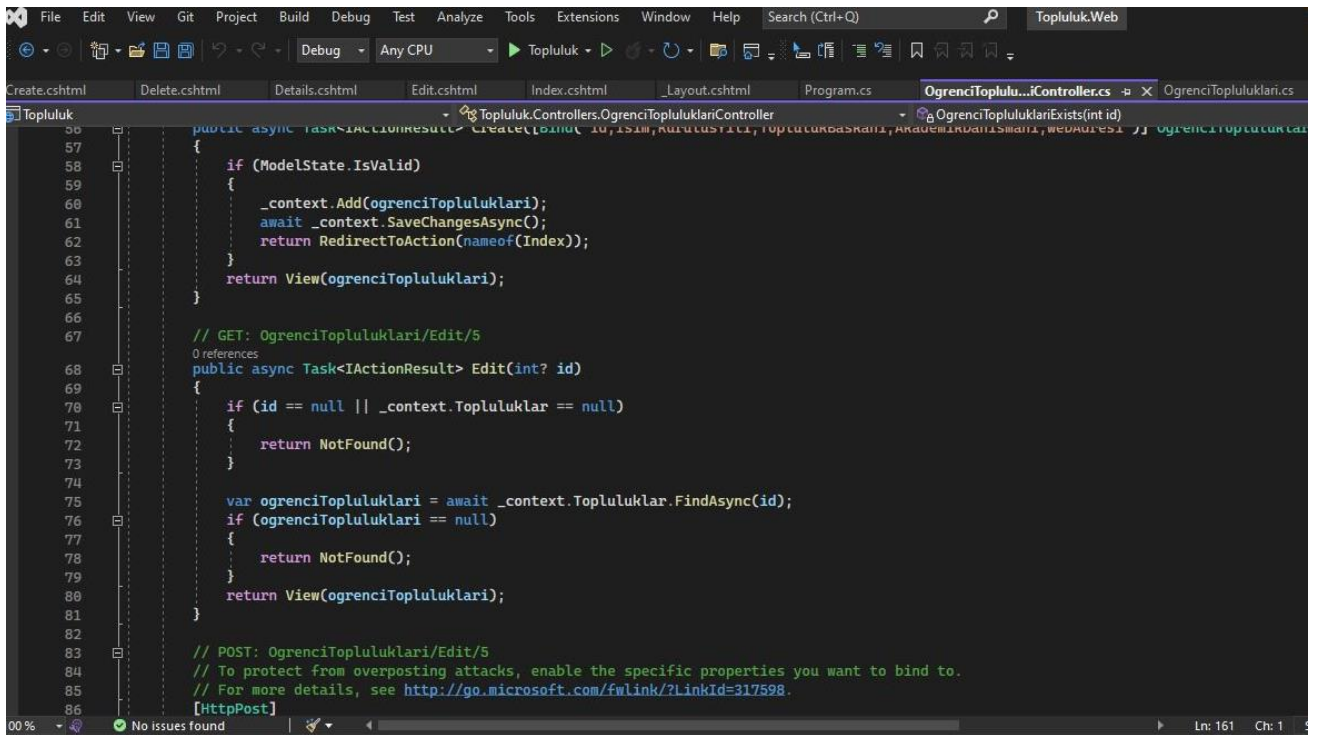


```
7 builder.Services.AddControllersWithViews();
8
9 builder.Services.AddDbContext<Context>(options =>
10 {
11     options.UseSqlServer(builder.Configuration.GetConnectionString("SqlCon"));
12 });
13
14 var app = builder.Build();
15
16 // Configure the HTTP request pipeline.
17 if (!app.Environment.IsDevelopment())
18 {
19     app.UseExceptionHandler("/Home/Error");
20     // The default HSTS value is 30 days. You may want to change this for production scenarios, see https://aka.ms/aspnetcore-hsts.
21     app.UseHsts();
22 }
23
24 app.UseHttpsRedirection();
25 app.UseStaticFiles();
26
27 app.UseRouting();
28
29 app.UseAuthorization();
30
31 app.MapControllerRoute(
32     name: "default",
33     pattern: "{controller=OgrenciTopluluklari}/{action=Index}/{id?}");
34
35 app.Run();
36
```

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Threading.Tasks;
5 using Microsoft.AspNetCore.Mvc;
6 using Microsoft.AspNetCore.Mvc.Rendering;
7 using Microsoft.EntityFrameworkCore;
8 using Topluluk.Models;
9
10 namespace Topluluk.Controllers
11 {
12     1 reference
13     public class OğrenciTopluluklariController : Controller
14     {
15         private readonly Context _context;
16
17         0 references
18         public OğrenciTopluluklariController(Context context)
19         {
20             _context = context;
21         }
22
23         // GET: OğrenciTopluluklari
24         3 references
25         public async Task<IActionResult> Index()
26         {
27             return View(await _context.Topluluklar.ToListAsync());
28         }
29
30         // GET: OğrenciTopluluklari/Details/5
31         0 references
32         public async Task<IActionResult> Details(int? id)
```

```
33         public async Task<IActionResult> Details(int? id)
34         {
35             if (id == null || _context.Topluluklar == null)
36             {
37                 return NotFound();
38             }
39
40             var oğrenciTopluluklari = await _context.Topluluklar
41                 .FirstOrDefaultAsync(m => m.Id == id);
42             if (oğrenciTopluluklari == null)
43             {
44                 return NotFound();
45             }
46
47             return View(oğrenciTopluluklari);
48         }
49
50         // GET: OğrenciTopluluklari/Create
51         0 references
52         public IActionResult Create()
53         {
54             return View();
55         }
56
57         // POST: OğrenciTopluluklari/Create
58         // To protect from overposting attacks, enable the specific properties you want to bind to.
59         // For more details, see http://go.microsoft.com/fwlink/?linkid=317598.
60         [HttpPost]
61         [ValidateAntiForgeryToken]
62         public async Task<IActionResult> Create([Bind("Id,Isim,KurulusYili,ToplulukBaskani,AkademikDanismani,WebAdresi")] OğrenciTopluluklar
```





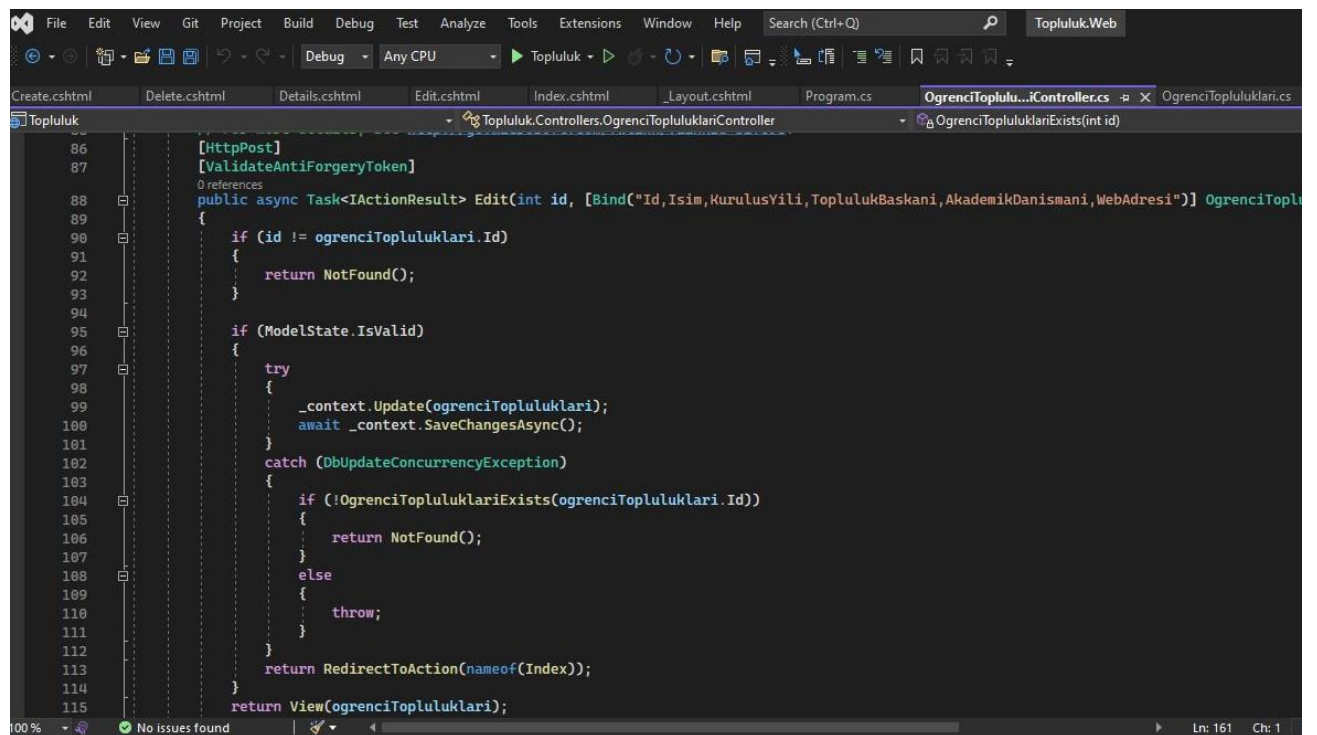
```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk
Create.cshtml Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml _Layout.cshtml Program.cs OgresciTopluluklariController.cs OgresciTopluluklari.cs
Topluluk
    Topluluk.Controllers.OgresciTopluluklariController
        OgresciTopluluklariExists(int id)
        public async Task<ActionResult> Create([Bind("Id,Isim,KurulusYili,ToplulukBaskani,AkademikDanismani,WebAdresi")] OgresciTopluluklari ogresciTopluluklari)
        {
            if (ModelState.IsValid)
            {
                _context.Add(ogresciTopluluklari);
                await _context.SaveChangesAsync();
                return RedirectToAction(nameof(Index));
            }
            return View(ogresciTopluluklari);
        }

        // GET: OgresciTopluluklari/Edit/5
        public async Task<ActionResult> Edit(int? id)
        {
            if (id == null || _context.Topluluklar == null)
            {
                return NotFound();
            }

            var ogresciTopluluklari = await _context.Topluluklar.FindAsync(id);
            if (ogresciTopluluklari == null)
            {
                return NotFound();
            }
            return View(ogresciTopluluklari);
        }

        // POST: OgresciTopluluklari/Edit/5
        // To protect from overposting attacks, enable the specific properties you want to bind to.
        // For more details, see http://go.microsoft.com/fwlink/?LinkId=317598.
        [HttpPost]
        public async Task<ActionResult> Edit(int id, [Bind("Id,Isim,KurulusYili,ToplulukBaskani,AkademikDanismani,WebAdresi")] OgresciTopluluklari ogresciTopluluklari)
        {
            if (id != ogresciTopluluklari.Id)
            {
                return NotFound();
            }

            if (ModelState.IsValid)
            {
                try
                {
                    _context.Update(ogresciTopluluklari);
                    await _context.SaveChangesAsync();
                }
                catch (DbUpdateConcurrencyException)
                {
                    if (!OgresciTopluluklariExists(ogresciTopluluklari.Id))
                    {
                        return NotFound();
                    }
                    else
                    {
                        throw;
                    }
                }
                return RedirectToAction(nameof(Index));
            }
            return View(ogresciTopluluklari);
        }
    }
}
00% No issues found Ln: 161 Ch: 1
```



```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk
Create.cshtml Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml _Layout.cshtml Program.cs OgresciTopluluklariController.cs OgresciTopluluklari.cs
Topluluk
    Topluluk.Controllers.OgresciTopluluklariController
        OgresciTopluluklariExists(int id)
        public async Task<ActionResult> Create([Bind("Id,Isim,KurulusYili,ToplulukBaskani,AkademikDanismani,WebAdresi")] OgresciTopluluklari ogresciTopluluklari)
        {
            if (ModelState.IsValid)
            {
                _context.Add(ogresciTopluluklari);
                await _context.SaveChangesAsync();
                return RedirectToAction(nameof(Index));
            }
            return View(ogresciTopluluklari);
        }

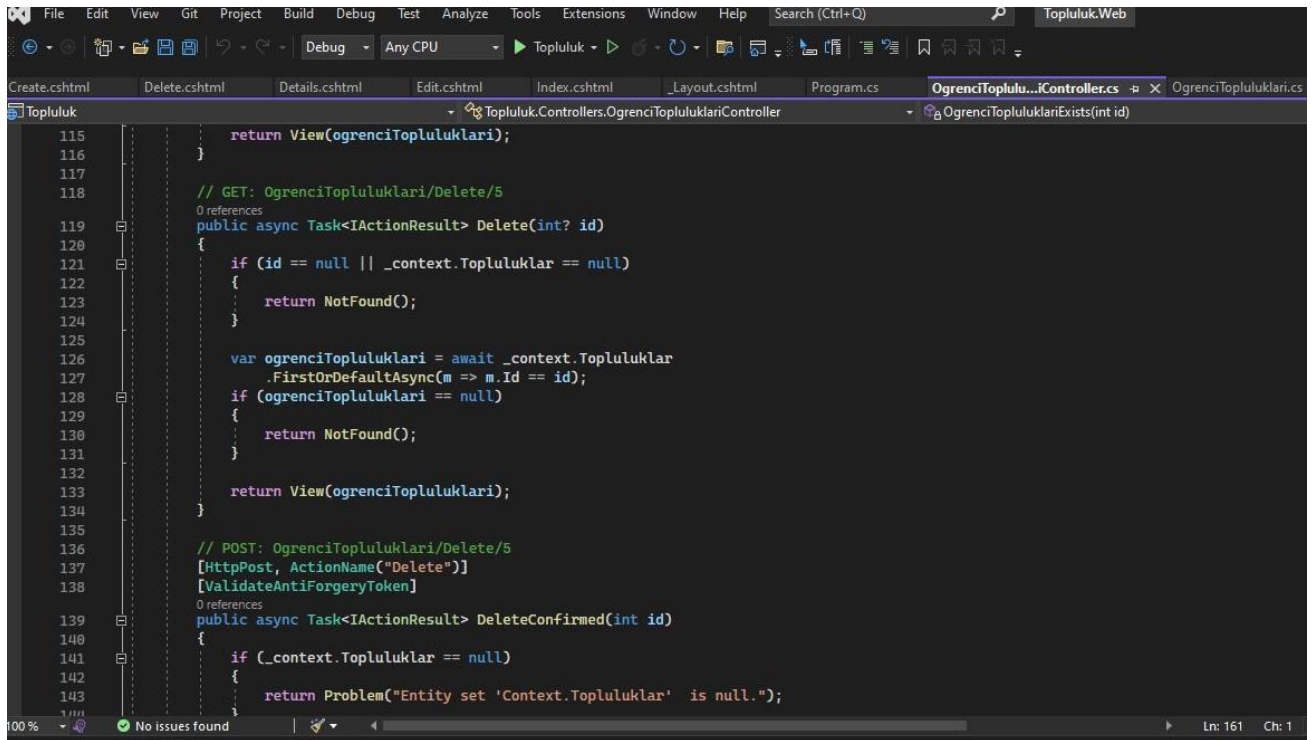
        // GET: OgresciTopluluklari/Edit/5
        public async Task<ActionResult> Edit(int? id)
        {
            if (id == null || _context.Topluluklar == null)
            {
                return NotFound();
            }

            var ogresciTopluluklari = await _context.Topluluklar.FindAsync(id);
            if (ogresciTopluluklari == null)
            {
                return NotFound();
            }
            return View(ogresciTopluluklari);
        }

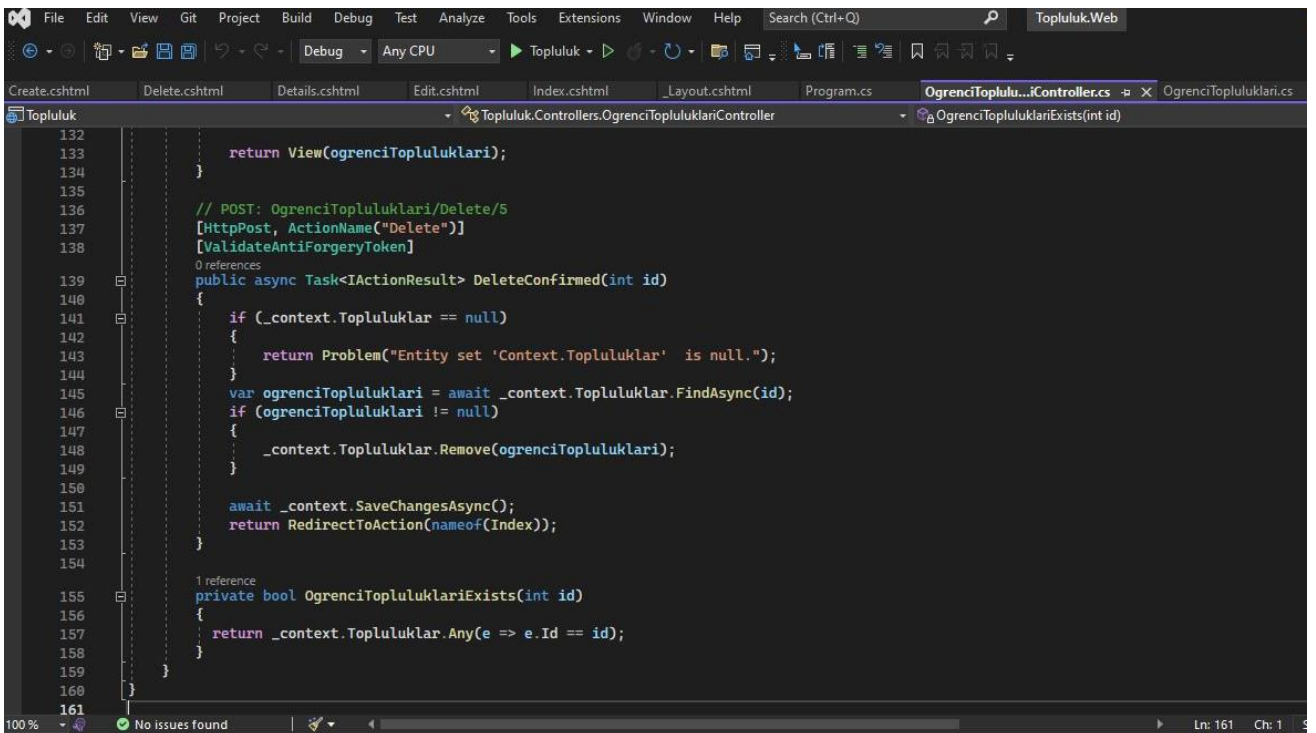
        // POST: OgresciTopluluklari/Edit/5
        // To protect from overposting attacks, enable the specific properties you want to bind to.
        // For more details, see http://go.microsoft.com/fwlink/?LinkId=317598.
        [HttpPost]
        [ValidateAntiForgeryToken]
        public async Task<ActionResult> Edit(int id, [Bind("Id,Isim,KurulusYili,ToplulukBaskani,AkademikDanismani,WebAdresi")] OgresciTopluluklari ogresciTopluluklari)
        {
            if (id != ogresciTopluluklari.Id)
            {
                return NotFound();
            }

            if (ModelState.IsValid)
            {
                try
                {
                    _context.Update(ogresciTopluluklari);
                    await _context.SaveChangesAsync();
                }
                catch (DbUpdateConcurrencyException)
                {
                    if (!OgresciTopluluklariExists(ogresciTopluluklari.Id))
                    {
                        return NotFound();
                    }
                    else
                    {
                        throw;
                    }
                }
                return RedirectToAction(nameof(Index));
            }
            return View(ogresciTopluluklari);
        }
    }
}
100% No issues found Ln: 161 Ch: 1
```





```
115         return View(ogrenciTopluluklari);
116     }
117
118     // GET: OgresciTopluluklari/Delete/5
119     public async Task<IActionResult> Delete(int? id)
120     {
121         if (id == null || _context.Topluluklar == null)
122         {
123             return NotFound();
124         }
125
126         var ogrenciTopluluklari = await _context.Topluluklar
127             .FirstOrDefaultAsync(m => m.Id == id);
128         if (ogrenciTopluluklari == null)
129         {
130             return NotFound();
131         }
132
133         return View(ogrenciTopluluklari);
134     }
135
136     // POST: OgresciTopluluklari/Delete/5
137     [HttpPost, ActionName("Delete")]
138     [ValidateAntiForgeryToken]
139     public async Task<IActionResult> DeleteConfirmed(int id)
140     {
141         if (_context.Topluluklar == null)
142         {
143             return Problem("Entity set 'Context.Topluluklar' is null.");
144         }
145     }
```



```
139     public async Task<IActionResult> DeleteConfirmed(int id)
140     {
141         if (_context.Topluluklar == null)
142         {
143             return Problem("Entity set 'Context.Topluluklar' is null.");
144         }
145         var ogrenciTopluluklari = await _context.Topluluklar.FindAsync(id);
146         if (ogrenciTopluluklari != null)
147         {
148             _context.Topluluklar.Remove(ogrenciTopluluklari);
149         }
150
151         await _context.SaveChangesAsync();
152         return RedirectToAction(nameof(Index));
153     }
154
155     private bool OgresciTopluluklariExists(int id)
156     {
157         return _context.Topluluklar.Any(e => e.Id == id);
158     }
159
160 }
```

```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Topluluk.Web
Debug Any CPU Topluluk Topluluk WebAdresi
Create.cshtml Delete.cshtml Details.cshtml Edit.cshtml Index.cshtml _Layout.cshtml Program.cs OgrenciToplulu...riController.cs OgrenciTopluluklari.cs
Topluluk
namespace Topluluk.Models
{
    18 references
    public class OgrenciTopluluklari
    {
        11 references
        public int Id { get; set; }
        12 references
        public string? Isim { get; set; }
        12 references
        public int KurulusYili { get; set; }
        12 references
        public string? ToplulukBaskani { get; set; }
        12 references
        public string? AkademikDanismani { get; set; }
        12 references
        public string? WebAdresi { get; set; }
    }
}
```

## Conclusion

We had created the scripts for the characteristics that we felt our website required. All that remained was to provide an overview of the site's interface and see if we were missing anything. The next step was obviously data entry.

Öğrenci Toplulukları - Hacettepe x

https://localhost:7180

Hacettepe Öğrenci Toplulukları

[Ekle](#)

İsim	KurulusYili	ToplulukBaskani	AkademikDanismani	WebAdresi	
ACM Bilişim Topluluğu	2012	Sefa KARABAŞ	Dr. Öğr. Üyesi Adnan ÖZSOY	http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=ACM-Bilisim-Toplulugu	<a href="#">Düzenle</a>   <a href="#">Detaylar</a>   <a href="#">Sil</a>
Bilgi Topluluğu	2010	Buse YILDIRIM	Doç. Dr. Şahika EROĞLU	http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Bilgi-Toplulugu	<a href="#">Düzenle</a>   <a href="#">Detaylar</a>   <a href="#">Sil</a>
Binicilik Topluluğu	2012	Zehra Selge İNAL	Prof. Dr. Mehmet Derviş KILIÇKAYA	http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Binicilik-Toplulugu	<a href="#">Düzenle</a>   <a href="#">Detaylar</a>   <a href="#">Sil</a>
Çevre Topluluğu	2008	Enes ATAÇ	Prof. Dr. Sinan ERTEN	http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Cevre-Toplulugu	<a href="#">Düzenle</a>   <a href="#">Detaylar</a>   <a href="#">Sil</a>
Hacettepe Müzikal Topluluğu	2016	Eylül SERÇE	Dr. Gözde Gürün DEMİRERİDEN	http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Hacettepe-Muzikal-Toplulugu	<a href="#">Düzenle</a>   <a href="#">Detaylar</a>   <a href="#">Sil</a>
Konumsal Bilgi Topluluğu	2018	Ceren AŞKİT	Doç. Dr. Sultan KOCAMAN/ Dr. Öğr. Üyesi Berk ANBAROĞLU	http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Konumsal-Bilgi-Toplulugu	<a href="#">Düzenle</a>   <a href="#">Detaylar</a>   <a href="#">Sil</a>

Bilgi Topluluğu	2010	Buse YILDIRIM	Doç. Dr. Şahika EROĞLU	<a href="http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Bilgi-Toplulugu">http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Bilgi-Toplulugu</a>	<a href="#">SİL</a>
Binicilik Topluluğu	2012	Zehra Selge İNAL	Prof. Dr. Mehmet Derviş KILINÇKAYA	<a href="http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Binicilik-Toplulugu">http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Binicilik-Toplulugu</a>	<a href="#">Düzenle</a>   <a href="#">Detaylar</a>   <a href="#">SİL</a>
Çevre Topluluğu	2008	Enes ATAÇ	Prof. Dr. Sinan ERTEN	<a href="http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Cevre-Toplulugu">http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Cevre-Toplulugu</a>	<a href="#">Düzenle</a>   <a href="#">Detaylar</a>   <a href="#">SİL</a>
Hacettepe Müzikal Topluluğu	2016	Eylül SERÇE	Dr. Gözde Gürün DEMİRERİDEN	<a href="http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Hacettepe-Muzikal-Toplulugu">http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Hacettepe-Muzikal-Toplulugu</a>	<a href="#">Düzenle</a>   <a href="#">Detaylar</a>   <a href="#">SİL</a>
Konumsal Bilgi Topluluğu	2018	Ceren AŞKİT	Doç. Dr. Sultan KOCAMAN/ Dr. Öğr. Üyesi Berk ANBAROĞLU	<a href="http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Konumsal-Bilgi-Toplulugu">http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Konumsal-Bilgi-Toplulugu</a>	<a href="#">Düzenle</a>   <a href="#">Detaylar</a>   <a href="#">SİL</a>
Yapay Zeka Topluluğu	2018	Oğuzhan DEĞİRMENÇİ	Doç. Dr. Mehmet Erkut ERDEM	<a href="http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Yapay-Zeka-Toplulugu">http://www.sksdb.hacettepe.edu.tr/topluluklar/index.php?t=Yapay-Zeka-Toplulugu</a>	<a href="#">Düzenle</a>   <a href="#">Detaylar</a>   <a href="#">SİL</a>

© 2022 - Hacette Öğrenci Toplulukları - Sıla GERÇEK, Doğa GERÇEK, Şeref Yiğit YÜKSEL

This is the image that was produced using the ensemble data, as can be seen. Information such as the community's name, founding year, president, academic advisor, and website address could all be added, deleted, or edited. In this way, we have succeeded in our objective.

## References

- <https://code.visualstudio.com/docs/languages/csharp>
- <https://visualobjects.com/web-development/blog/web-development-workflow>
- <http://www.sksdb.hacettepe.edu.tr/new/grid.php?parameters=qbapuL6kmaScnHYY2Bf%2BopWek6BZqbHDy6WcpZujmscGBIWonZyPrKvBf4GNX4SfoKOuwe%2By5GiXqikpXu6wMuPlpmVo53If7TDmVVxlPvqga3I0aWcpaOwosGreKqloqWcrP70Yqwj4Zz04WOtxLK%2F1Jylm5KYrMCjwchVhJ%2Bgo67Bt75%2FcpH1z6KawwYEi5GbkZScpr6tt8CemaOdmKe%2BZ5TKkZSVnaCkdYa0zfTh9c%2BkmsMGBIunlZKRm6u6tbyEh5WSUHidx6fGyFaonZyWrb62v8SPlpmVo52So7fIVqCRI5yYyKvNxG1iZWBBWXVic39QUFA6V111Yg%3D%3D>
- <https://www.halvorsen.blog/documents/teaching/courses/csharp/database.php>
- <https://www.codecademy.com/learn/learn-c-sharp>
- <https://www.geeksforgeeks.org/c-sharp-tutorial/>
- <https://www.ibm.com/docs/en/zos-basic-skills?topic=zos-what-is-database-management-system>
- <https://www.oracle.com/database/what-is-database/>
- <https://bulutistan.com/blog/postgresql-nedir/>
- <https://www.oracle.com/database/what-is-a-relational-database/>
- <https://www.upwork.com/resources/what-is-web-application-development>